THE PRESERVE

CHINO SPHERE OF INFLUENCE - SUBAREA 2

FINAL ENVIRONMENTAL IMPACT REPORT - VOLUME 1
SCH # 2000121036

CITY OF CHINO

CERTIFIED MARCH 25, 2003

FINAL ENVIRONMENTAL IMPACT REPORT FOR THE PRESERVE (AS CERTIFIED MARCH 25, 2003)

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Note: The Final Environmental Impact Report Responses to Comments (January 2003) volume is separately bound and available at the City of Chino Community Development Department.

Attachment 2

Recommended Revisions to Planning & Environmental Documents (March 25, 2003)

This attachment includes a variety of revisions to various documents related to The Preserve that are recommended to the City Council by Staff. Recommended changes include: minor modifications to the Open Space Designations and the circulation component of the Specific Plan; a few corrections to the Final EIR; minor changes to the Resources Management Plan; and clarification to the Water Supply Assessment, a technical document that is a component part of the Final EIR.

Recommended Specific Plan Revisions

Open Space Land Use Designations

As part of the Planning Commission's action on February 24, 2003 they recommended some modifications to the Open Space Land Use Designations of the Specific Plan. These changes were made to address concerns raised by the Orange County Water District (OCWD) and environmental interests. Following the hearing, OCWD requested a few additional minor changes, some of which had been inadvertently omitted from the Commission-recommended revisions. The attached copy of the designations, included as Exhibit 1, contains the text recommended by the Planning Commission on February 24th and also includes the few minor changes requested by OCWD. The specific recommended minor changes asked for by OCWD after the February 24 hearing are indicated below under items one and two.

In addition, staff is recommending additional language (item three) to allow legally established residential uses and structures that existing prior to annexation to be allowed to continue.

Revise subsections AG2(f.), A/OS2(e.), OS-R2(i.), OS-N(e.) to read as follows:

> Public infrastructure facilities including but not limited to those necessary for: drainage and flood control including watershed, water recharge and percolation areas, the retention or detention of flood waters, and **other facilities necessary to provide water quality improvements**; reducing water runoff pollutants; public communications; and other publicly owned facilities necessary to provide for public safety or health.

1. Revise subsections AOS4(f.)(3) and OSN(3)(d)(1.) to read as follows:

> The use of herbicides to control or kill vegetation is not permitted, **except for the use of EPA approved herbicides to kill invasive exotic species.**

2. Revise the last sentence of section of OSN1 to read as follows:

This designation also permits the use of open space areas for crop farming, ~~passive~~ outdoor recreational uses and other low intensity uses in some instances.

3. Add the following language as new subsections AG2(g), A/OS2(f), OSR2(j) and OSN2(f)

Existing residential uses and structures. A residential use legally established within the unincorporated areas of the County of San Bernardino prior to the effective date of the annexation of the Preserve into the City of Chino may be expanded, changed, or replaced, subject to the following:

1. The expansion, change, or replacement shall be subject to Administrative Review in accordance with Section 20.03.100 of the Zoning Ordinance and shall comply with all other applicable requirements of the Zoning Ordinance and The Preserve Specific Plan;
2. The expansion, change, or replacement shall not adversely affect, or be materially detrimental to, adjoining properties;
3. The expansion, change, or replacement shall be subject to review in accordance with the California Environmental Quality Act (CEQA) and CEQA Guidelines, as applicable;
4. The expansion, change, or replacement will improve the appearance or stability of the vicinity.
5. The expansion, change or replacement will not result in a greater number of legally established residential structures than currently exists on the property.

Circulation Plan and Street Cross Sections

There were some minor errors made in the Circulation Plan and a couple of the street cross sections contained in the Final Draft of the Specific Plan (January, 2002). Corrections recommended by the Planning Commission at the February 24, 2003 hearing are attached. On the Circulation Plan (Figure 9, p. 149) two of the Right-of-way (ROW) widths are incorrect. The ROW for "Loop Local Collector, With Paseo" should be 83' instead of 89'. The ROW for "Loop Local Collector, With Paseo and Transit" should be 94' instead of 100'.

Two of the street cross sections do not include Paseos, although they are referenced on the Circulation Plan (Figure 9). These are:

1. "Local Collector With Paseo and Transit" which is the segment of Bickmore Avenue located between Euclid Avenue and Bon View Avenue.

2. "Local Collector With Paseo", which is the North-South segment of Chino-Corona Road between Pine Avenue and the East-West segment of Chino-Corona Road.

Total rights-of-way for these two segments remain unchanged on the Circulation Plan. Exhibit 2 contains the recommended revised Figure and cross-sections.

Recommended Corrections To The Final EIR

There are two errors in the "Response To Comments" Volume of the proposed Final EIR that need correction. These recommended corrections are part of a summary of information that is contained in the body of the Final EIR and do not represent a material change in the information in the Final EIR.

1. On Page 4-43 Under "Loss of Open Space" change the level of significance after mitigation from "Not Significant" to "Significant".

2. On Page 4-77 – Parks and Recreation, First paragraph under the "Environmental Mitigation" columned to be revised to indicate that 100 acres instead of 115 acres of local park and recreational facilities will be needed.

3. **Section 5.2.6** (Mitigation Measures), **Page 5.2-11** of the Draft Environmental Impact Report,Final Environmental Impact Report,

Mitigation measure AG-1 on Page 5.2-11 is hereby revised to read as follows:

The City of Chino ~~shall~~ <u>will propose to</u> participate in the Williamson Act Easement Exchange Program (WAEEP) and any plan that may be adopted pursuant to SB 831 .

4. Revise Item 7 "Agricultural Easements" on Page 5.4-42 of the Recirculated Draft EIR to read as follows, superceding, the change recommended on page 4-5 of the Response To Comments Volume of the Final EIR:

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 **their involvement** ~~actively pursue establishment of agricultural easements within The Preserve, pursuant to SB 831 and~~ 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.

Recommended Changes To The Resources Management Plan

1. The revision below is recommended based on additional discussion with Dr. Bath regarding the burrowing Owl. Recommended revisions start at page 4-25, fourth paragraph of the Resources Management Plan (RMP).

   Other Candidate Relocation Areas ~~Below the 566-foot Elevation~~

   ~~Three~~ **Four other** general areas ~~below the 566-foot dam inundation area~~ 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.

2. Staff recommends the following clarifying revision to Page 4-21, 1st paragraph, 3rd sentence to read as follows to be consistent with Table 4-6:

   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).

3. The following, minor recommended revisions to the RMP were proposed by Chuck Hale, Executive Director of the Southern California Agricultural Land Foundation in his letter of March 7, 2003, contained in Attachment 3.

a. Revise page 4-36 by adding the following to the bullets following the first paragraph under the heading "Participation in Regional Efforts":

- The Southern California Agricultural Land Foundation:

b. Revise page 4-36, first paragraph as follows:

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** ~~actively pursue establishment of agricultural easements within The Preserve, pursuant to SB 831 and~~ 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.

Recommended Clarification Notes To City of Chino
Water Supply Assessment
Dated January 28, 2002, Updated July 19, 2002

March 14, 2003

EXECUTIVE SUMMARY

Page 1, par. 6, first sentence: Strike "over entitlement."

SECTION 3.1 OVERVIEW OF SUPPLY AND DEMAND

Page 6, par. 5, Water Demand: Change "15,145" to "15,345," to be consistent with Table 3-1.

Page 7, par. 1, sentence 2: Strike the words "begin lower and," to clarify that demands increase according to development phasing.

Page 7, par. 3, sentence 3: Replace "overproduction" with "production," to clarify that production is consistent with safe yield.

Page 7, par. 4, second to last sentence: In second to the last line, replace "Ann" with "Ana."

Page 8, Table 3-1:

- Change year 2005 Recycled – Subarea 2 demand from "325" to "650,"
  change Total Water Demand in year 2005 from "18,055" to "18,380."
- Change Imported supply amounts in years 2005 through 2022 from "5,357" to "5,353."
- Change year 2005 Total Water Supply from "22,914" to "22,910"; change year 2010 Total Water Supply from "25,314" to "25,310"; change year 2015 Total Water Supply from "25,824" to "25,820"; change year 2020 Total Water Supply from "27,084" to "27,080"; change year 2022 Total Water Supply from "27,448" to "27,444."
- Change year 2005 Surplus Supply from "4,859" to "4,530"; change year 2010 Surplus Supply from "5,264" to "6,260"; change year 2015 Surplus Supply from "4,814" to "4,810"; change year 2020 Surplus Supply from "4,110" to "4,234"; and change year 2022 Surplus Supply from "3,838" to "3,834".

Page 8, Demand Assumptions, 1. City Potable Demand: Add "Year 2000 is actual demand."

Page 8, Supply Assumptions, 1. Groundwater: Change "use" to "available," to clarify the Year 2000 data presented represents the amount available in 2000.

Page 8, Supply Assumptions 3, Imported: Change "5,357" to "5,353."

Page 9, par. 4, sentence 1: Change "this" to "the," and insert "land use" between "from" and "conversion."

Page 9, par. 5, sentence 2: Change "1000" to "2000," to correct year of Inland Empire Utility Agency's Urban Water Management Plan Update.

Page 10, par. 2, sentence 1: Strike "From" and replace with "Imported water is supplied to the City by," and end the sentence with "IEUA". Then start a new (2nd) sentence with "The City of Chino is entitled...," to clarify the relationship between MWD, IEUA and the City.

Page 10, par. 2, (original) sentence 2: Strike "and plans to continue this level of imported supply," to reflect the City's plan as shown in Table 3-1.

Page 10, par. 4, sentence 2: Strike "approximately 350" and replace with "368."

Page 10, par. 6, sentence 1: Insert the word "regional" between "current" and "recycled."

SECTION 3.2 GROUNDWATER – CHINO WATER BASIN

Page 12, par. 3, sentence 2: Strike the "s" on "rights."

Page 15, par. 2, Overdraft – 1978 Judgement: Add "the Appropriative Pool's share of Safe Yield" before "or," and add "more than" before "10,000 acre-feet."

Page 16, last par., Item 2: Strike the last sentence.

Page 17, par. 4, sentence 1: Insert "Individual" before "Producers," to clarify that an individual producer's production ability is different from the pools' total production ability.

Page 19, par. 1, sentence 3: Insert "was" between "City" and "also."

Page 19, par. 4, last sentence: Insert a period at end of sentence.

Page 21, par. 2, sentence 1: Insert "I" after "Chino Basin Desalter."

SECTION 3.3 IMPORTED WATER

Page 24, par. 2, sentence 2: Change "seven" to "five," strike "Fontana Water Company" and "and San Antonio Water Company," and insert "and" before "Monte Vista..."

Page 24, par. 5, sentence 1: Insert "located" between "water connection" and "in the City of Upland."

Page 24, par. 6, sentence 1: Change "5,357" to "5,353."

Page 24, par. 6, sentence 3: Add an "s" to the end of "standard," and insert "and" before "demand," to clarify that the City uses imported water for two purposes.

Page 25, par. 4, sentence 2: Change "their" to "its."

Page 25, par. 5, sentence 2: Strike the "s" from "frameworks."

Page 26, Notes to Table 3-5: Add an "n" after the "r" in "Easter" to read "Eastern."

SECTION 3.4 RECYCLED WATER

Page 27, par. 3, sentence 2: Strike ":1" after "500."

Page 27, par. 6, sentence 3: Strike "approximately 350" and replace with "368;" also add "landscape irrigation and industrial" before "customers."

Page 28, par. 4, sentence 5: Strike the "for."

Page 28, par. 5, sentence 3: Replace "1984" with "1982."

Page 28, par. 5, sentence 1: Change "thirty-seven" to "thirty-eight."

Page 28, par. 5, sentence 2: Add "24 users with a total of" before "45," and strike "of these."

Page 29, Table 3-6: Change "1984-83" to "1982-83."

Page 29, Table 3-7, Second Source: Add "Draft" before "Water Master Plan," and strike the remaining source information, and add "April 2002."

Page 30, par. 4, sentence 2: Change "350" to "368," and add "from the CCWRF" following "afy."

Page 30, par. 6, end sentence: Add footnote "7a" as "7a, Inland Empire Utilities Agency Urban Water Management Plan 2000 Update, Page 2-14."

SECTION 4.0 RELIABILITY OF WATER SUPPLIES

Page 33, par. 3, last sentence: Add a "d" after the "e" in "place" to read "placed."

Page 33, par. 4, sentence 1: Add "after" before "the conversion."

Page 33, par. 4: Change "CDA" to "IEUA and WMWD acting independently, or in their complete discretion, acting through Project Committee 14 consistent with the "Peace Agreement" dated June 29, 2000 by the major producers in the Chino Basin, including the Appropriative Pool, Overlying Non-Agricultural Pool, Overlying Agricultural Pool, MWD member agencies IEUA, WMWD, TVMWD and the State of California."

Page 34, par. 1, sentence 2: Change "use is expected" to "production is expected."

Page 34, par. 1, sentence 2: Add a "0" to "28,00" to read "28,000."

Page 34, par. 1, sentence 2: Change "100 af" to "1,000 af."

Page 34, par. 5, sentence 2: Change "two-" to "multi-."

Page 34, Footnote 9: Add "Tables 3-11, 6-2, and 6-10" after "October 2001."

Page 36, par. 1, sentence 3: Add "located" before "in the City of Upland."

Page 36, par. 1, sentence 4: Capitalize "f" in "feeder" to read "Feeder."

Page 36, par.1, sentence 5: Change "5,267" to "5,353."

Page 36, par. 3, sentence 2: Capitalize "o" in "optimum", "b" in "basin", the first "m" in "measurement" and "p" in "program."

Page 36, par. 4, sentence 2: Add an "n" after the "w" in "know" to read "known."

Page 37, par. 5, sentence 1: Change "Enhancement" to "Expansion."

Page 38, par. 2, sentence 3: Change "Plan" to "Program."

Page 38, par. 6, last sentence: Strike "ing" from "finding" to read "find."

Page 39, Table 4-1: Demand and supply figures are expressed in terms of million acre feet (MAF).

Page 40, par. 1, sentence 4: Add "and multiple-dry years" after "single dry year," and strike "single" before "worst dry year scenario."

Page 40, par. 2, sentence 3: Change " .," between "Conservation" and "while" to ";".

Page 42, par. 9, sentence 1: Add "in diameter" after "2 inches."

Page 42, par. 9, sentence 3: Add "in diameter" after "2 inches."

Page 42, par. 9, sentence 4: Add "and" before "therefore encourages conservation."

Page 43, par. 5, sentence 3: Add "Chino" before "Public Works" and strike "Services."

Page 44, par. 7, sentence 4: Strike "According to "MWD," and begin the sentence with "Data shows."

Page 45, Clarify Table 4-3 as follows: Further analyses by MWD and IEUA contained within their Urban Water Management Plan 2000 Updates demonstrate that projected water use during periods of multiple-year drought reflect that water demand would increase in the first and second years of the drought and then decrease in the third year of the drought. This is based on the 1990-1991-1992 hydrologic sequence, with the first of the three years being the worst, so conditions improved over the next two years. No other three-year sequences in the 77-year hydrologic record had as great an impact on the supply/demand balance. The tabulation below presents the 20-year water supply and demand comparison in dry-year scenarios based on this model, which is consistent with MWD and IEUA projections.

Page 45, Table 4-3: Add sub-heading as "Current Condition Water Supply and Demand Comparison during single and multiple dry years."

Page 45, Table 4-3: Add note as "Recycled Water: Average/Normal Water Year reflects current use; Recycled Factors: single-dry year = 1.00, multiple-dry year 2 = 1.107, dry year 3 = 1.145."

Table 45, Table 4-3:

1. Change Total Supply in Average/Normal Year from "17,202" to "17,852."
2. Change Total Supply in Multiple-Dry Years, Year 2, from "17,912" to "18,182."
3. Change Surplus Supply in Average/Normal Water Year from "4,000" to "4,650."
4. Change Surplus Supply in Multiple-Dry Years, Year 2, from "848" to "1,118."

20-Year Water Supply and Demand Comparison (afy) during single and multiple dry years ***including*** Subarea 2

2020 Supply & Demand Through Year 2022	Normal	Single Dry	Multiple 1	Multiple 2	Multiple 3
Demand Total	**22,850**	**24,787**	**24,787**	**25,846**	**24,447**
Groundwater	11,557	12,181	12,181	13,034	14,142
Imported	5,353	4,603	4,603	4,077	3,611
Desalted	5,000	5,000	5,000	5,000	5,000
Recycled	5,170	5,170	5,170	5,723	6,553
Supply Total	**27,080**	**26,954**	**26,954**	**27,834**	**29,306**
Surplus	**4,230**	**2,167**	**2,167**	**1,988**	**4,859**

Dry Year Factors Used for Comparison: Consistent with IEUA Urban Water Management Plan Year 2000 Update, Table 3-14.

Dry Year Factors	Single Dry	Multiple 1	Multiple 2	Multiple 3
Demand	1.08478	1.08478	1.04270	0.94589
Supply				
Groundwater	1.054	1.054	1.070	1.085
Imported	0.85984	0.85984	0.88574	0.88574
Desalted	1.000	1.000	1.000	1.000
Recycled	1.000	1.000	1.107	1.145

Page 45, par. 1: Strike sentences 2 and 3.

Page 46, par. 4, sentence 1: Change "2035" to "2022."

Page 46, par. 5, sentence 1: Strike "over entitlement."

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
5.1 Land Use	**LU-1. Chino Airport Influence Area.** The City of Chino shall provide notice of development applications within adopted airport noise and safety zones to the Airport Land Use Commission (ALUC), in compliance with the Chino Airport Comprehensive Land Use Plan (ACLUP). The City will coordinate with the ALUC to assure specific development projects' compatibility with Chino Airport operations.	Written evidence of notification	Development Application Review and Plan Check	Community Development Director
	LU-2. Correctional Institution for Women (CIW-Chino). Special attention should be focused during subsequent review of specific development projects on providing an adequate buffer and separation between the existing CIW-Chino and planned residential uses immediately to the east. The planned linear Community Paseo along Chino-Corona Road separating these uses should include some combination of landscape screening, berms and/or walls, and setbacks to achieve an adequate physical and visual separation between these uses.	Plan Check	Development Application Review and Prior to Issuance of Grading Permit	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
5.2 Agriculture	**AG-1. Agricultural Land Preservation.** The City of Chino will propose to participate in the Williamson Act Easement Exchange Program (WAEEP) and any plan that may be adopted pursuant to SB 831.	Written or other evidence of participation	Ongoing (Following implementation of a plan for Chino Basin pursuant to SB 831)	Community Development Director
	AG-2. Agency Coordination and Planning for Agricultural Uses. The City of Chino shall participate in a coordinated multi-agency planning program for sustainable agricultural uses within the Lower Chino/Prado Basin. This program should involve the principal public landowners within the basin, including but not limited to the U.S. Army Corps of Engineers, Orange County Flood Control District, and County of San Bernardino. Components of this program may include an agricultural feasibility study, acquisitions plan, and management plan for sustainable agricultural uses within the basin.	Written or other evidence of participation/ coordination	Ongoing	Community Development Director
	Also see Biological Resources Measure B-3(4), **RMP-Urban Buffer/Transition Area**	Plan Check	Prior to Issuance of Grading Permit	Community Development Director
5.3 Hydrology and Water Quality	**HWQ-1. NPDES.** All development shall comply with the National Pollutant Discharge Elimination System (NPDES) regulations. Prior to the issuance of a grading permit, applicants shall demonstrate compliance with NPDES Stormwater Permit requirements to the satisfaction of the City of Chino. Applicable	Plan Check	Prior to Issuance of Grading Permit	City Engineer

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	BMP provisions shall be incorporated into the NPDES Permit.			
	HWQ-6. Storm Drain Outlets. The City of Chino shall assure that storm drain facilities and outlets to Prado Regional Park and the natural open space system are designed in a manner that minimizes disruption of park operations and protects park and open space resources. Specific drainage facility designs at outlets to the major open space system below the 566' elevation shall be made available for review by the County of San Bernardino Flood Control District and U.S. Army Corps of Engineers, as appropriate.	Plan Check	Development Review/Prior to Issuance of Grading Permit	City Engineer
	HWQ-7. Urban Runoff Management Plan. Prior to any development approvals, a plan for managing urban runoff to protect sensitive drainages within the open space system shall be approved by the City of Chino. This Urban Runoff Management Plan (URMP) will be integrated with the project Storm Drain Plan, and provide the framework and mechanism for: 1) Phased implementation of structural and non-structural best management practices (BMP's) to control stormwater discharges and protect water quality;	Plan Check and approved Urban Runoff Management Plan	URMP approval prior to subsequent development project approvals Review of subsequent projects for compliance with URMP prior to issuance of Grading Permit	City Engineer

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	2) Review of subsequent projects for inclusion of 'mini-basins' for detention, filtration and recharge to groundwater; 3) The design and location of Natural Treatment Systems (NTS) for water quality purposes within drainages; and 4) Implementation of a water quality monitoring program at storm drain outlets to Prado Lake, Chino Creek and Mill Creek. The URMP shall be made available for review and comment by the Flood Control Districts of the counties of San Bernardino and Orange, the U.S. Army Corps of Engineers, and Orange County Water District during the City of Chino's review and approval process. The URMP shall assure to the satisfaction of the City of Chino that project development that drains into Chino Creek and Mill Creek will not unacceptably contribute to flooding, scour and erosion, or water quality degradation of these environmentally sensitive drainages.			
	HWQ-2. Best Management Practices. Individual projects within the specific plan area shall be reviewed by the City of Chino for the inclusion of appropriate structural and non-structural Best Management Practices (BMPs) to control stormwater discharges and protect water quality. Structural controls may include,	Plan Check (for NPDES Permit Compliance)	Prior to Issuance of Grading Permit	City Engineer

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	but are not limited to filtration, common area efficient irrigation, common area runoff-minimizing landscape design, velocity dissipation devices, oil/grease separators, inlet trash racks, and catch basin stenciling. Non-structural BMPs can include education for property owners, tenants and occupants, activity restrictions, common area landscape management, litter control, and catch basin inspection, BMP maintenance; and street sweeping. The following are examples of BMPs that may be included within NPDES permit requirements for individual projects: • Use of sand bags and temporary desilting basins during project grading and construction during the rainy season (October through April) to prevent discharge of sediment-laden runoff into stormwater facilities. • Installation of landscaping as soon as paracticable after completion of grading to reduce sediment transport during storms. • Hydroseeding, soil binders or other measures to retain soil on graded building pads if they are not built upon before the onset of the rainy season.			

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	• Incorporation of structural BMPs (e.g., grease traps, debris screens, continuous deflection separators, oil/water separators, drain inlet inserts) into the project design to provide detention and filtering of contaminants in urban runoff from the developed site prior to discharge to stormwater facilities. • Stenciling of catch basins and other publicly visible flood control facilities with the phrase "No Dumping-Drains to the Ocean."			
	HWQ-3. Best Management Practices. The City shall review subsequent development projects within the specific plan area for the application of Best Management Practices (BMPs) to reduce water pollution from urban runoff. Among the source-reduction BMPs that may be required by the City for application to such projects are the following: • Animal waste reduction • Exposure reduction • Recycling/waste disposal • Parking lot and street cleaning • Infiltration (exfiltration) devices • Oil and grease traps • Sand traps	Plan Check	Prior to Issuance of Grading Permit	City Engineer

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	• Filter strips • Regular/routine maintenance The specific measures to be applied shall be determined in conjunction with review of required project hydrology and hydraulic studies, and shall conform to City standards and the standards of the County's Municipal Stormwater Permit, under the NPDES program.			
	HWQ-4. Water Quality Monitoring. A water quality monitoring program should be implemented to regularly test the water quality at the project storm drainage outlets to Prado Lake, Chino Creek and Mill Creek. The program should be devised to differentiate the pollutant contributions of project development from dairies during the transitional period. If test results determine that the water quality standards established by the RWQCB are not being met, corrective actions acceptable to the RWQCB would be taken to improve the quality of surface runoff discharged from the outlets to a level in compliance with the adopted RWQCB standards.	Water quality samples	Annual Monitoring Report	City Engineer
5.4 Biological Resources	**B-1. Zoning and Land Use Regulation.** 1. All areas below the 566-foot dam inundation line, except such areas located north of Pine	Review of requests for changes in Land Use	Prior to Planning Commission action on	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	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.	Designations utilizing the Zoning and Land Use Regulations Checklist (RMP Table 4-2)	requests for changes in Land Use Designations	
	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.	Development Application Review (see Zoning and Land Use Regulations Checklist--RMP Table 4-2)	Prior to Issuance of Permit	Community Development Director
	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.	Development Application Review (see Required Biological Surveys Checklist--RMP Table 4-3)	Prior to Approval of Development Projects or the Issuance of Grading Permits, as appropriate	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	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.			

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	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 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:	Approved RMP	With Certification of Program EIR	Community Development Director
	1. 300-acre Conservation Area			
	Provision will be made for the creation, enhancement, expansion and perpetuation of	Feasibility Study of Potential Conservation	Study Complete within 12 Months of Program	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	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. An illustrative example of an artificial burrow is provided in Exhibit 5.4.4). Nesting sites will be located and designed to facilitate use by burrowing owls. c.) Stands of trees shall be planted at a minimum of five (5) locations within the 300-	Areas (see Conservation Area Checklist—RMP Table 4-4) Enhancement/Restoration Checklist—RMP Table 4-5	EIR Certification Annual Report for first 5 years (RMP Table 4-5)	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	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. d.) 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 needed)** 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	Feasibility Study of Potential Conservation Areas (see Conservation Area Checklist—RMP Table 4-4)	Annual Report for first 5 years (RMP Table 4-5)	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	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 (Exhibit 5.4.4). 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	Development Application Review and Burrowing Owl Mitigation Checklist (see RMP Table 4-6) (Measure to be implemented in accordance with the RMP.)	Prior to Issuance of Permit related to development, expansion of existing land uses, or other land use activities	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	minimum of 6.5 acres of suitable foraging habitat for each pair of relocated owls (see Exhibit 5.4.4). 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			

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	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 study 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	Plan Check for Conformance with RMP Urban Buffer/Transition Area design guidelines (all Development Applications adjacent 566' Elevation Line)	Prior to approval of development project (Buffer/transition area improvements to be installed prior to issuance of Certificate of Occupancy.)	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	of the buffer shall be included as part of the Resources Management Plan (RMP). 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.	Development Application Review (see Surface Waters Checklist—RMP Table 4-7)	Prior to Issuance of Grading Permit	Community Development Director
	b.) Drainage Area B (see, Exhibit 5.4.5) 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.	Development Application Review and Plan Check	Prior to Issuance of 1,800th Building Permit	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	Exhibit 5.4.6 provides an illustrative example of how the drainage area may be designed. 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.	Plan Check (tabulation)	Prior to Issuance of the 1,800th Building Permit	Community Development Director
	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 study 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	Development Application Plan Check (see Review and Windrow Checklist—RMP Table 4-8)	Prior to Issuance of Grading Permit	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	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 ornithologist.			
	7. Agricultural Easements			
	Under Mitigation Measure AG-1 (see Section 5.2 in the Draft EIR), which addresses mitigation for 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.	Written or other evidence of participation	Following Implementation of a plan for Chino Basin pursuant to SB 831	Community Development Director
	8. Mitigation Fee			
	A mitigation fee shall be imposed on new development for the purpose of implementing the Biological Resource mitigation measures as	Plan Check (verification of payment of fee)	Fee adoption Prior to Issuance of any Grading Permit (as described	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	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.		under Mitigation B-3-8). Payment of fee once the fee is adopted to be prior to the issuance of grading permits.	

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	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 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;	Written or other evidence of participation	Ongoing	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	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	Execution of an agreement or similar instrument.	Concurrent with the City's cessation of RMP management	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	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.			
5.5 Geology and Soils	**GS-1. Geotechinical and Soils Engineering Study.** All applications for individual development projects shall include a detailed Geotechnical and Soils Engineering Study which addresses potential hazards associated with fault rupture, seismicity and groundshaking, liquefaction, subsidence and near-surface groundwater. Such studies shall: • Conform to code requirements, and standards and guidelines established by the City of Chino; • Fully and accurately reflect site conditions regarding the possible hazards identified herein; and	Development Application Review and Plan Check	Prior to Issuance of Grading Permit	City Engineer

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	• Include all mitigation measures necessary for reducing risks posed by geologic hazards on the project site.			
	GS-2. Conformance with Geological Study Requirements. All individual developments shall be constructed according to requirements established in geologic studies pertaining to the project site, and general engineering practices established by the City of Chino.	Plan Check	Prior to Issuance of Grading Permit	Building Official
	GS-3. Soils Report – Dairy Lands. Grading operations on all former dairy lands and other agricultural properties will be conducted in accordance with the soils report prepared by a registered soils engineer approved by the City of Chino. The soils engineer will make recommendations concerning removal of any organic material or the proper handling of such material during grading. All manure from dairy corrals and other surface areas shall be stripped and removed prior to grading operations, in accordance with applicable codes and regulations. The potential for methane in remaining soils shall be specifically addressed in soils reports on all former dairy lands and other agricultural properties. Where the potential for methane accumulation or release is identified, soils testing shall occur with	Plan Check and Monitoring of construction	Prior to Issuance of Grading Permit and During Construction	City Engineer and Soils Engineer

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	results and remedial measures identified in the soils report.			
5.6 Hazards	**HM-1. Aircraft/Waterfowl Hazards.** To minimize aircraft/wildlife hazards, sizeable water features that might attract waterfowl should be prohibited in the plan area east of the Airport.	Development Application Review Plan Check	Prior to Issuance of Grading Permit	Community Development Director
	HM-2. Maximum Building Height. The maximum building heights outside of the runway protection zones may not exceed 160 feet to prevent any conflict with adopted flight patterns.	development Application Review Plan Check	Prior to Issuance of Building Permit	Community Development Director
	HM-3. Environmental Site Assessments. Prior to City consideration of any specific development projects within the plan area, developers will be required by the City to submit a completed Phase 1 Environmental Site Assessment (ESAs), which at a minimum, meets with the requirements of the most current standards of investigation established by the American Society of Testing and Materials (ASTM Standard E 1527). The recommendations of such ESAs, including testing and soil remediation, if necessary, shall be adhered to reduce any identified hazards to acceptable levels.	Development Application Review	Prior to Issuance of Grading Permit	City Engineer

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	HM-4. Asbestos and Lead-Based Paint. Prior to issuance of permits by the City of Chino for major renovation or demolition of any pre-1979 structure within the project area, the project developer will be required to submit documentation to the City Building Department that asbestos and lead-based paint issues are not applicable to their property, or that appropriate actions will be taken to correct any asbestos or lead-based paint issues prior to development of the site.	Development Application Review	Prior to Issuance of Grading, Building or Demolition Permits as appropriate.	Building Official
	HM-5. Compliance with Laws and Regulations. In order to minimize risks to life and property, projects within the plan area will be required to demonstrate compliance with all applicable federal, state and local laws and regulations governing the handling, transport, treatment, generation and storage of hazardous materials.	Measure HM-3 and written evidence of Compliance	Prior to Issuance of Grading and/or Use Permits (or any state, federal or local permits, approvals or licenses related to the handling, transport, treatment, generation and storage of hazardous materials	Community Development Director and the City Engineer
5.7 Transportation and Circulation	A cumulative listing of all project related roadway and signal improvements to be provided for post-2020 buildout conditions, including the proposed project, is contained in RDEIR Table 5.7-5.			
	T-1. Notification: Since the project contributes significant traffic to a State Highway (I-15	Documentation of Notification and CMP	Following approval of CMP	City Transportation Manager

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	Freeway, SR-71 Freeway, SR-60 Freeway, and SR-91 Freeway), and it also contributes significant traffic to roadway segments serving CMP intersections within the jurisdictions of the City of Chino Hills, City of Ontario, County of San Bernardino, City of Norco, City of Corona, and the County of Riverside, the City of Chino shall notify the Congestion Management Agency (SANBAG), the California Department of Transportation (Caltrans), the City of Chino Hills, City of Ontario, County of San Bernardino, City of Norco, City of Corona, and the County of Riverside in accordance with CMP requirements. Each of these agencies must be provided with a copy of the CMP traffic study, once the document is accepted by the City of Chino.	Transmittal		
	T-2. Internal Roadway Improvements. The proposed project shall construct or otherwise provide for all internal roadway improvements. The provision of such improvements shall be phased to address the incremental impacts of individual development projects.	Plan Check and Measure T-9	Development Application Review and Prior to Issuance of Grading Permit and construction	City Transportation Manager and Building Official
	T-3. Regional/Subregional Project Participation. The City of Chino shall work cooperatively through SCAG and SANBAG to develop regional/subregional projects and identify regional transportation funding needed	Written or other evidence of participation	Ongoing	City Transportation Manager

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	to minimize future freeway deficiencies. The City will actively participate in other future regional and/or subregional efforts to reduce freeway congestion.			
	T-4. Regional/Subregional Transportation Planning. The City of Chino shall participate in planning efforts to develop subregional and/or regional transportation facilities based on equitable cost sharing programs among cities and counties.	Written or other evidence of planning coordination	Ongoing	City Transportation Manager
	T-5. Traffic Operations and System Management. The City of Chino shall provide traffic operations and traffic systems management (TSM) improvements, including signal system coordination, automated traffic control, Smart Corridors, intelligent transportation systems, and other measures.	Plan Check and Measure T-9	Ongoing	City Transportation Manager
	T-6. Project Review for Trip Reduction and Travel Demand Management. Individual development projects shall be reviewed by the City for integration of trip reduction measures, travel demand management (TDM) strategies and alternative transportation modes, consistent with the Specific Plan.	Development Application Review	Development Application Review and Prior to Issuance of Permits	City Transportation Manager
	T-7. Transit Feasibility Study. In the initial phases of development, the City of Chino shall require that a Transit Feasibility Study be	Acceptance of Transit Feasibility Study	Initial development phase (i.e. within 24 months of Issuance of	City Transportation Manager

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	prepared of the proposed project transit system. The feasibility study should address the timing of transit development vis-a-vis development phasing, and the interface with future regional transit works. To respond to potential issues related to the development of such a system, the following actions must be undertaken: • Identify the various funding mechanisms associated with the construction and operation of the system. • Require each proposed project to provide adequate right of way for such a system and construct the required infrastructure. • Establish design criteria and an evaluation process for determining transit stop locations that ensure pedestrian access prior to tentative map approval. • Operational issues, such as the future management of the system, may be deferred until the appropriate time, based upon discussions with current regional transit providers.		Initial Grading Permits)	
	T-8. Transit Service Extensions. The City of Chino shall contact appropriate transit agencies to encourage an expansion of transit services up to and within the project area.	Evidence of Contact	Ongoing	City Transportation Manager
	T-9. Project Traffic Studies. Traffic studies shall be required as deemed necessary by the	Development Application	Prior to Issuance of	City Transportation

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	City Engineer. Each study will identify the timing, and extent of required improvements to adequately evaluate future traffic impacts of individual projects needed to mitigate the impacts of such development.	Review	Grading Permit	Manager
5.8 Noise	**N-1. Construction Noise.** The following construction noise reduction measures will be implemented: All construction activities conducted within 500 feet of any occupied dwelling shall not occur from 7 P.M. to 7 A.M. the following day, and at any time on Sundays or universally observed holidays. • All construction equipment will use properly operating mufflers. • All staging areas shall be located away from occupied dwellings and schools where feasible. • The City of Chino will approve construction truck access routes that minimize noise intrusion into sensitive areas, such as neighborhoods, schools, and parks.	Plan Check and Monitoring of Construction	Prior to Issuance of Grading Permit	Community Development Director
	N-2. Roadway Noise. Developers/builders shall submit acoustical studies to the City of Chino for subsequent tentative maps and noise-sensitive uses (e.g. residences, schools, medical facilities) adjacent the principal area roadways.	Development Application Review and Plan Check	Prior to Issuance of Grading Permit or Building Permit as appropriate	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	Such studies shall assure that: • Usable exterior space meets noise standards of 65 dB CNEL through a combination of setback or barriers. • Habitable interior rooms along any project perimeter near noise-impacted roadways meet the interior standard of 45 dB CNEL through dual-paned windows, central air conditioning and other structural upgrades.			
	N-3. Airport Noise. In order to ensure that noise exposure is considered in review of subsequent development projects within the plan area, and in acknowledgement of possible single-event aircraft audibility even if standards are not exceeded, the following measures will be implemented:			
	• The City of Chino shall provide notice of development applications within adopted airport noise and safety zones to the Airport Land Use Commission (ALUC), in compliance with the Airport Comprehensive Land Use Plan (ACLUP). The City will coordinate with the ALUC to assure the compatibility of specific development projects with Chino Airport Operations (same as Mitigation Measure LU-1).	Development Application Review and Plan Check (Airport Overlay Zone) and Evidence of Notification	Prior to Issuance of Grading Permit	Community Development Director
	• All real estate transactions within Subarea 2 within 1.0 mile of the airport boundary will	Evidence of Notification	Certificate of Occupancy	Community

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	contain advisory language that aircraft may be periodically audible even though the subject property is exposed to noise levels due to aviation activities that are well within State guidelines.			Development Director
5.9 Air Quality	**AQ-2. Construction Emissions**. Per SCAQMD Rule 403, the City shall enforce the following measures: • During all construction activities, construction contractors shall use low emission mobile construction equipment where feasible to reduce the release of undesirable emissions. • During all construction activities, construction contractors shall encourage rideshare and transit programs for project construction personnel to reduce automobile emissions. • During all grading and site disturbance activities, construction contractors shall water active grading sites at least twice a day, and clean construction equipment in the morning and/or evening to reduce particulate emissions and fugitive dust. • During all construction activities, construction contractors shall, as necessary, wash truck tires leaving the site to reduce the amount of particulate matter transferred to	Plan Check	Prior to Issuance of Grading Permit	Community Development Director and City Engineer

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	paved streets as required by SCAQMD Rule 403. • During all construction activities, construction contractors shall sweep on and off site streets if silt is carried over to adjacent public thoroughfares, as determined by the City Engineer to reduce the amount of particulate matter on public streets. • During all construction activities, construction contractors shall limit traffic speeds on all unpaved road surfaces to 15 miles per hour or less to reduce fugitive dust. • During grading and all site disturbance activities, at the discretion of the City's Planning Director, construction contractors shall suspend grading operations during first and second stage smog alerts to reduce fugitive dust. • During grading and all site disturbance activities, at the discretion of the City's Planning Director, construction contractors shall suspend all grading operations when wind speeds (including instantaneous gusts) exceed 25 miles per hour to reduce fugitive dust. • During all construction activities, the construction contractors shall maintain			

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	construction equipment engines by keeping them tuned. • During all construction activities, the construction contractors shall use low sulfur fuel for stationary construction equipment as required by AQMD Rules 431.1 and 431.2 to reduce the release of undesirable emissions. • During all construction activities, the construction contractors shall use existing on site electrical power sources to the maximum extent practicable. Where such power is not available, the Contractor shall use clean fuel generators during the early stages of construction to minimize or eliminate the use of portable generators and reduce the release of undesirable emissions. • During all construction activities, the construction contractors shall use low emission, on site stationary equipment (e.g., clean fuels) to the maximum extent practicable to reduce emissions, as determined by the City Engineer. • During all construction activities, the construction contractors, in conjunction with the City Engineer, shall locate construction parking to minimize traffic interference on local roads. • During all construction activities, the construction contractors shall ensure that all			

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	trucks hauling dirt, sand, soil or other loose materials are covered or should maintain at least two feet of freeboard (i.e. minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of the California Vehicle Code Section 23114 to reduce spilling of material on area roads.			
	AQ-1. **Mobile Source Emissions/Transit.** The City of Chino shall contact appropriate transit agencies to encourage an expansion of transit services up to and within the project area. The City will coordinate with such agencies and other jurisdictions to promote express transit access from the Chino area to other regional employment centers.	Evidence of Contact (see Measure T-8)	Ongoing	City Transportation Manager
5.10 Population and Housing	**[No Mitigation Measures are necessary.]**			
5.11.1 Schools	**PS-S-1. Planning for School Services.** Developers/builders within the plan area shall work with the CVUSD to plan school service for the proposed development.	Written or other evidence of fee payment, mitigation agreement or other compliance in accordance with state law	Ongoing	Community Development Director
	PS-S-2. School Fees. Prior to issuance of a building permit, project developers shall pay statutory developer fees to the CVUSD, form a Communities Facilities District, or provide	Plan Check (evidence of fee payment, mitigation agreement or other compliance in accordance	Prior to Issuance of Building Permit	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	land and improvements pursuant to the requirements established in SB 50. The amount of fees or special taxes to be paid or land and improvements to be provided will be determined based on the established state formula for determining construction costs.	with state law)		
	PS-S-3. Construction Activity Notification. To reduce potential safety hazards during construction, the City shall require developer notification to Chino Valley Unified School District of pending construction activity adjacent or near operating schools. Evidence of notification shall be provided to the City prior to issuance of grading and building permits for projects within any Master Plan, Tentative Map or Site Plan inclusive of, or immediately adjacent to, an operating school site.	Plan Check (evidence of Notification)	Prior to Issuance of Grading and Building Permits	Community Development Director
5.11.2 Policy Protection	**PS-P-1. Police Services Impact Fees.** Police impact fees shall be paid to cover capital costs associated with the creation of additional facilities and improvements to service The Preserve area. The City of Chino may allow credit toward impact fees for any police facilities constructed by the developer.	Plan Check (evidence of fee payment or other compliance)	Prior to Issuance of Building Permit	Community Development Director
5.11.3 Fire Service & Emergency Medical Service	**PS-F-1. Fire Service Impact Fees.** Developer impact fees shall be paid to contribute to the cost of new fire facilities, apparatus, and	Plan Check (evidence of fee payment or other compliance)	Prior to Issuance of Building Permit	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	equipment to offset the increase in fire services demand created by the project.			
	PS-F-2. Fire Station. The City of Chino shall coordinate with the Fire District to assure construction of a new fire station site to serve the proposed project. The fire station shall be constructed and ready for Fire District occupancy prior to the issuance of the 1,350th building permit for the proposed project. The station location may either be within the project site or at Chino Airport, subject to agreement by San Bernardino County Department of Airports. The station shall be adequately attenuated from noise effects of airport operations.	Plan Check (and Evidence of Compliance from CVIFD)	Prior to Issuance of the 1,350th Building Permit	Community Development Director
	PS-F-3. Fire Protection Requirements. Prior to construction, the developer shall contact the Fire District for verification of current fire protection development requirements. All new construction shall comply with all applicable statutes, codes, ordinances, and/or Fire District standards.	Plan Check	Prior to Issuance of Grading Permit	Community Development Director and Fire Division Chief (CVIFD)
	PS-F-4. Water Lines. Water lines within the project site shall be designed to meet the fire requirements.	Plan Check	Prior to Issuance of Grading Permit	City Engineer and Fire Division Chief (CVIFD)
	PS-F-5. Fire Hydrants. Fire hydrants shall be designed and placement specified by the Fire	Development Application Review and Plan Check	Prior to Issuance of Grading Permit	City Engineer and Fire Division Chief (CVIFD)

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	District at the time water lines to the project area are built or as a condition of development project approval.			
	PS-F-6. Wild Land Fire Protection Services. Upon annexation of the plan area, the City will be responsible for payment of services to the State Department of Forestry & Fire Protection in conformance with rules and standards for wild land fire areas still receiving State protection.	Written Evidence of Fire Protection Service from (SDFFP or CVIFD)	Upon Annexation of State Responsibility Area (SRA)	Community Development Director
5.11.4 Library Services	**PS-L-1. Library Facilities.** The proposed project should address the need for additional library facilities and library services, and provide space or funding for library construction. The construction of a joint use library shared by the County of San Bernardino and Chino Valley Unified School District may be an appropriate option.	Ongoing review of Development Applications and coordination with County of San Bernardino (libraries) and the Chino Valley Unified School District	Ongoing	Community Services Director
	PS-L-2. Library Impact Fees. Project developers should contribute impact fees either toward expansion of existing library facilities or construction of new facilities, if such fees or requirements are adopted for general application by the County.	Plan Check (subject to adopted City or County Fee requirement)	Prior to Issuance of Building Permit (if a fee is adopted)	Community Development Director
5.11.5 Parks and Recreation	**PS-PR-1. City Park Requirements.** As Per the City of Chino, every residential developer or person who develops land for residential	Development Application Review and Plan Check	Prior to Issuance of Building Permit (fees or dedication)	Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	purposes shall dedicate a portion of such land, pay a fee, or a combination of both at the option of the city for the purpose of providing park and recreational facilities at the time and according to City standards outlined in Chapter 18.04, "Land Dedication Requirements Generally."			
	PS-PR-2. Prado Regional Park. The City of Chino will coordinate with San Bernardino County to assure that traffic, access control and safety needs of Prado Regional Park are met, and that the impacts of implementation of the proposed project on Prado Regional Park facilities are minimized to the extent practical. A Traffic and Access Control plan may be a component of this collaboration. The City will also assure through subsequent development reviews, that project-related drainage does not adversely affect the park and Prado Lake.	Development Application Review and Plan Check	Ongoing	Community Development Director
5.12.1 Water Supply	**U-W-1. Water Supply Availability.** Consistent with SB 221, subsequent development projects within the plan area shall be reviewed by the City to confirm the availability of sufficient water supplies to meet project water needs.	Plan Check	Tentative Map	City Engineer
	U-W-2. Urban Water Management Plan. Consistent with requirements of AB 2838, the City shall periodically review and update its	Verification per Requirements of AB	Periodically (or per AB 2838 Requirements)	City Engineer

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	urban water management plan to ensure that adequate water supplies and facilities are available to meet future growth.	2838		
	U-W-3. Groundwater Replenishment. Subsequent development projects should be designed to incorporate features that encourage and promote groundwater replenishment.	Development Application Review and Plan Check	Prior to Issuance of Grading Permit	City Engineer
	U-W-4. Onsite Retention. Retention of precipitation and runoff on-site should be encouraged in development designs where appropriate.	Development Application Review and Plan Check	Prior to Issuance of Grading Permit	City Engineer
	U-W-5. Water Conservation Techniques. The City shall continue to support efforts to develop the water supply and to encourage water conservation. Water conservation techniques appropriate for new and existing development include: • Installing flow restrictors in showers. • Repairing leaky water fixtures. • Promoting drought resistant low maintenance vegetation.	Plan Check	Prior to Issuance of Building Permits	Community Development Department
	U-W-6. Wastewater Re-use. The City shall coordinate its efforts with the IEUA to expand the re-use of wastewater for such uses as the irrigation of parkways, golf courses,	Urban Water Management Plan review	Periodically (or per AB 2838 Requirements)	City Engineer

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	landscaped areas, and parks, and, if feasible, for industrial processes.			
	U-W-7. Water Conservation Programs. The City shall engage in water conservation programs and activities, including but not limited to, participation in the following water conservation practices: • Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers • Residential Plumbing Retrofits • System Water Audits, Leak Detectors and Repair • Large Landscape Conservation Programs and Incentives • High Efficiency Washing Machine Programs • Public Information and School Education Programs • Conservation Programs for Commercial, Industrial and Institutional Accounts • Wholesale Agency Technical Assistance Program • Conservation Pricing	Plan Check (for new development) and written or other verification f engagement in water conservation programs and activities	Prior to Issuance of Building Permits	City Engineer
	U-W-8. On-site Water Recharge. Where erosion or water runoff is not a problem,	Development Application Review and Plan Check	Prior to Issuance of Grading Permit	City Engineer

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	encourage use of on-site water recharge, such as dry wells.			
5.12.2 Wastewater	**U-WW-1. Compliance with Sewer Master Plan.** The City shall assure that required backbone sewer lines, or an equivalent system recommended by the City Engineer are implemented pursuant to the Sewer Master Plan.	Development Application Review and Plan Check	Prior to Issuance of Grading Permit	City Engineer
	U-WW-2. Sewer Impact Fees. Developers shall pay required sewage facilities development fees and system collection fees to cover City costs to construct master planned sewer mains.	Plan Check	Prior to Issuance of Buidling Permit	Community Development Director
5.12.3 Electricity	**U-E-1. Energy Efficient Lighting.** Energy efficient lighting and natural lighting should be encouraged and utilized where practical.	Plan Check	Prior to Issuance of Building Permit	Community Development Director
5.12.4 Natural Gas	[No Mitigation Measures are necessary.]			
5.12.5 Waste Management	**U-SW-1. Waste Container Storage Space.** Future developments should be reviewed by the City for the provision of outside building space to accommodate the storage of large waste containers (e.g. 3 containers of 96-gallons). This system reduces waste production by encouraging recycling of material.	Development Application Review and Plan Check	Prior to Issuance of Building Permit	Community Development Director
5.12.6 Telecommunication	**[No Mitigation Measures are necessary.]**			

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
5.13 Cultural Resources	**CR-1. Archaeological Survey and Mitigation Report.** Phase 1 field surveys (surface survey and collection) by a certified archaeologist should be conducted prior to all earth disturbing activities within the plan area. Existing natural open space, agricultural open space and dairy sites are included in this survey requirement. Excluded would be heavily disturbed areas, lagoons and detention ponds, and paved areas. The archaeologist will identify all prehistoric and historic resources observed during the field survey, complete a preliminary evaluation of the resources, and recommend appropriate measures for the disposition and treatment of significant resources. A technical report shall be prepared including discussion of cultural site significance (depth, nature, condition, and extent of the resources), final mitigation recommendations, and cost estimates. Excavated finds shall be offered to the City of Chino, or its designee on a first refusal basis. Final mitigation shall be carried out based upon the report recommendations and a determination as to site disposition by the City. Possible determinations include, but are not limited to, preservation, salvage, partial salvage, or no mitigation necessary.	Development Application Review	Prior to Issuance of Grading Permit	Archaeologist and Community Development Director

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
	CR-2. Archaeological Monitoring. Where recommended in culturally-sensitive areas pursuant to Survey and Mitigation Reports (CR-1 above), archeological monitoring of earth-disturbing activities shall be conducted. The monitoring certified archaeologist will identify any prehistoric or historic resources exposed, complete a preliminary evaluation of the resource, and recommend appropriate resource management for the treatment of the resource. If additional or unexpected archaeological features are discovered, the archaeologist shall report such findings to the City. If the resources are found to be significant, the archaeologist shall determine, in consultation with the City, appropriate actions for further exploration and/or salvage recovery.	Plan Check and Construction Monitoring	Prior to Issuance of Grading Permit and During Construction	Archaeologist and Community Development Director
	CR-3. Paleontological Monitoring. Monitoring for fossil material should be conducted by a qualified paleontologist during construction grading activities within older alluvium (Pleistocene), in order to avoid any disturbances to possible unknown or unidentified paleontological resources.	Plan Check and During Construction [Only within older alluvium (Pleistocene) indicated by the letters Qpf on EIR Exhibit 5.5-1 Geology]	Prior to Issuance of Grading Permit and during construction	Community Development Director
5.14 Aesthetics	[No Mitigation Measures are necessary.]			

CHINO SUBAREA 2 ('THE PRESERVE')
MITIGATION MONITORING PROGRAM (Cont.)

EIR Section	Mitigation Measures	Method of Verification	Timing of Verification	Responsible Party
5.15 General Plan Consistency	[No Mitigation Measures are necessary.]			

ATTACHMENT TO MITIGATION MONITORING PROGRAM
CHINO SUBAREA 2 RESOURCE MANAGEMENT PLAN CHECKLISTS

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).

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.
☐	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).

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.

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.

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.

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.

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.

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

FINDINGS, FACTS IN SUPPORT OF FINDINGS AND STATEMENT OF OVERRIDING CONSIDERATIONS REGARDING THE ENVIRONMENTAL IMPACT REPORT FOR THE PRESERVE (CHINO SUBAREA 2) (SCH No. 2000121036)

1.0 INTRODUCTION

1.1 State Law. The State Guidelines ("Guidelines") promulgated pursuant to the California Environmental Quality Act ("CEQA") provide:

No public agency shall approve or carry out a project for which an EIR has been completed which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:

a. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR *(hereinafter referred to as "finding (1)").*

b. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency *(hereinafter referred to as "finding (2)").*

c. The proposed mitigation measures would substantially lessen the impact, but not to a level of less than significant, and there are specific economic, legal, social, technological or other considerations, including provision of employment opportunities for highly trained workers, that make infeasible any additional mitigation measures or project alternatives identified in the Final EIR *(hereinafter referred to as "finding (3)").*

The required findings shall be supported by substantial evidence in the record. (Guidelines, Section 15091).

1.2 **Findings.** An Environmental Impact Report ("EIR") pursuant to CEQA has been prepared by the City of Chino. The EIR for The Preserve Specific Plan (Chino Subarea 2) ("Project") identifies significant effects on the environment which may occur as a result of the Project. Section 2.0 of this Attachment identifies the significant environmental effects of the Project which cannot feasibly be mitigated below a level of significance. Section 3.0 sets forth potential environmental effects of the Project which are not significant because of the design of the Project or which can feasibly be mitigated below a level of significance. Section 4.0 summarizes the alternatives discussed in the EIR and makes findings with respect to the feasibility of alternatives and whether the alternatives would lessen the significant environmental effects of the Project. Section 5.0 sets forth a Statement of Overriding Considerations with respect to the Project.

The following sets forth all significant effects of The Preserve Specific Plan for Chino Subarea 2, and with respect to each effect, makes one or more of the findings set forth in the Introduction above, states facts in support of such findings, and, as appropriate, refers to the Statement of Overriding Considerations which is attached hereto.

The Final Environmental Impact Report ("FEIR"), and the administrative record concerning the Project provide additional facts in support of the findings herein. The mitigation measures set forth in the Mitigation Monitoring Program (Attachment B) are incorporated by reference in these findings, and the findings in Sections 2.0 and 3.0 refer to individual mitigation measures as appropriate.

1.3 Feasible Mitigation Defined. To the extent that a project is subject to CEQA, a public agency may not approve the project as proposed if feasible mitigation measures or feasible alternatives are available that would substantially lessen the project's significant environmental effects. (Public Resources Code Section 21002). Based on Section 21002, both the California Resources Agency and the State's courts have recognized that, in approving projects with significant environmental effects, public agencies have an obligation to modify projects, to the extent *feasible*, to substantially lessen or avoid such effects. (CEQA Guidelines, Sections 15002, subd. (a)(3), 15021, subd. (a)(2); *Sierra Club v. Gilroy City Council* (1990) 222 Cal.App.3d 30, 41 [271 Cal.Rptr. 393].)

Public Resources Code Section 21061.1 defines "feasible" to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social and technological factors." CEQA Guidelines Section 15364 adds another factor: "Legal" considerations. (*See also, Citizens of Goleta Valley v. Board of Supervisors* ("*Goleta II*") (1990) 52 Cal.3d 553, 565 [276 Cal.Rptr. 410].) An agency may reject mitigation measures or environmentally superior alternatives as being infeasible if they frustrate an agency's ability to meet the objectives of a proposed project. (*See, City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 410, 416-417 [183 Cal.Rptr. 898; *Sequoyah Hills Homeowners Association v. City of Oakland* (1993) 23 Cal.App.4th 704, 715 [29 Cal.Rptr.2d 182].)

The obligation to substantially lessen or avoid significant effects, where feasible, is implemented, in part, through the adoption of "CEQA" findings, as mandated by Public Resources Code Section 21081. The parallel section in the CEQA Guidelines is Section 15091, which provides that, before an agency can approve a project for which an EIR has identified significant environmental effects, the agency must first adopt "one or more findings for each [such] ... significant effect." For each effect, the agency's findings must reach one or more of three (3) permissible conclusions.

The first possible finding is that "[c]hanges or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR." (CEQA Guidelines, Section 15091, subd. (a)(1).)

The second permissible finding is that "[s]uch changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency." (CEQA Guidelines, Section 15091, subd. (a)(2).)

As to the third permissible conclusion, CEQA Guidelines Section 15091 no longer exactly tracks the statutory language of Public Resources Code Section 21081, subdivision (a)(3), which was amended in 1993 and again in 1994. The amended statute provides that the third permissible conclusion is that "[s]pecific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the EIR." (Public Resources Code, Section 21081, subd. (a)(3); *see also* CEQA Guidelines, Section 15091, subd. (a)(3).)

The CEQA Guidelines do not define the difference between "avoiding" a significant environmental effect and merely "substantially lessening" such an effect. The City must therefore glean the meaning of these terms from other contexts in which the terms are used. Public Resources Code Section 21081, on which CEQA Guidelines Section 15091 is based, uses the term "mitigate" rather than "substantially lessen". Such an understanding of the statutory term is consistent with Public Resources Code Section 21002, which, as noted earlier, uses the terms "substantially lessen" and "avoid", but does not use the word "mitigate."

For purposes of these Findings, the term "avoid" refers to the effectiveness of one or more mitigation measures to reduce an otherwise significant effect to a *less-than-significant level.* In contrast, the term "substantially lessen" refers to the effectiveness of such a measure or measures to substantially reduce the severity of a significant effect, but not to reduce that effect to a less-than-significant level.

Although CEQA Guidelines Section 15091 requires only that approving agencies specify that a particular significant effect is "avoid[ed] or substantially lessen[ed]", these Findings, for purposes of clarity, in each case will specify whether the effect in question has been avoided (i.e., reduced to a less-than-significant level), or has simply been substantially lessened but remains significant.

In seeking to effectuate the substantive policy of CEQA to substantially lessen or avoid significant environmental effects to the extent feasible, an agency, in adopting findings, need not necessarily address the feasibility of *both* mitigation measures and environmentally superior alternatives when contemplating approval of a proposed project with significant impacts. Where a significant impact can be mitigated to an "acceptable" level solely by the adoption of feasible mitigation measures, the agency, in drafting its findings, has no obligation even to consider the feasibility of any environmentally superior alternative that could also substantially lessen or avoid that same impact — even if the alternative would render the impact less severe than would the proposed project as mitigated. (*Laurel Hills Homeowners Association v. City Council* (1978) 83 Cal.App.3d 515, 521 [147 Cal.Rptr. 842]; *see also Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 730-731 [270 Cal.Rptr. 650]; and *Laurel Heights Improvement Association v. Regents of the University of California ("Laurel Heights I")* (1988) 47 Cal.3d 376, 400-403 [253 Cal.Rptr. 426].)

In these Findings, the City of Chino first addresses the extent to which each significant environmental effect can be substantially lessened or avoided through the adoption of feasible mitigation measures. Only after determining that, even with the adoption of all feasible mitigation measures, an effect is significant and unavoidable does the City address the extent to which alternatives described in the FEIR are (i) environmentally superior with respect to that effect and (ii) "feasible" within the meaning of CEQA.

In cases in which a project's significant effects cannot be mitigated or avoided, an agency, after adopting proper findings, may nevertheless approve the project if it first adopts a statement of overriding considerations setting forth the specific reasons why the agency found that the "benefits of the project outweigh the significant effects on the environment." (Public Resources Code, Section 21081, subd. (b); *see also,* CEQA Guidelines, Sections 15093, 15043, subd.(b).) In the Statement of Overriding Considerations found at the end of these Findings, the City identifies the specific economic, social, and other considerations that, in its judgment, outweigh the significant environmental effects that the Project will cause.

The California Supreme Court has stated that "[t]he wisdom of approving ... any development project, a delicate task which requires a balancing of interests, is necessarily left to the sound discretion of the local officials and their constituents who are responsible for such decisions. The law as we interpret and apply it simply requires that those decisions be informed, and therefore balanced." (*Goleta II, supra,* 52 Cal.3d at 576 [276 Cal.Rptr. 410].)

1.4 Record of Proceedings. For purposes of CEQA, and the Findings as set forth herein, the Record of Proceedings (the "Record") for the City's decision on the Project consists of the following documents:

1. The City of Chino General Plan;

2. All Notices of Preparation, as amended, and other public notices issued by the City in conjunction with the Project;

3. The *FEIR for the Preserve Project, including its Resources Management Plan* (City of Chino, 2003) (including all Appendices)(hereinafter the "FEIR");

4. The *Draft EIR for the Preserve Project* (City of Chino, 2001) (including all Appendices (hereinafter the "DEIR");

5. The revised Biological Resources, Transportation and Circulation, and Water Supply chapters of the Draft EIR (City of Chino, 2002)(hereinafter the "RDEIR");

6. The Preserve Project's Specific Plan (City of Chino, 2003) and associated General Plan Amendment (hereinafter the "Specific Plan");

7. All comments submitted by public agencies or members of the public during the public comment period on the Draft SEIR, the Recirculated chapters of the Draft EIR, the Final EIR and the Resources Management Plan, and responses to those comments, as well as comments on the Preserve Project's Specific Plan;

8. All staff reports, memoranda, maps, letters, minutes of meetings, referrals, and other planning documents prepared by City staff relating to the Project;

9. All testimony, documents, and other evidence presented by landowners and members of the public and their representatives within the Project Area;

10. All testimony and documents submitted to the City by public agencies and members of the public in connection with the Project;

11. Minutes, transcripts, recordings and videotapes of all workshops, information sessions, public meetings, and public hearings held by the City in connection with the Project;

12. Any documentary or other evidence submitted to the City at such workshops, information sessions, public meetings and public hearings.

13. Matters of common knowledge to the City Council, including, but not limited to, the following:

a. The City General Plan, including the Land Use Map and elements thereof;

b. The Zoning Ordinance of the City of Chino;

c. The City of Chino Municipal Code; and

d. Other formally adopted policies and ordinances.

14. All pleadings and court orders filed in San Bernardino County Superior Court case no. RCV 0624284, Chino Land & Water Co. , Inc. vs. Lewis Investment Company, LLC, etc., et al.

Items listed under 1 through 13.a. are in the custody of the City Planning and Community Development Department, located at 13220 Central Avenue, Chino, California 91708.

Items 13.b., 13.c., 13.d and 14 are in the custody of the City Clerk's Office, located at 13220 Central Avenue, Chino, California 91708.

1.4 Hearing Process. The scoping process for the Preserve Project Specific Plan has essentially spanned three years, from early 2000 to the present. The public and affected agencies have been involved in raising environmental issues since the Project area was placed within the City's Sphere of Influence by the San Bernardino Local Agency Formation Commission and planning efforts began.

A notice of preparation ("NOP") for the Draft EIR was originally released on December 5, 2000, with an Amended NOP being released on January 5, 2001. The issues raised in response to the NOP, as amended, were addressed in the Draft and Final EIR. The DEIR was released on September 18, 2001 and circulated for 45 days for public review and comment, with the comment period ending November 1, 2001. The RDEIR concerning Biological Resources, Transportation and Circulation, and Water Supply was recirculated for 45 days, with the comment period ending on September 16, 2002. Thereafter the FEIR was prepared with responses to comments, as well as a Resources Management Plan, and released for review on January 31, 2003.

A public hearing on the FEIR was held by the City's Planning Commission on February 24, 2003, where approval of the Project and certification of the EIR was recommended by the Planning Commission. The City Council held a public hearing on March 11, 2003, continued the hearing to March 25, 2003 , when they approved the Project and certified the FEIR .

2.0 FINDINGS REGARDING IMPACTS THAT CANNOT BE MITIGATED BELOW A LEVEL OF SIGNIFICANCE

2.1 Land Use

2.1.1 Significant Effect. **Land use change from rural to urban.** Implementation of The Preserve Specific Plan will result in a fundamental change in the rural character of the plan area to a more suburban or urban setting. The proposed project will accelerate the conversion of existing agricultural and dairy uses to a mix of residential, commercial, business park, industrial, airport-related uses, open space/active recreation uses (OS-R), and public facilities. Approximately 85 percent of the project area is currently in agriculture and dairy use, with the remaining 15 percent largely in other open space, recreation and institutional uses. This change in character is significant for the plan area and cumulatively significant for the Chino Basin.

Findings. The City Council hereby makes finding (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) The proposed Specific Plan includes design features that minimize potential land use impacts at plan buildout. These features include but are not limited to:

- A compact urban form and community core; a gradation of land use intensity/density from the community core outward, and from northerly portions of the plan near Chino Airport south to the open space and sensitive resources below the 566' elevation; appropriate buffering and separation of potentially incompatible uses through application of linear open space (e.g. Community Paseo and Open Space System, linear park and other recreational open space); retention and consolidation of the major open space resources within a vast, manageable open space unit below the 566' elevation; and preserved opportunities for long-term agricultural use within agricultural units defined by the AG and AG/OS-N designations. (See DEIR, Pages 5.1-1 to 5.1-19)

(2) Implementation of policies in the General Plan Amendment through provisions of the Specific Plan will mitigate land use impacts to the extent feasible. This includes the application of various specific plan overlay zones to reduce potential land use impacts and implementation of a right to farm policy designed to minimize conflicts between urban growth and continuing agricultural operations. (See Pages 144 to 146 of the Specific Plan)

(3) None of the build alternatives (i.e. Alternatives other than "No Project") would avoid the irreversible conversion of land from rural to urban character.

(4) It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

(5) Ultimately, there is a finite amount of land that is suitable for agricultural uses. The purchase of fee title or of agricultural conservation easements over other agricultural parcels off-site would not avoid, reduce or fully compensate for the impact of converting land in the Project area to urban uses because it would not offset the loss of agricultural land caused by the Project. There would still be a net reduction in the total amount of land suitable for agricultural use that is available for such use. The same analysis applies for purposes of mitigating the loss of privately owned agricultural land treated as a loss of open space. There are no measures available to fully mitigate the loss of open space that will be converted to urban uses. The views and open space that will be lost in the Project area cannot be replaced by preserving existing space in areas outside of the Project area.

Supporting Explanation: An unavoidable impact of the Specific Plan will be a change in land uses from rural to urban. Such a change is a fundamental policy decision which has been made by the City Council with the adoption of the General Plan Amendment and Specific Plan. While there is a finite amount of land within the City which can be made available for agricultural and open space uses, this shift in land uses has been mitigated to the extent feasible, while still accomplishing the City's policy goals, through the Specific Plan's adoption of a compact urban form and community core to restrict urban areas to the northern portion of the plan area; by adopting a gradation of land use intensities and densities radiating from the community core with the most intense and dense land uses to less intense and less dense urbanization from north to south; by avoiding any new development in areas with sensitive biological resources below the 566' line, and by requiring appropriate buffers between urban and agricultural uses both above and below of the 566' line. Moreover, the Specific Plan has retained opportunities for agricultural uses to continue wherever located pursuant to the Specific Plan's right to farm policies as well as in areas with AG and AG/OS-N land use designations. It has also preserved a vast, manageable and contiguous agricultural and open space area below the 566' line which will not be developed with urban uses. While these features reduce the impacts of changing from rural to urban land uses, they do not reduce it to a level of less than significant.

2.1.2 Significant Effect. **Land use conflicts between urban and agricultural uses.** Potentially significant urban use conflicts with adjacent agriculture may occur during the implementation of The Preserve Specific Plan (i.e. during the transition phase). The types of impacts commonly associated with adjacent agricultural and urban uses include, but are not limited to dust, harmful chemicals, noise, odor and flies, intrusion by pets, trespass and vandalism. At buildout of The Preserve Specific Plan, land use compatibility impacts for the plan area would be substantially reduced, although the Project may still contribute to cumulative land use conflicts during the long-term transition of the greater Chino Valley dairylands to urban uses. (See, DEIR, Pages 5.1-16 to 5.1-17)

Findings. The City Council hereby makes finding (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) The proposed Preserve Specific Plan includes design features that minimize potential land use impacts at plan buildout. These features include but are not limited to:

A compact urban form and community core; a gradation of land use intensity/density from the community core outward, and from northerly portions of the plan near Chino Airport south to the open space and sensitive resources below the 566' elevation; appropriate buffering and separation of potentially incompatible uses through application of linear open space (e.g. Community Paseo and Open Space System, linear park and other recreational open space, 100' wide ag/urban buffer along 566' elevation line); retention and consolidation of the major open space resources within a vast, manageable open space unit below the 566' elevation; and preserved opportunities for long-term agricultural use within agricultural units defined by the AG and AG/OS-N designations.

(2) Implementation of policies in the Preserve Project's Specific Plan will mitigate land use impacts to the extent feasible. This includes the application of various specific plan overlay zones to reduce potential land use impacts.

(3) None of the build alternatives (i.e. Alternatives other than "No Project") would avoid the potentially significant urban use conflicts with adjacent agriculture that would occur during the implementation of The Preserve Specific Plan (i.e. during the transition phase).

(4) The Specific Plan includes "Right-to-Farm" provisions and compatibility findings requirements, including minimum 100 ft. setback requirements between existing animal uses and any residential buildings, that will reduce the potential for urban use conflicts with agricultural/dairy operations during the transition to urban uses.

(5) It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

Supporting Explanation: To the greatest extent feasible, the potential conflicts between urban and agricultural land uses have been reduced by the Specific Plan's design features which created a compact urban form with urbanization radiating from the community core outward and the preservation of almost half of the entire Plan Area in open space and agricultural land use designations. Moreover, the Plan includes right to farm policies which will allow agricultural uses to continue within the Specific Plan area and will require minimum 100 foot setback requirements between existing animal uses and residential buildings so as to minimize conflicts. In addition, a permanent 100 foot

buffer area will be established along the 566' line to separate urban uses from the agricultural uses below the 566' line to further minimize land use conflicts.

2.1.3 Significant Effect. **Land use conflicts between urban uses and IEUA Co-Composting Facility.** Until the IEUA Co-Composting Facility is relocated or enclosed, nearby properties may be adversely impacted by the noise, odors, insects, dust, traffic and visual/aesthetic impacts associated with facility operations. The Specific Plan Co-Composting Facility Overlay (300' interim buffer) and the planned enclosure of this facility by IEUA would reduce these potentially significant adverse impacts to residential uses and other sensitive receptors (e.g. schools). However, there would remain a potentially significant land use conflict until such time as the Co-Composting Facility either is enclosed or relocates. (See, DEIR, Pages 5.1-17 to 5.1-18)

Findings. The City Council hereby makes findings (2) and (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) The proposed Specific Plan includes design features that minimize potential land use impacts at Specific Plan buildout. This includes appropriate buffering and separation of potentially incompatible uses through application of linear open space (e.g. Community Paseo and Open Space System, linear park and other recreational open space);

(2) The proposed Specific Plan includes an Interim Co-Composting Facility Overlay (CCO) to be applied to properties within 300 feet of the Co-Composting Facility. Any residential projects within this overlay must provide a 300-foot interim buffer until such time as the Co-Composting Facility relocates;

(3) The relocation of the Co-Composting Facility is a change or alteration that is within the responsibility and jurisdiction of IEUA and not the City of Chino. The timing of such relocation is determined by IEUA and the environmental analysis and any necessary mitigation for such relocation will be the responsibility of IEUA;

(4) None of the build alternatives (i.e. Alternatives other than "No Project") would avoid the potentially significant land use conflicts with the Co-Composting Facility that may occur during the early phases of The Preserve Specific Plan (i.e. during the transition phase).

(5) It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

Supporting Explanation: Until such time as the IEUA Co-Composting Facility is relocated or fully enclosed, these land use conflicts will be present. In order to minimize such conflicts, the Specific Plan will buffer adjoining residential land uses by requiring such uses to be

setback at least 300 feet from the Facility. Until the Facility relocates, that 300 foot setback must remain in place. Linear parks and recreational open space may also be used to buffer urban uses from the Co-Composting Facility in order to separate these land uses and minimize impacts from the odors, insects, dust, traffic and visual impacts associated with the operation of the Facility.

2.1.4 Significant Effect. **Conversion of agricultural/open space to urban uses.** Implementation of the Specific Plan will result in the conversion of approximately 2,055 acres of agricultural open space to urban uses. Although limited to approximately 38% of the total plan area, this loss of open space is irretrievable, and is considered a significant, unavoidable impact of the proposed project. This loss of open space is cumulatively significant within the Chino Valley Dairy Preserve. (See, DEIR, Pages 5.1-23 to 5.1-25)

Findings. The City Council hereby makes finding (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) The proposed Specific Plan includes design features that minimize potential land use impacts and conserve open space resources in a manageable system. These features include but are not limited to:

A compact urban form and community core; a gradation of land use intensity/density from the community core outward, and from northerly portions of the plan near Chino Airport south to the open space and sensitive resources below the 566' elevation; appropriate buffering and separation of potentially incompatible uses through application of linear open space (e.g. Community Paseo and Open Space System, linear park and other recreational open space); retention and consolidation of the major open space resources within a vast, manageable open space unit below the 566' elevation; and preserved opportunities for long-term agricultural use within agricultural units defined by the AG and AG/OS-N designations.

(2) Implementation of policies in the General Plan Amendment and the Specific Plan will mitigate land use impacts to the extent feasible. This includes the application of various Specific Plan overlay zones to preserve and protect open space resources.

(3) None of the build alternatives (i.e. Alternatives other than "No Project") would avoid the irretrievable loss of open space that would occur with implementation of The Preserve Specific Plan.

(4) Ultimately, there is a finite amount of land that is suitable for agricultural uses. The purchase of fee title or agricultural conservation easements over other agricultural parcels off-site would not completely avoid, reduce or fully compensate for the impact of converting land in the Project area to urban uses because it would not offset the loss of agricultural land caused by the Project. There would still be a net reduction in the total amount of land suitable for agricultural use that is available within the Project area for

such use. The same analysis applies for purposes of mitigating the loss of privately owned agricultural land treated as a loss of open space. There are no measures available to fully mitigate the loss of open space that will be converted to urban uses. The views and open space that will be lost in the Project area cannot be replaced by preserving existing open space in areas outside of the Project area.

(5) It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

Supporting Explanation: An unavoidable impact of the Specific Plan will be a change in land uses from agricultural/open space to urban. Such a change is a fundamental policy decision which has been made by the City Council with the adoption of the General Plan Amendment and Specific Plan. While there is a finite amount of land within the City which can be made available for agricultural and open space uses, this shift in land uses has been mitigated to the extent feasible, while still accomplishing the City's policy goals, through the Specific Plan's adoption of a compact urban form and community core to restrict urban areas to the northern portion of the plan area; by adopting a gradation of land use intensities and densities radiating from the community core with the most intense and dense land uses to less intense and less dense urbanization from north to south; by avoiding any new development in areas with sensitive biological resources below the 566' line, and by requiring appropriate buffers between urban and agricultural uses both above and below the 566' line. Moreover, the Specific Plan has retained opportunities for long term agricultural and open space uses both above and below the 566' line, as well as in areas with AG and AG/OS-N land use designations and preserved a vast, manageable and contiguous agricultural and open space area below the 566' line which will not be developed with urban uses. While these features reduce the impacts of changing from agricultural/open space land uses to urban land uses, they do not and cannot reduce it to a level that is less than significant due to the finite supply of land available within the City.

2.2 Agriculture

2.2.1 Significant Effect. **Loss of prime farmland.** Implementation of the Specific Plan would result in the conversion of approximately 1,265 acres of prime farmland to non-agricultural use. This represents approximately 56% of the total 2,268 acres of prime farmland within the Plan area, and is considered a significant impact. Approval of the Project and the introduction of residential and other urban uses within the Plan area will accelerate the conversion of prime farmlands. This is considered a significant direct and cumulative impact of the Project. (See, DEIR, Pages 5.2-10 to 5.2-12)

Findings. The City Council hereby makes finding (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) Project design features that reduce significant impacts to agricultural resources include retention of approximately 862 acres in agricultural-related use designations, and Specific Plan right-to-farm provisions which allow existing agricultural uses to continue wherever located in the Plan area.

(2) agencies to identify locations where continued agricultural uses would be preferable.

None of the build alternatives (i.e. Alternatives other than "No Project") would avoid the conversion of prime farmland to urban use that would occur with implementation of Specific Plan.

(3 Ultimately, it must be recognized that there is a finite amount of land that is suitable for agricultural uses. The purchase of fee title or of agricultural conservation easements over other agricultural parcels off-site would not fully avoid, reduce or compensate for the impact of converting land in the Project area to urban uses because it would not offset the loss of agricultural land caused by the Project. There would still be a net reduction in the total amount of land suitable for agricultural use that is available for such use.

(4) Mitigation Measure AG-1: "The City of Chino shall participate in the Williamson Act Easement Exchange Program 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 within the Agricultural (AG), Agricultural/Open Space-Natural, and as appropriate subject to conditional use permit, the Open Space-Natural (OS-N), designated areas of the plan area." In this manner the City will be able to reduce the further loss of agricultural lands, but not eliminate such loss completely, since not all agricultural lands are under Williamson Act contracts.

(5) Mitigation Measure AG-2: "The City of Chino shall participate in a coordinated multi-agency planning program for sustainable agricultural uses within the Lower Chino/ Prado Basin. This program should involve the principal public landowners within the basin, including but not limited to the U.S. Army Corps of Engineers, Orange County Flood Control District and County of San Bernardino. Components of this program may include an agricultural feasibility study, acquisitions plan, and management plan for sustainable agricultural uses within the basin." In this manner, the City will seek to ameliorate the loss of agricultural lands by working with other public agencies to identify locations where continued agricultural uses would be preferable.

(6) It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

(7) Master planning for the Plan area and its annexation to the City of Chino was specifically contemplated by LAFCO's inclusion of the area within the City's sphere of influence. The pattern of cancellation or non-renewal of Williamson Act contracts within the Plan area dates back to 1992-93, precipitating a transition to urban uses, long before the Preserve Project was ever proposed.

Supporting Explanation: Ultimately, it must be recognized that there is a finite amount of land that is suitable for agricultural uses within the City. Nonetheless, the Specific Plan designates areas for permanent agricultural uses and will allow existing agricultural uses to continue wherever located. In addition, to further mitigate the impacts from the loss of prime farmland, the City has committed to the purchase of fee title or agricultural conservation easements over other agricultural parcels with proceeds from Williamson Act contract cancellation fees through participation in the Williamson Act Easement Exchange Program. While this would stem the further loss of prime farmland, it could not fully avoid, reduce or compensate for the impact of converting land in the Preserve Project area to urban uses because there is a finite supply of farmland. There would still be a net reduction in the total amount of land suitable for agriculture that is available for such use.

2.2.2 Significant Effect. **Acceleration of Williamson Act contract non-renewals and cancellations.** The Project would accelerate Williamson Act contract non-renewals and/or cancellation notices on the remaining 1,148 acres under contract within the Plan area. This is considered a significant and unavoidable impact of the proposed Project, and is cumulatively significant within the Chino Basin Dairy Area. (See, DEIR, Pages 5.2-10 to 5.2-13)

Findings. The City Council hereby makes finding (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) Project design features that reduce significant impacts to agricultural resources include retention of approximately 862 acres in agricultural-related use designations, and Specific Plan right-to-farm provisions which allow existing agricultural uses to continue wherever located in the Plan area.

(2) Mitigation Measure AG-1: "The City of Chino shall participate in the Williamson Act Easement Exchange Program 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 within the Agricultural (AG), Agricultural/Open Space-Natural, and as appropriate subject to conditional use permit, the Open Space-Natural (OS-N), designated areas of the plan area." In this manner the City will be able to somewhat reduce the further loss of agricultural lands within the overall Project area, but not eliminate such loss completely, since private landowners are always able to decide not to renew their Williamson Act contract.

(3) Mitigation Measure AG-2: "The City of Chino shall participate in a coordinated multi-agency planning program for sustainable agricultural uses within the Lower Chino/ Prado Basin. This program should involve the principal public landowners within the basin, including but not limited to the U.S. Army Corps of Engineers, Orange County Flood Control District and County of San Bernardino. Components of this program may

include an agricultural feasibility study, acquisitions plan, and management plan for sustainable agricultural uses within the basin." In this manner, the City will seek to ameliorate the loss of agricultural lands by working with other public agencies to identify locations where continued agricultural uses would be preferable.

(4) None of the build alternatives (i.e. Alternatives other than "No Project") would avoid an acceleration of Williamson Act contract non-renewals and/or cancellation notices that would occur with implementation of The Preserve plan.

(5) It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

Supporting Explanation: Private landowners always hold the right to non-renew or seek the cancellation of their Williamson Act contracts. In order to slow the rate of cancellations or non-renewals, the Specific Plan has designated 862 acres in agricultural-related land uses, as well as adopted right to farm policies in order to allow farming to continue for as long as the landowner desires to do so. In addition, to further reduce this impact, the City has committed to participate in the Williamson Act Easement Exchange Program to purchase agricultural conservation easements to permanently protect farmland, and to participate in a multi-agency planning program for the Lower Chino/Prado Basin for sustainable agricultural uses. While these actions will serve to reduce the impacts of the Project, they will not reduce or avoid it completely.

2.2.3 Significant Effect. **Offsite relocation of dairies.** Development of the Project area will accelerate the relocation of dairies from the Chino Basin Dairy Area and plan area, resulting in an annual milk production value loss to the region. In addition, the Santa Ana Regional Water Quality Control Board has adopted requirements for dairies to retain and control their surface water drainage, and to limit the amount of manure which may be stockpiled at dairies. Approximately 700 acres of cultivated cropland will be converted, although some of these farming operations may choose to relocate to AG and AG/OS-N designated areas within the Plan area. New dairies and expansions of existing dairies within these designated areas below the 566' elevation are prohibited under the proposed Specific Plan. As such, the proposed Project will result in a significant direct and cumulative impact on agricultural productivity. (See, DEIR, Pages 5.2-11 to 5.2-13)

Findings. The City Council hereby makes findings (2) and (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) Project design features that partially reduce significant impacts to agricultural resources include retention of approximately 862 acres in agricultural-related use designations, and Specific Plan right-to-farm provisions which allow existing agricultural uses to continue wherever located in the Plan area.

(2) Mitigation Measure AG-1: "The City of Chino shall participate in the Williamson Act Easement Exchange program 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 within the Agricultural (AG), Agricultural/Open Space-Natural, and as appropriate subject to conditional use permit, the Open Space-Natural (OS-N), designated areas of the plan area." While this measure will somewhat reduce the further loss of agricultural lands, it will not eliminate such loss completely, nor will it ensure that such lands are used for dairies.

(3) Mitigation Measure AG-2: "The City of Chino shall participate in a coordinated multi-agency planning program for sustainable agricultural uses within the Lower Chino/ Prado Basin. This program should involve the principal public landowners within the basin, including but not limited to the U.S. Army Corps of Engineers, Orange County Flood Control District and County of San Bernardino. Components of this program may include an agricultural feasibility study, acquisitions plan, and management plan for sustainable agricultural uses within the basin." With this measure, the City will seek to ameliorate the loss of agricultural lands by working with other public agencies to identify locations where continued agricultural uses would be preferable; however, there is no assurance that dairies would relocate to such other areas or that other jurisdictions would approve of dairy uses.

(4) None of the build alternatives (i.e. Alternatives other than "No Project") would avoid an acceleration of the relocation of dairies and corresponding loss of regional agricultural productivity that would occur with implementation of The Preserve plan.

(5) Ultimately, there is a finite amount of land that is suitable for agricultural/dairy uses. The purchase of fee title or of agricultural conservation easements over other agricultural parcels off-site would not avoid, reduce or fully compensate for the impact of converting land in the Project area to urban uses because it would not offset the loss of agricultural land and the potential relocation of dairies to other regions caused by the Project. There would still be a net reduction in the total amount of agricultural land suitable for dairy use in the City.

(6) To the extent that dairies relocate to areas outside of the City to other agricultural lands in other jurisdictions, the environmental impacts of approving new dairies would be the responsibility of the jurisdictions approving the new diary location/use.

(7) It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

Supporting Explanation: The relocation of dairies has been happening even in the absence of the Specific Plan's adoption for a number of reasons unrelated to the Specific Plan, such as the Santa Ana Regional Water Quality Control Board's enforcement actions to remediate the contamination of surface and groundwater arising from dairy wastes. The loss of agricultural

productivity caused by the Plan's acceleration of that relocation is an unavoidable result of the City's policy decision to adopt urban land uses for a significant portion of the plan area. However, the City has also provided for the retention of agricultural uses by designating 862 acres of the plan area for agricultural uses, committing to the participation in the Williamson Act Easement Exchange Program for the purchase of permanent agricultural easements, and participating in a coordinated multi-agency planning program with other governmental agencies in the Lower Chino/Prado Basin that will provide for sustainable agricultural uses. While these measures will allow dairies to remain in operation, they will not avoid the loss of agricultural productivity which arises due to dairy relocations.

2.3 Biological Resources

2.3.1 Significant Effect. **Loss of burrowing owl habitat.** The loss of burrowing owl nesting and foraging habitat within the Project area was determined to be significant at the project level and cumulatively significant at the regional level. (See, RDEIR, Pages 5.4-23 to 5.4-44)

Findings. The City Council hereby makes finding (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) Mitigation Measure B-2 "Required Biological Studies" provides: (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 or 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 the 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.

(2) Mitigation Measure B-3 "Resources Management Plan", subsections B-3(3) "Burrowing Owls", B-3(1) "300-Acre Conservation Area", B-3(2) "Alternate Location", B-3(8) "Mitigation Fee" and B-3(10) "Administration and Monitoring" provide as follows: "B-3(3) Burrowing Owls - 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; B-3(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 elevation 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); B-3(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 B-3(1) above; B-3(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 the 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; and B-3(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 into necessary agreements with the chosen entity prior to the acquisition of any property through an irrevocable license, conservation easement, right of entry, or other legally enforceable instrument."

(3) None of the build alternatives (i.e. Alternatives other than "No Project") would avoid an acceleration of the relocation of dairies and corresponding loss of regional agricultural productivity that would occur with implementation of the Specific Plan.

(4) It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

Supporting Explanation: Implementation of the Specific Plan will result in the loss of lands used as burrowing owl habitat in the plan area. In order to mitigate for the loss of that habitat which has varying quality, the Project will be required to create enhanced burrowing owl habitat in suitable locations remote from urban development. Moreover, to prevent impacts to burrowing owls, a pre-construction biological study must be performed by a qualified biologist to

determine the owls' presence on each specific development site and appropriate measures taken to prevent harm to any owls found to be present during construction, including relocation, and the creation of artificial burrows for the owls within the Plan area. The relocation area(s) will be permanently protected and managed by a third party to preserve its biological values. All new development will be required to pay a mitigation fee determined by the City in order to fund the mitigation program that includes acquisition of the relocation areas. The Resources Management Plan also provides for monitoring to ensure the success of mitigation efforts. While all of the above mitigation measures will reduce adverse impacts arising from the loss of burrowing owl habitat, they will not avoid it completely.

2.3.2 Significant Effect. **Loss of raptor habitat.** The loss of raptor foraging habitat within Subarea 2 will contribute to a cumulative significant adverse impact to regional raptor populations. (See, RDEIR, Pages 5.4-31 to 5.4-37)

Findings. The City Council hereby makes finding (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) Mitigation Measures B-2 Required Biological Studies, B-3 Resources Management Plan, B-3(1) 300-Acre Conservation Area, B-3(2) Alternate Location for the 300-Acre Conservation Area, B-3(6) Existing Windrows, B-3(7) Agricultural Easements, B-3(8) Mitigation Fee and B-3(10) Administration and Monitoring, as previously stated above, are all hereby incorporated by reference to reduce this impact.

(2) None of the alternatives would avoid the cumulative loss of regional raptor foraging habitat that would occur with or without implementation of The Preserve plan.

(3) It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

Supporting Explanation: In order to reduce the impacts from the cumulative loss of raptor habitat on a regional level, the Project will implement the Resources Management Plan to create a 300-acre Conservation Area with enhanced habitat values for wildlife, including raptors. This Conservation Area may be situated within the Plan area or in an alternate offsite location and will be permanently protected and managed for the benefit of wildlife by a third party. In addition, the Project will be required to preserve windrows wherever feasible for the benefit of raptors and some agricultural areas which provide raptor foraging habitat will be permanently protected with agricultural conservation easements purchased under the Williamson Act Easement Exchange Program. In order to fund this mitigation, the City will be required to implement a mitigation fee that must be paid before a grading permit is issued. In the foregoing manner, impacts for the loss of raptor habitat will be reduced, but not to level of less than significant on a cumulative level.

2.3.3 Potential Effect. **Loss of land cover types.** The project will result in the loss of approximately 2,349 acres of land cover type above the 566' elevation line. Acres lost above the 566' line include approximately 1,580 acres of agricultural industry (dairy/pasture), 702 acres of cultivated fields (croplands), 1 acre of fallow fields, 38 acres of surface water bodies (dairy detention/livestock watering/irrigation ponds), 1 riparian acre, and 17 acres of windrows. Proposed development will result in the loss of most of the remaining ruderal plant species within the northern portion of Subarea 2 above the 566' line.

Findings. The City Council hereby makes finding (3).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure B-1 Zoning and Land Use Regulation provides: "Zoning and Land Use Regulations: (1) All areas below the 566-fot 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 Measure 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 Resources Management Plan in order to mitigate potential adverse project-specific impacts on biological resources."

(2) Mitigation Measure B-2 "Required Biological Studies" provides: (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 or 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 the 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

(3) Mitigation Measure B-3 "Resources Management Plan", subsections B-3(1) "300-Acre Conservation Area", B-3(2) "Alternate Location", B-3(3) "Burrowing Owls", B-3(5) "Surface Water and Riparian Habitat", B-3(6) "Existing Windrows", B-3(7) "Agricultural Easements", B-3(8) "Mitigation Fee", and B-3(10) "Administration and

Monitoring", provide as follows: "B-3(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 elevation 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); B-3(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 B-3(1) above ; B-3(3) Burrowing Owls - 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; ; B-3(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, RDEIR, Exhibit 5.4.5) 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 designed to improve water quality. Exhibit 5.4.6 in the RDEIR provides an illustrative example of how the drainage area may be designed. 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 agricultural detention basins, as well as other surface water areas that support waterfowl; B-3(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 study 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 trees 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 ornithologist; B-3(7) Agricultural Easements – Under Mitigation Measure AG-1, which addresses mitigation for loss of prime agricultural land, the City has committed to actively pursuing SB 831 Williamson Act cancellation fees to acquire agricultural easements within the Preserve. 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; B-3(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 measure; and B-3(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 into necessary agreements with the chosen entity prior to the acquisition of any property through an irrevocable license, conservation easement, right of entry, or other legally enforceable instrument."

Supporting Explanation: The adoption of the Preserve Specific Plan is a policy decision by the City that fundamentally reflects a choice of urban land uses over rural land uses and the land cover types associated with rural uses. Those mitigation measures identified above will reduce/minimize the Project's impacts on biological resources resulting from the loss of the current and heavily degraded and modified land cover types above the 566' elevation by retaining all lands below the 566' inundation in open space and agricultural uses, require biological studies to determine the presence of sensitive species and mitigation if any such species are found in an area being developed for urban uses, implement a Resources Management Plan to mitigate for the impacts of urban development on the Area's biological resources, set aside in perpetuity a 300 acre Conservation Area, enhance the habitat values of the 300 acre Conservation Area, provide a burrowing owl mitigation program, create new riparian habitat and marsh areas in existing degraded areas, retain existing windrows to the extent possible and provide for a tree planting program for any windrows which cannot feasibly be preserved. They also provide for the imposition of a mitigation fee to fund all of the measures set forth in the Resources Management Plan. Ultimately, it must be recognized that there is a finite amount of land that is suitable for retention in ruderal land cover types within the City. Nonetheless, the Specific Plan designates areas for permanent agricultural uses and a 300-acre Conservation Area that allow for rural land cover types to continue. While these measures will reduce this impact, they will not reduce it to a level of les than significant.

2.4 Transportation and Circulation

2.4.1 Significant Effect. **Traffic impacts on local and regional intersections, streets and highways to LOS "E" or "F".** The projected level of development for the Interim Year (2010) will generate a total of approximately 71,499 trip-ends per day with 5,722 vehicles per hour during the AM peak hour and 7,793 vehicles per hour during the PM peak hour. For the ultimate Buildout conditions (post 2020), development is estimated to generate a total of approximately 244,930 trip-ends per day with 18,993 vehicles per hour during the AM peak hour and 25,911vehicles per hour during the PM peak hour.

For Interim Year (2010) Without Project traffic conditions, fifteen (15) intersections are projected to be at LOS "E" or "F". For the Interim Year (2010) With Project conditions, twenty-five (25) intersections are projected to be at LOS "E" or "F", representing an increase of 10 intersections adversely impacted. By the Year 2020, thirty-five (35) intersections are projected to be at LOS "E" or "F" for the Without Project condition. Forty-two (42) intersections are projected to be at LOS "E" or "F" for the With Project condition by 2020 and 46 intersections at buildout of theProject. This represents a significant project and cumulative effect on the area wide circulation system. (See, RDEIR, Pages 5.7-13 to 5.7-54)

Findings. The City Council hereby makes findings (2) and (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) Mitigation Measure T-1 provides: "Notification. Since the Project contributes significant traffic to a State Highway (I-15 Freeway, SR-71 Freeway, SR-60 Freeway, and SR-91 Freeway), and it also contributes significant traffic to roadway segments serving CMP intersections within the jurisdictions of the City of Chino Hills, City of Ontario, County of San Bernardino, City of Norco, City of Corona, and the County of Riverside, the City of Chino shall notify the Congestion Management Agency (SANBAG), the California Department of Transportation (CalTrans), and the aforementioned cities in accordance with CMP requirements. Each of these agencies must be provided with a copy of the CMP traffic study once the document is accepted by the City of Chino.

(2) Mitigation Measure T-2 provides: "Internal Roadway Improvements. The proposed project shall construct or otherwise provide for all internal roadway improvements. The provision of such improvements shall be phased to address the incremental impacts of individual development projects."

(3) Mitigation Measure T-3 provides: "Regional/Subregional Project Participation. The City shall work cooperatively through SCAG and SANBAG to develop regional/subregional projects and identify regional transportation funding needed to minimize future freeway deficiencies. The City will actively participate in other future regional and/or subregional efforts to reduce freeway congestion."

(4) Mitigation Measure T-4 provides: "Regional/Subregional Transportation Planning. The City shall participate in planning efforts to develop subregional and/or regional transportation facilities based on equitable cost sharing programs among cities and counties."

(5) Mitigation Measure T-5 provides: "Traffic Operations and Systems management. The City shall provide traffic operations and traffic systems management (TSM) improvements, including signal system coordination, automated traffic control, Smart Corridors, intelligent transportation systems, and other measures."

(6) Mitigation Measures T-6 provides: "Project Review for Trip Reduction and Travel Demand Management. Individual development projects shall be reviewed by the City for integration of trip reduction measures, travel demand management (TDM) strategies and alternative transportation modes, consistent with the Specific Plan."

(7) Mitigation Measure T-7 provides: "Transit Feasibility Study. In the initial phases of development, the City shall require that a Transit Feasibility Study be prepared of the proposed project transit system. The Feasibility Study should address the timing of transit development vis-à-vis development phasing, and the interface with future regional transit works. To respond to potential issues related to the development of such a transit system, the following actions must be undertaken: identify the various funding mechanisms associated with the construction and operation of the system; require each proposed project to provide adequate right of way for such a system and construct the required infrastructure; establish design criteria and an evaluation process for determining transit stop locations that ensure pedestrian access prior to tentative map approval; operational issues, such as the future management of the system, may be deferred until the appropriate time, based upon discussions with current regional transit providers."

(8) Mitigation Measure T-8 provides: "Transit Service Extensions. The City shall contact appropriate transit agencies to encourage an expansion of transit services up to and within the project area."

(9) Mitigation Measure T-9 provides: "Project Traffic Studies. Traffic studies shall be required as deemed necessary by the City Engineer. Each study will identify the timing, and extent of required improvements to adequately evaluate future traffic impacts of individual projects needed to mitigate the impacts of such development."

(10) The Project includes a compact urban form and community core that has been designed to include transit. The Traffic Impact Assessment is required to allocate all vehicles trips to the surrounding circulation system without factoring in any potential reduction in vehicle trips due to future transit implementation within the plan area, or extensions of regional transit service to the site.

(11) Of the build alternatives, the Environmental Land Use Alternative minimizes impacts to transportation and circulation. However, as described in Section 4.0 Findings Regarding Alternatives, this alternative would not attain the basic project objectives.

(12) It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

Supporting Explanation:. As noted in the RDEIR, the Project will have impacts to a number of streets, highways and intersections that result in their operation at LOS "E" or "F" at ultimate buildout of the Project. In order to mitigate for those impacts, the Project shall construct or otherwise provide for all internal roadway improvements and to phase such improvements to address the incremental impacts of individual development projects. Such impacts of individual development projects shall be addressed through project-level traffic studies, as deemed

necessary by the City Engineer, and such studies shall identify the timing and extent of improvements needed for mitigation. In addition, individual development projects will be required to implement TDM strategies and provide traffic studies as deemed necessary by the City Engineer. The City will also participate in regional level approaches to reduce traffic impacts, such as the SANBAG Congestion Management Plan and regional/subregional transportation planning efforts to develop transportation facilities, and to conduct a Transit Feasibility Study to develop and improve the regional public transit system and ensure that local projects are designed to be compatible with such a system. The City will also encourage the local transit system providers to expand their service to the plan area. All of the foregoing will reduce, but not eliminate, the traffic impacts arising from the buildout of the Project over time.

2.4.2 Significant Effect. **Impacts on 35 freeway segments needed to provide adequate LOS.** The traffic report included an analysis of 35 freeway segments based upon the San Bernardino County CMP. The Project's traffic study identified the number of general use and high occupancy traffic lanes required to accommodate the proposed project and other future development. Providing the number of lanes necessary to provide an adequate level of service for all segments, except those on the SR-91 which are currently under study by the Counties of Riverside, San Bernardino, and Orange, is based upon obtaining adequate funding. A portion of the traffic generated by the proposed project will contribute toward the need to expand these freeway segments. This represents a significant project and cumulative effect on the identified freeway segments. (See, RDEIR, Pages 5.7-41 to 5.7-54)

Findings. The City Council hereby makes findings (2) and (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) Mitigation Measures T-1, T-3, T-4, T-6, and T-7, as set forth in full above, are hereby incorporated by reference for this impact.

(2) Outside of state and federal funding sources, and application of San Bernardino County's Measure "I" half-cent sales tax, no mechanisms are currently in place for local contributions to needed freeway improvements on a project-by-project basis. Similarly, no mechanisms or interagency agreements exist to address full funding and construction of offsite intersection improvements needed by cumulative projects and regional growth. (See, RDEIR, Page 5.7-54)

(3) The Project will provide for the full cost or in-lieu construction of road improvements within the boundaries of the Plan area, including the proportionate share of costs associated with impacts of other regional traffic as determined by the City of Chino. (See, RDEIR, Page 5.7-54)

(4) Of the build alternatives, the Environmental Land Use Alternative minimizes impacts to transportation and circulation. However, as described in Section 4.0 Findings Regarding Alternatives, this alternative would not attain the basic Project objectives.

(5) It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

Supporting Explanation: While the Project will implement a number of mitigation measures designed to reduce the traffic impacts that will arise at buildout, there will nonetheless be impacts on the freeway system that cannot be mitigated for by the City. The Project will contribute, on a cumulative basis, to the need to expand segments of the regional freeway system as identified in the RDEIR. Funding for that expansion may come from federal and state sources, as well as from San Bernardino County's Measure "I" sales tax, but there are no local mechanisms which have been put into place for local jurisdictions to contribute to state freeway improvements on a project by project basis. Consequently, while the Project will be implementing a number of measures designed to reduce the overall traffic produced by the Project, there are no regional or local mechanisms available for funding the needed freeway expansions. Such funding mechanisms will be the responsibility of the State of California and other regional transportation agencies.

2.5 Air Quality

2.5.1 Significant Effect. **Construction activity emissions impacts on air quality.** Project development will create temporary emissions of fugitive dust from soil disturbance, and combustion emissions from on-site construction equipment and from off-site trucks moving dirt, delivering construction materials, and from worker travel. A significant source of air pollution from Project construction will be the dust generated during clearing, excavation and site preparation. Nitrogen oxide (NO_x) emissions are likely to exceed the SCAQMD significance threshold. However, the mobile nature of the on-site construction equipment and off-site trucks will minimize any localized violations of the NO_x or other standards. With mitigation to keep equipment in good tune (low-NO_x tune-ups), average daily construction equipment emissions can be reduced, but not to less than significant levels during maximum grading activity days. While emissions of particulate matter (PM_{10}) will occur with construction activity phased over the long-term buildout of the community, daily emissions would still have the potential to exceed significance thresholds identified by SCAQMD. (See, DEIR, Pages 5.9-17 to 5.9-27)

Findings. The City Council hereby makes finding (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) The proposed project will employ standard mitigation measures, such as dust control measures during construction mandated by the SCAQMD, and energy efficient design practices required by Title 24 of the California Code of Regulations.

(2) Mitigation Measure AQ-2 provides: "Construction Emissions. Per SCAQMD Rule 403, the City shall enforce the following measures during all construction activities: contractors shall use low emission mobile construction equipment where feasible to reduce the release of undesirable emissions; construction contractors shall encourage rideshare and transit programs for project construction personnel to reduce automobile emissions; construction contractors shall water active grading sites at least twice a day, and clean construction equipment in the morning and/or evening to reduce particulate emissions and fugitive dust; construction contractors shall, as necessary, wash truck tires leaving the site to reduce the amount of particulate matter transferred to paved streets as required by SCAQMD Rule 403; construction contractors shall sweep on and off site streets if silt is carried over to adjacent public thoroughfares, as determined by the City Engineer to reduce the amount of particulate matter on public streets; construction contractors shall limit traffic speeds on all unpaved road surfaces to 15 MPH or less to reduce fugitive dust; at the discretion of the City's Planning Director, construction contractors shall suspend grading operations during first and second stage smog alerts to reduce fugitive dust; at the discretion of the City's Planning Director, construction contractors shall suspend all grading operations when wind speeds exceed 25 MPH to reduce fugitive dust; construction contractors shall maintain construction equipment engines by keeping them tuned; construction contractors shall use low sulfur fuel for stationary construction equipment as required by AQMD Rules 431.1 and 431.2 to reduce the release of undesirable emissions; construction contractors shall use existing onsite electrical power to the maximum extent possible. Where such power is not available, the contractor shall use clean fuel generators during the early stages of construction to minimize or eliminate the use of portable generators and reduce the release of undesirable emissions; the construction contractor, in conjunction with the City Engineer, shall locate construction parking to minimize interference on local roads; construction contractors shall ensure that all trucks hauling dirt, sand, soil or other lose materials are covered or should maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code Section 23114 to reduce spilling of material on area roads."

(3) Although project daily PM_{10} emissions during the construction phase have the potential to exceed significance thresholds, these emissions levels are not likely to exceed the substantial daily particulate emissions attributable to current dairy activities within the Plan area (i.e. a No Project Alternative).

(4) Other build alternatives evaluated in the EIR would have similar grading disturbance areas and earthwork requirements as compared to the proposed Project, and would result in similar levels of particulate emissions during construction.

(5) The Preserve is situated in a regional non-attainment area for air quality. It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

Supporting Explanation: Construction of the Project will have significant temporary air quality impacts, especially since the Project is located in a non-attainment air quality basin. In order to reduce the temporary construction activity emissions, the Project will require contractors to comply with SCAQMD Rules 403, 431.1 and 431.2, as well as comply with the mitigation measures identified above to reduce exhaust and particulate emissions of PM10 during

construction activities to the extent feasible by requiring motorized equipment to be kept in tune and good repair, the watering of sites to control dust, the sweeping of streets to control dust, the covering of trucks hauling lose loads of dirt or sand, the use of onsite electrical power sources in lieu of fossil fuel powered generators, and the suspension of construction during smog alerts and windy conditions

2.5.2 Significant Effect. **Project related increases in NOx and CO emissions at Buildout.** Project implementation will create significant increases in CO and NO_x levels due to traffic exhaust emissions. At buildout, Project-related emission levels for the three primary exhaust pollutants (CO, NO_x and ROG) would substantially exceed SCAQMD thresholds. However, displacement of dairy operations will cause a significant net reduction in reactive organic gases and in particulates. There is no basis for comparing pollutants as one type being better or worse than another. The South Coast Air Basin as a whole is in attainment for CO, but not for ozone (created by ROG + NO_x + sunlight), or for particulates. The net effect of Project implementation is that two non-attainment pollutants or precursors (ROG and PM-10) will be significantly reduced, while one non-attainment precursor (NO_x) and one attainment pollutant (CO) will be increased significantly. This air quality effect is cumulatively significant within the South Coast Air Basin non-attainment area. (See, DEIR, Page5.9-26 to 5.9-27)

Findings. The City Council hereby makes finding (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) Effective emissions reduction of mobile source emissions requires a unified transportation system management (TSM) approach where a variety of transportation control measures (TCM's) are integrated into a comprehensive system of procedures and goals. The proposed Project includes several important components of an effective mobile source emissions reduction program. These components include basic project design features which are consistent with air quality objectives and "smart growth" principles, and include:

Community design to facilitate local transit (The Preserve Mobility Plan and Transit System); development of park-and-ride facilities; encouragement of bicycle and pedestrian circulation alternatives (The Preserve Community Paseo and Open Space System and Bicycle System); encouragement of local employment-generating uses to reduce jobs-housing imbalances that promote long commutes in and out of the local area (The Preserve Land Use Development Plan, including approximately 626 acres of Business Uses).

(2) Mitigation Measure AQ-1, Mobile Source Emissions/Transit, provides: "The City of Chino shall contact appropriate transit agencies to encourage an expansion of transit services up to and within the project area. The City will coordinate with such agencies and other jurisdictions to promote express transit access from the Chino area to other regional employment centers."

(3) Long-term operational air emissions under the Environmental Land Use Alternative may be reduced as compared with the Project, as a result of the reduction in the projected number of daily vehicle trips. However, the feasibility of implementing a future transit system that would contribute to reductions in air emissions is less likely with this reduced density alternative. As described in Section 4.0 Findings Regarding Alternatives, the Environmental Land Use alternative would not attain the basic project objectives.

(4) It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

Supporting Explanation: In order to reduce mobile source emissions and thereby reduce the production of NOx and CO, the Project has been designed with smart growth principles, such as a compact community design to facilitate the use of public transit systems, the use of park and ride facilities, the encouragement of bicycle and pedestrian circulation with a system of paseos and bike trails, a favorable jobs/housing balance to reduce long commutes in/out of the area, and the use of express transit services from Chino to other regional employment centers. All of these measures will tend to reduce the use of single occupant vehicles to the greatest extent feasible, but will not do so to a level where emissions of NOx and CO will be reduced to a less than significant level.

2.5.3 Significant Effect. **Odor impacts on sensitive uses during the transition to urban uses.** Odor impacts of dairies on sensitive uses (e.g. residential, schools) are anticipated to be significant during the transition period to urban use. Residential development in the vicinity of the IEUA Co-Composting facility (e.g. within approximately ½ mile) may be affected by facility-generated odor prior to facility relocation. (See, DEIR, Pages 5.9-19 to 5.9-20)

Findings. The City Council hereby makes finding (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) The Specific Plan establishes a 300-ft. overlay zone setback from the IEUA Co-Composting facility for residential and other sensitive uses. Although this setback will reduce odor impacts, given the variability of meteorological conditions residential development within 0.5 mile of the IEUA Co-Composting Facility is considered to have a potentially significant odor exposure.

(2)Odor impacts from dairy operations to new receptors (e.g. residences, schools) during the transition period are an unavoidable effect of urban development within the Plan area. (3) It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

Supporting Explanation: Odor impacts from existing dairy and agricultural related operations on new sensitive receptors in the plan area will be an uncontrollable and unavoidable impact during the transition from rural to urban uses. In order to minimize this impact, the Project will require a 300-foot setback from the IEUA Co-Composting Facility for residential and other sensitive land uses. While this will reduce odor impacts, given the variability of meteorological conditions, odor impacts could still arise at residential development within 0.5 miles of the Facility. Consequently, there is no feasible measure to reduce these impacts to a less than significant level without adversely impacting the integrity of the land use planning of the Specific Plan.

2.6 Electricity

2.6.1 Significant Effect. **Uncertainty over future electricity supplies to serve the Project.** Given the recent electrical energy shortfall in California and the western United States due to high wholesale costs of electricity brought about by deregulation in 1996, it is uncertain that electrical supplies will be sufficient to meet future growth demand. Therefore, the Project may contribute to significant cumulative impacts on electrical energy supplies. (See, DEIR, Page 5.12-16 to 5.2-18)

Findings. The City Council hereby makes findings (2) and (3).

Facts in Support of Findings. The following facts or mitigation measures indicate that although the identified impact has been reduced or avoided to the extent feasible, it cannot feasibly be mitigated below a level of significance. The remaining unavoidable effect is acceptable when balanced against the facts set forth in the Statement of Overriding Considerations.

(1) Development will be required to conform to Title 24 of the California Code of Regulations regarding efficient use of energy resources, and other State and/or City Regulations which may be in effect at the time of approval of individual projects.

(2) Mitigation Measure U-E-1 provides: "Energy efficient lighting and natural lighting should be encouraged and utilized where practical."

(3) Provision of energy supplies is largely the responsibility of major utilities such as Southern California Edison, and is under the jurisdiction of the State through the Public Utilities Commission. Impacts from new electrical generating facilities would be the responsibility of the entity permitting the facility.

(4) Of the build alternatives, no substantial difference in electrical energy consumption is apparent.

(5) It is infeasible to completely avoid this significant effect, due to the economic, legal, social, technological or other considerations described in Section 5.0, the Statement of Overriding Considerations, incorporated by reference herein.

Supporting Explanation: The recent energy shortfall in California has created uncertainty over the sufficiency of future electrical supplies to serve the project. In order to minimize the Project's usage of electrical power, it has required the use of energy efficient lighting systems and natural lighting wherever practical. In addition, all new construction must comply with the requirement of Title 24 of the California Code of Regulations (the Building Code) that require energy efficient buildings. While these measures will reduce electrical demand, they will not reduce this impact to a level of less than insignificant.

3.0 POTENTIAL ENVIRONMENTAL EFFECTS WHICH ARE NOT SIGNIFICANT OR WHICH CAN BE MITIGATED BELOW A LEVEL OF SIGNIFICANCE.

The City Council has determined that the following potential environmental effects will not be significant for the reasons stated below.

3.1 Land Use3.1.1 Potential Effect. The Specific Plan locates potentially incompatible residential uses in close proximity to the Correctional Institution for Women (CIW-Chino). Without careful design of the linear paseo to fully buffer and screen these potentially incompatible uses, significant land use conflicts could occur.

Findings. **The City Council hereby makes finding (1).**Facts in Support of Findings.

The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure LU-2 provides: "Special attention should be focused during subsequent review of specific development projects on providing an adequate buffer and separation between the existing CIW-Chino and planned residential uses immediately to the east. The planned linear Community Paseo along Chino-Corona Road separating these uses should include some combination of landscape screening, berms and/or walls, and setbacks to achieve an adequate physical and visual separation between these uses."

Supporting Explanation: As stated in the DEIR (See Pages 5.1-18 to 5.1-26), a buffer must be provided between the correctional institution and neighboring land uses to prevent incompatible land uses in close proximity to the institution. The foregoing mitigation measure will prevent significant land use conflicts from occurring by requiring a separation of residential uses and institutional uses by the Community Paseo, which will have landscape screening, berms and/or walls, and setbacks designed to provide both a physical and visual separation between those uses, while at the same time considering prison security issues.

3.1.2 Potential Effect. The Specific Plan includes a Chino Airport Overlay Zone to assure subsequent project review for consistency with the ACLUP. No significant land use compatibility impacts with current Chino Airport operations and adopted safety zones and noise contours will result from the Preserve's Specific Plan implementation. However, potential future changes to the Airport Master Plan and airport operations could result in significant safety and/or noise impacts to proposed land uses depending on the type and magnitude of such changes.

Findings. The City Council hereby makes finding (1) and (2).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure LU-1 provides: "The City of Chino shall provide notice of development applications within adopted airport noise and safety zones to the Airport Land Use Commission (ALUC), in compliance with the Chino Airport Comprehensive Land Use Plan (ACLUP). The City will coordinate with the ALUC to assure specific development projects' compatibility with Chino Airport operations."

(2) Projects at the Airport which cause changes in the ACLUP will be subject to independent environmental review under CEQA by the ALUC during their approval process for compatibility with surrounding land uses.

(3) Additional mitigation will be provided by the avigation easements required to be granted pursuant to he Specific Plan by all new development within close proximity to the Airport.

Supporting Explanation: The mitigation measure will require notice to the Airport Land Use Commission of any projects with a potential to impact the airport's noise and safety zones, as required by the ACLUP. It will also require the City to coordinate those projects with the ALUC to ensure that the projects are compatible with the Airport's operations, thereby minimizing any land use conflicts. See DEIR, Pages 5.1-18 to 5.1-19.

3.1.3 Potential Effect. The Specific Plan land use designations below the 566' elevation consist almost entirely of Open Space-Recreation (OS-R), Open Space-Water (OS-W), Agriculture/Open Space-Natural (AG/OS-N) and Open Space-Natural (OS-N) uses. These designations include uses that are potentially allowed by the Prado Flood Control Basin Master Plan. However, without a mechanism to assure Army Corps of Engineers ("ACOE") review of specific development proposals, consistency impacts could occur.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) The Specific Plan includes a 566-Foot Dam Inundation Elevation Overlay (DIO) applied to all lands below 566' elevation inundation area. This overlay requires that all specific development proposals be submitted for ACOE review, and that allowable land uses comply with provisions of any cooperative management plans that may apply to the Lower Chino Basin/Prado Basin area. As a result, no significant conflicts with the Prado Flood Control Basin Master Plan or other ACOE plans within the Prado Dam inundation area are anticipated.

Supporting Explanation: The Specific Plan is self mitigating in this regard, and no additional mitigation measure was required in the DEIR or FEIR. See DEIR, Pages 5.1-19 to 5.1-23. It will preclude new development and new structures which conflict with Army Corps of Engineers requirements for inundation areas, as noted on Page 130 of the Specific Plan.

3.1.4 Potential Effect. The Specific Plan includes approximately 52 acres of the 566' elevation inundation area above Pine Avenue at its intersection with Euclid Avenue (northeast corner) within the Regional Commercial designation. This could potentially conflict with U.S. Army Corps of Engineers use requirements within the Prado Basin inundation area.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) The affected area falls within the proposed DIO Overlay Zone, requiring ACOE review of specific development projects. As the ACOE would review proposed uses for inconsistency with the DIO Overlay Zone, no significant land use conflict is likely to result.

Supporting Explanation: ACOE review of any development and structures in this area will assure that no loss of flood control capacity or volume within the 566' inundation area occurs.

3.1.5 Potential Effect. Implementation of the Specific Plan and related actions by the City of Chino would conflict with the existing San Bernardino County General Plan's Agriculture-Agriculture Preserve (AG-AP) designations for the site, and the site's agricultural status within the Chino Valley Dairy Preserve and West Valley Subregion Planning Area. This conflict in and of itself does not represent a significant adverse impact.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Master planning for the area and its annexation to the City of Chino was specifically contemplated by LAFCO's inclusion of the area within the City's sphere of influence. The pattern of cancellation or non-renewal of Williamson Act contracts within the Plan area dates back to 1992-93, precipitating a transition to urban uses, long before the Preserve Project was ever proposed. Therefore, implementation of the proposed Preserve Specific Plan and related actions by the City do not represent a new substantial adverse land use impact or conflict with existing San Bernardino County land use planning for the area.

(2) All existing agricultural uses will be allowed to continue following annexation as either conforming or non-conforming uses under the Zoning Code pursuant to the Specific Plan and its Right to Farm policies.

3.2 Agriculture

3.2.1 Potential Effect. The Project would require annexation of the Preserve Project area by the City of Chino and rezoning consistent with the Specific Plan and City Zoning Code. Existing County of San Bernardino Agriculture-Agriculture Preserve (AG-AP) zoning designations on the site would be removed.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Removal of the existing County Agricultural Preserve status and rezoning of the site for urban development were actions contemplated in LAFCO's 1994 inclusion of this portion of the dairy preserve within the City's sphere of influence, and do not in and of themselves represent a significant adverse impact. All existing agricultural uses will be allowed to continue following annexation as either conforming or non-conforming uses under the Zoning Code pursuant to the Specific Plan and its Right to Farm policies.

(2) Mitigation Measure AG-1 provides: "The City of Chino shall actively pursue the use of Williamson Act cancellation fees pursuant to SB 831, for acquisition of agricultural easements or other conservation easements for the purpose of permanent agricultural land preservation within the Agricultural (AG), Agricultural Open Space-Natural, and as appropriate subject to conditional use permit, the Open Space-Natural (OS-N) designated area of the plan area."

Supporting Explanation: As noted above, the rezoning of the land within the County's Agricultural Preserve was already contemplated when LAFCO included the area within the City of Chino's sphere of influence in 1994, and underwent environmental review at that time. Impacts arising from the cancellation of Williamson Act contracts also will be mitigated in part by the City's commitment to pursue the use of cancellation fees for the acquisition of permanent agricultural easements pursuant to the provisions of SB 831. Furthermore, all agricultural uses at the time of annexation of the Project area will be allowed to continue.

3.2.2 Potential Effect. Buildout of the proposed Preserve Specific Plan will place the new local resident population near farmlands and agricultural uses that choose to locate within the AG and AG/OS-N designated areas within the Plan area (i.e. northeast corner and below the 566' elevation). Without managed access, buffers and other measures to protect these remaining farmlands, land use conflicts may arise that would ultimately lead to the conversion of farm land to non-agricultural use.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measures AG-1 provides: "The City of Chino shall actively pursue the use of Williamson Act cancellation fees pursuant to SB 831, for acquisition of agricultural easements or other conservation easements for the purpose of permanent agricultural land preservation within the Agricultural (AG), Agricultural Open Space-Natural, and as appropriate subject to conditional use permit, the Open Space-Natural (OS-N) designated area of the plan area."

(2) Mitigation Measure AG-2 provides: "The City of Chino shall participate in a coordinated multi-agency planning program for sustainable agricultural uses within the Lower Chino/ Prado Basin. This program should involve the principal public landowners within the basin, including but not limited to the U.S. Army Corps of Engineers, Orange County Flood Control District and County of San Bernardino. Components of this program may include an agricultural feasibility study, acquisitions plan, and management plan for sustainable agricultural uses within the basin."

(3) Mitigation Measure B-3(4) provides: "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 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."

(4) The Specific Plan includes "Right-to-Farm" provisions and compatibility findings requirements, as well as 100 ft. setback requirements between existing animal uses and any residential buildings, that will reduce the potential for urban use conflicts with agricultural/dairy operations during the transition to urban uses.

Supporting Explanation: The mitigation measures will reduce these conflicts by requiring the use of Williamson Act cancellation fees to acquire agricultural easements for permanent ag land preservation in appropriate locations, as well as City participation in a multi-agency planning program for sustainable agricultural uses in the Lower Chino/Prado Basin. In addition, the agricultural uses below the 566' elevation will be buffered from the urban uses above the 566' elevation by the ag/urban buffer required by the Specific Plan. Implementation of the Specific Plan's Right to Farm policy and the minimum 100 ft. setback between residential buildings and animal uses will also further reduce conflicts between farm lands and urban uses.

3.3 Hydrology and Water Quality

3.3.1 Potential Effect. At buildout of the proposed Specific Plan, existing problems associated with flooding of the dairies, lack of stormwater containment and related pollution of downstream receiving waters with dairy wastes would be alleviated. With implementation of the Storm Drainage Plan and project-level detailed storm water management studies and measures specified in the Specific Plan, no significant storm water runoff impacts are anticipated from future urban development.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure HWQ-1 provides: "All development shall comply with the National Pollutant Discharge Elimination System (NPDES) regulations. Prior to the issuance of a grading permit, applicants shall demonstrate compliance with NPDES Stormwater Permit requirements to the satisfaction of the City of Chino. Applicable BMP provisions shall be incorporated into the NPDES Permit."

(2) Mitigation Measure HWQ-6 provides: "The City of Chino shall assure that storm drain facilities and outlets to Prado Regional Park and the natural open space system are designed in a manner that minimizes disruption of park operations and protects park and open space resources. Specific drainage facility designs at outlets to the major open space system below the 566' elevation shall be made available for review by the County of San Bernardino Flood Control District and the U.S. Army Corps of Engineers, as appropriate."

(3) Mitigation Measure HWQ-7 provides: "Prior to any development approvals, a plan for managing urban runoff to protect sensitive drainages within the open space system shall

be approved by the City of Chino. This Urban Runoff Management Plan (URMP) will be integrated with the Project's Storm Drain Plan, and provide the framework and mechanism for: (1) Phased implementation of structural and non-structural best management practices to control stormwater discharges and protect water quality; (2) Review of subsequent projects for inclusion of mini-basins for detention, filtration and recharge to groundwater; (3) The design and location of Natural Treatment Systems for water quality purposes within drainages; and (4) Implementation of a water quality monitoring program at storm drain outlets to Prado Lake, Chino Creek and Mill Creek.

(4) The Specific Plan would not result in significant alteration of the principal natural streams and natural watercourses through the site. Existing natural channels within the open space system, including Chino Creek and Mill Creek, would remain unaltered.

Supporting Explanation: Those mitigation measures will reduce storm water impacts by requiring compliance with the National Pollutant Discharge Elimination System regulations and requiring the construction of an adequate storm water drainage and treatment system to prevent uncontrolled flooding and the release of urban pollutants. In addition, they will require monitoring of storm water discharges to prevent pollution of Prado Lake, Chino Creek and Mill Creek with urban pollutants in the storm water.

3.3.2 Potential Effect. The proposed plan limits urban development to areas above the 566-foot Prado Dam high water inundation line, consistent with the Prado Dam Flood Control Project and land acquisition program. An exception to this is an approximate 55-acre area at the northeast corner of Euclid and Pine Avenues designated Regional Commercial in the proposed Specific Plan.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Any future development at this location would require use agreements and permits with the U.S. Army Corps of Engineers to offset the loss of flood volume. As a result, no significant impact on Prado Dam inundation capacity is anticipated. (See, DEIR, Page 5.1-19 to 5.1-23)

Supporting Explanation: By limiting urban development to areas above the 566' line, the Project is consistent with the Corps of Engineers' Prado Dam Flood Control Project. In order to assure that there is no net loss of flood storage volume behind Prado Dam, the development of the 55-acre area at Euclid and Pine Avenues will be subject to review by the Corps to assure that it does not result in any loss of flood control capacity or volume.

3.3.3 Potential Effect. Proposed urban uses would have the potential to degrade surface waters through discharges of urban runoff, containing a variety of pollutants including but not limited to oils, greases, solvents, pesticides and urban debris. These contaminants may enter the storm drain system in the form of street runoff, indiscriminate household use or other sources. Without proper management, potentially significant project and cumulative water quality impacts could occur.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure HWQ-2 provides: "Individual projects within the specific plan area shall be reviewed by the City of Chino for the inclusion of appropriate structural and nonstructural Best Management Practices to control stormwater discharges and protect water quality. Structural controls may include, but are not limited to, filtration, common area efficient irrigation, common area runoff minimizing landscape design, velocity dissipation devices, oil/grease separators, inlet trash racks, and catch basin stenciling. Non structural BMPs can include education for property owners, tenants and occupants, activity restrictions, common area landscape management, litter control, and catch basin inspection, BMP maintenance, and street sweeping."

(2) Mitigation Measure HWQ-3 provides: "Best Management Practices. The City shall review subsequent development projects within the specific plan area for the application of Best Management Practices. To reduce water pollution from urban runoff. Among the source reduction BMPs that may be required by the City for application to such projects are the following: animal waste removal, exposure reduction, recycling/waste disposal, parking lot and street cleaning, infiltration (exfiltration) devices, oil and grease traps, sand traps, filter traps, and regular/routine maintenance. The specific measures to be applied shall be determined in conjunction with review of required project hydrology and hydraulic studies, and shall conform to City standards and the standards of the County's Municipal Stormwater Permit under the NPDES program."

(3) Mitigation Measure HWQ-4 provides: "Water Quality Monitoring. A water quality monitoring program should be implemented to regularly test the water quality at the project storm drainage outlets to Prado Lake, Chino Creek and Mill Creek. The program should be devised to differentiate the pollutant contributions of project development from dairies during the transitional period. If test results determine that the water quality standards established by the RWQCB are not being met, corrective actions acceptable to the RWQCB would be taken to improve the quality of surface runoff discharged from the outlets to a level in compliance with the adopted RWQCB standards."

(4) Mitigation Measure HWQ-7 provides: "Prior to any development approvals, a plan for managing urban runoff to protect sensitive drainages within the open space system shall be approved by the City of Chino. This Urban Runoff Management Plan (URMP) will be integrated with the Project's Storm Drain Plan, and provide the framework and mechanism for: (1) Phased implementation of structural and non-structural best management practices to control stormwater discharges and protect water quality; (2) Review of subsequent projects for inclusion of mini-basins for detention, filtration and recharge to groundwater; (3) The design and location of Natural Treatment Systems for water quality purposes within drainages; and (4) Implementation of a water quality monitoring program at storm drain outlets to Prado Lake, Chino Creek and Mill Creek."

Supporting Explanation: The foregoing measures will control the discharges from urban runoff through the use of Best Management Practices and compliance with NPDES requirements, including without limitation, grease traps, debris screens, oil/water separators and filtering of contaminants in the urban runoff. In addition, a water quality monitoring program will be conducted on a regular basis to test the Project area's storm drainage outlets to Chino Creek, Mill Creek and Prado Lake and corrective measures taken when needed.

3.3.4 Potential Effect. Both Chino Creek and Mill Creek within the Plan area have been listed as impaired waters due to high nutrient, pathogen, salinity/TDS/chlorides and suspended solids concentrations caused by the existing dairy operations. Without proper management of runoff to protect water quality in Chino and Mill Creeks, potentially significant project and cumulative water quality impacts could occur.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure HWQ-2 provides: "Individual projects within the Specific Plan area shall be reviewed by the City of Chino for the inclusion of appropriate structural and nonstructural Best Management Practices to control stormwater discharges and protect water quality. Structural controls may include, but are not limited to, filtration, common area efficient irrigation, common area runoff minimizing landscape design, velocity dissipation devices, oil/grease separators, inlet trash racks, and catch basin stenciling. Non structural BMPs can include education for property owners, tenants and occupants, activity restrictions, common area landscape management, litter control, and catch basin inspection, BMP maintenance, and street sweeping."

(2) Mitigation Measure HWQ-3 provides: "Best Management Practices. The City shall review subsequent development projects within the Specific Plan area for the application of Best Management Practices. To reduce water pollution from urban runoff. Among the source reduction BMPs that may be required by the City for application to such projects are the following: animal waste removal, exposure reduction, recycling/waste disposal, parking lot and street cleaning, infiltration (exfiltration) devises, oil and grease traps, sand traps, filter traps, and regular/routine maintenance. The specific measures to be applied shall be determined in conjunction with review of required project hydrology and hydraulic studies, and shall conform to City standards and the standards of the County's Municipal Stormwater Permit under the NPDES program."

(3) Mitigation Measure HWQ-4 provides: "Water Quality Monitoring. A water quality monitoring program should be implemented to regularly test the water quality at the project storm drainage outlets to Prado Lake, Chino Creek and Mill Creek. The program should be devised to differentiate the pollutant contributions of project development from dairies during the transitional period. If test results determine that the water quality standards established by the RWQCB are not being met, corrective actions acceptable to the RWQCB would be taken to improve the quality of surface runoff discharged from the outlets to a level in compliance with the adopted RWQCB standards."

(4) Mitigation Measure HWQ-7 provides: "Prior to any development approvals, a plan for managing urban runoff to protect sensitive drainages within the open space system shall be approved by the City of Chino. This Urban Runoff Management Plan (URMP) will be integrated with the Project's Storm Drain Plan, and provide the framework and mechanism for: (1) Phased implementation of structural and non-structural best management practices to control stormwater discharges and protect water quality; (2) Review of subsequent projects for inclusion of mini-basins for detention, filtration and recharge to groundwater; (3) The design and location of Natural Treatment Systems for water quality purposes within drainages; and (4) Implementation of a water quality monitoring program at storm drain outlets to Prado Lake, Chino Creek and Mill Creek."

(5) The Santa Ana Regional Water Quality Control Board ("RWQCB") is also responsible for reducing pollution for the existing dairy operations in the Plan area. It has adopted requirements for dairy operators designed to prevent continued surface and groundwater contamination. In August of 1999, the RWQCB adopted additional manure handling requirements designed to impede manure waste from further degradation of the Santa Ana River watershed. (DEIR, Page 5.3-9)

Supporting Explanation: The foregoing measures will assist with reducing pollution from the dairies by requiring monitoring of all discharges into Chino Creek and Mill Creek and the performance of corrective actions to reduce pollution from dairy sources as required by RWQCB standards.

3.4 Biological Resources

3.4.1 Potential Effect. Proposed land use designations below the 566-foot elevation consist of open-space related uses that will also fall under the jurisdiction of the U.S. Army Corps of Engineers. Biologically sensitive areas within the Chino Creek and Mill Creek floodways are included within an resource area that is protective of biological resources. These areas include critical habitat areas identified as suitable only for extremely low intensity use. However, without adequate mitigation, additional impacts to sensitive biological resources below the 566-foot elevation line could occur from increased public access and use of the open space system, as well as uncontrolled stormwater discharges from planned development above the 566-foot elevation.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measures B-1 "Zoning and Land Use Regulation", B-2 "Required Biological Studies", B-3 "Resources Management Plan", B-3(1) "300-Acre Conservation Area", B-3(2) "Alternate Location", B-3(4) "Urban Buffer/Transition Area", B-3(7) "Agricultural Easements", B-3(8) "Mitigation Fee", B-3(9) "Participation in Regional Efforts", and B-3(10) "Administration and Monitoring," as set forth above, are all hereby incorporated by reference for this impact.

(2) Mitigation Measure HWQ-7 Urban Runoff Management Plan, as set forth above, is incorporated by reference for this impact.

(3) The Resources Management Plan provides that land uses will be restricted below the 566' line so as to avoid land uses incompatible with critical habitat designations. Land below the 566-foot line is within the Specific Plan's Dam Inundation Elevation Overlay ("DIO"). This overlay requires all specific development proposals be submitted for US Army Corps of Engineers review, and that allowable land uses comply with provisions of any existing cooperative management plans developed for the Lower Chino/Prado Basin area. If there are proposed uses, activities, or improvements that could affect Corps or federal land, the Corps may require compliance with the provisions of the National Environmental Policy Act. 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 the risk to sensitive biological species. (See, Resources Management Plan, Pages 4-11 to 4-12 and Appendix E thereto)

Supporting Explanation: The Project has provided mitigation in a number of ways. The first is avoidance of any new impacts to the areas below the 566' line by retaining such areas with their existing land use designations, rather than provide for urban land uses in that area. Secondly, any new development or any expansion of existing uses below the 566' inundation line must comply with the Resources Management Plan to reduce impacts to that area's biological resources. In addition, the mitigation measures and the Specific Plan will require the creation of an urban buffer/transition area that will only allow limited access to habitat areas below the 566' line. No urban development will be allowed by the Specific Plan in any areas designated as critical habitat by the U.S. Fish and Wildlife Service.

3.4.2 Potential Effect. Without resource protection and management measures, plan implementation could result in significant impacts to the following resources: Loss of Surface Water and Riparian Habitat, Least Bell's Vireo Critical Habitat, Southwest Willow Flycatcher Habitat, Western Yellow-Billed Cuckoo Habitat, Windrows and Agricultural Fields, Migratory Corridors and Delhi Sands Flower-loving Fly Recovery Area.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measures B-2 "Required Biological Studies", B-3 "Resources Management Plan", B-3(1) "300-Acre Conservation Area", B-3(2) "Alternate Location for 300-Acre Conservation Area", B-3(3) "Burrowing Owls", B-3 (5) "Surface Water and Riparian Habitat", B-3(6) "Existing Windrows," and B-3(7) "Agricultural Easements", as previously set forth above, are all hereby incorporated by reference.

Supporting Explanation: Any new development or any expansion of existing uses below the 566' inundation line must comply with the Resources Management Plan to limit or avoid impacts to the Project area's biological resources. In addition, the mitigation measures will require the creation of an urban buffer/transition area which will only allow limited access to habitat areas below the 566' line where the locations with designated critical habitat are located. No urban

development will be allowed in any areas designated as critical habitat by the U.S. Fish and Wildlife Service. Further, any development below the 566' line will require review by the U.S. Army Corps of Engineers ("USACOE")to assure avoidance of any conflicts with sensitive critical habitat areas.

3.4.3 Potential Effect. Waterbodies likely to fall under the jurisdiction of the U.S. Army Corps of Engineers and California Department of Fish and Game are included within a variety of Open Space plan designations. Any development activity proposed within wetlands and jurisdictional drainages would require coordinated review and permitting with the USACOE, CDFG and Santa Ana Regional Water Quality Control Board. Through the permitting process, loss of wetlands and jurisdictional drainages would be mitigated to less than significant levels, or permits would not be issued.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measures B-2 "Required Biological Studies", B-3 "Resources Management Plan", and B-3(5) "Surface and Riparian Habitat", as fully set forth above, are hereby incorporated by reference.

Supporting Explanation: These mitigation measures will require all development within jurisdictional waters and wetland areas to obtain all Clean Water Act permits from the USACOE and streambed alteration agreements from the CDFG, and water quality certifications from the RWQCB, when necessary. In addition, all such development must pay a mitigation fee to fund the City's implementation of the Resources Management Plan.

3.5 Geology and Soils

3.5.1 Potential Effect. The potentially significant geologic hazards affecting land use and development in the plan area are: Fault rupture and severe groundshaking due to a local moderate to large earthquake; Liquefaction (including lateral spread landslides) due to shallow groundwater and severe groundshaking from local and major regional faults; and Subsidence-induced ground fissures due to groundwater withdrawal. Development and buildout according to the Specific Plan would have the potential to expose additional people, residences, commercial and industrial development, and public facilities to these geologic and seismic hazards.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure GS-1 provides: "Geotechnical and Soils Engineering Study. All applications for individual development projects shall include a detailed Geotechnical and Soils Engineering Study which addresses potential hazards associated with fault rupture, seismicity and groundshaking, liquefaction, subsidence and near-surface

groundwater. Such studies shall: conform to code requirements and standards and guidelines established by the City of Chino; fully and accurately reflect site conditions regarding possible hazards identified herein; and include all mitigation measures necessary for reducing risks posed by geologic hazards on the project site."

(2) Mitigation Measure GS-2 provides: "Conformance with Geological Study requirements. All individual developments shall be constructed according to requirements established in geologic studies pertaining to the project site, and general engineering practices established by the City of Chino."

(3) Mitigation Measure GS-3 provides: "Soils Report – Dairy Lands. Grading operations on all former dairy lands and other agricultural properties will be conducted in accordance with the soils report prepared by a registered soils engineer approved by the City of Chino. The soils engineer will make recommendations concerning removal of any organic material or the proper handling of such material during grading. All manure from dairy corrals and other surface areas shall be stripped and removed prior to grading operations, in accordance with applicable codes and regulations. The potential for methane in remaining soils shall be specifically addressed in soils reports on all former dairy lands and other agricultural properties. Where the potential for methane accumulation or release is identified, soils testing shall occur with results and remedial measures identified in the soils report."

(4) Federal, state and local laws, regulations, codes, and policies are in effect to mitigate geologic and seismic hazards experienced within the region and at the project site. Conformance with standard measures, code requirements, and recommendations of detailed geotechnical and soils engineering studies required for subsequent development projects should serve to reduce hazards to less than significant levels.

Supporting Explanation: Those mitigation measures require all new development to comply with the City's code requirements for geologic studies and engineering measures and to thereby minimize risk from groundshaking and subsidence and from the accumulation of manure on the former agricultural lands.

3.5.2 Potential Effect. Of special concern in the Specific Plan area is the distribution, character and thickness of surface organic residue (e.g. cow manure and other organic deposition) within the soils that remain from activities of the dairy industry. A related concern for development and building foundations is the potential accumulation and/or release of methane in soils with manure and other organic content.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure GS-3, as set forth above, is hereby incorporated by reference for this impact.

Supporting Explanation: All grading operations will be required to be conducted in accordance with a soils report prepared by a registered soils engineer approved by the City. Such report shall make recommendations concerning removal and disposal of any organic matter; manure from dairy corrals and other surface areas must be stripped and removed prior to grading in order to preclude any problems. In addition, testing for methane gas and remedial measures will be required as part of the soils report in order to resolve any methane gas problems.

3.5.3 Potential Effect. Development of the proposed project and other approved, pending and probable future projects may expose future populations to regional seismic hazards.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Compliance with seismic safety standards for new construction, recommendations of project geotechnical engineering reports, and ongoing provisions for emergency preparedness and response are anticipated to reduce such risks, on a project-by-project basis, to acceptable levels. Other geologic and soils influences are largely site specific, and there is little if any cumulative relationship between proposed project development and development of other cumulative projects.

(2) Mitigation Measures GS-1, GS-2 and GS-3, as set forth above, are hereby incorporated by reference and provide for compliance with safety standards and requirements in construction to minimize seismic hazards.

Supporting Explanation: The risks from regional seismic hazards will be reduced by requiring compliance with the applicable seismic safety codes in the construction of new buildings and other structures in the Project area, as well as the requirement to prepare site specific soils reports and to comply with the requirements in such reports.

3.6 Hazards

3.6.1 Potential Effect. The possible location of wildlife areas or large water features near the Chino Airport is a safety concern for aircraft operations, particularly with regard to waterfowl near runways.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure HM-1 provides as follows: "Aircraft/Waterfowl Hazards. To minimize aircraft/wildlife hazards, sizeable water features that might attract waterfowl should be prohibited in the plan area east of the Airport."

Supporting Explanation: This mitigation measure will preclude the creation of sizeable water features that could attract waterfowl near the existing Chino Airport, thereby reducing the risk of aircraft/waterfowl hazards.

3.6.2 Potential Effect. With cumulative development within the Chino Airport vicinity, additional populations will be exposed to some level of risk associated with aircraft activities and hazards. However, safety zones have been established to protect future uses and reduce hazards to an acceptable level of risk. No significant cumulative impact is anticipated.

(1) Planned land uses surrounding the airport are compatible with Airport Safety Zones and the adopted Airport Comprehensive Land Use Plan (ACLUP). School sites within two miles of the airport will require special review by CalTrans Division of Aeronautics and Chino Valley Unified School District to assure compliance with site criteria.

(2) Mitigation Measure HM-2 provides: "Maximum Building Height. The maximum building heights outside of the runway protection zones may not exceed 160 feet to prevent any conflict with adopted flight patterns."

Supporting Explanation: The mitigation measure limits maximum building heights outside of the runway protection zones to 160 feet in order to prevent conflicts with adopted flight patterns at the Chino Airport and hazards to aircraft from tall buildings. In addition, the Specific Plan has designated land uses surrounding the airport with uses compatible with the Airport Safety Zones and ACLUP.

3.6.3 Potential Effect. Surface organic residues (e.g. manure and other organic deposition) within the soils that remain from activities of the dairy industry are a potential concern for development. Related concerns are possible exposure of new development and human populations to explosive concentrations of methane released from such soils, and exposure to pesticide residues in agricultural soils.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measures HM-3 provides: "Environmental Site Assessments. Prior to City consideration of any specific development projects within the plan area, developers will be required by the City to submit a completed Phase I Environmental Site Assessment, which at a minimum, meets with the requirements of the most current standards of investigation established by the American Society of Testing and Materials (ASTM Standard E 1527). The recommendations of such Environmental Site Assessments, including testing and soil remediation, if necessary, shall be adhered to reduce any identified hazards to acceptable levels."

(2) Mitigation Measure GS-3, as previously noted above, is also hereby incorporated by reference for this impact.

Supporting Explanation: These require each specific development proposal for projects within the Preserve area to conduct a Phase I Environmental Survey and to comply with all remediation measures and testing required by such Surveys. In addition, specific projects must prepare soils reports and engineering studies and comply with all measures derived from those studies in order to reduce any risks and hazards arising from the presence of manure and other organic deposition arising from former dairy activities on a site.

3.6.4 Potential Effect. Mosquito populations may continue to breed during the dairy transition to urban uses, and buildout of the community.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Control of mosquito populations will be achieved with non-chemical methods (i.e. mechanical methods) and the use of pesticides. With proper vector control practices, health and safety impacts are not expected to be significant.

Supporting Explanation: The use of non-chemical methods of vector control, in conjunction with the use of pesticides, will assure that mosquito populations will be controlled so as not to present any risk to human health.

3.6.5 Potential Effect. A number of existing buildings within Subarea 2 may contain potentially hazardous materials, including asbestos and lead-based paints. These buildings may include, but are not limited to, pre-1979 residential structures as well as commercial and industrial buildings.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure HM-3, as previously noted above, is hereby incorporated by reference to reduce this impact.

(2) Mitigation Measure HM-4 provides: "Asbestos and Lead Based Paint. Prior to issuance of permits by the City of Chino for major renovation or demolition of any pre-1979 structure within the project area, the project developer will be required to submit documentation to the City Building Department that asbestos and lead-based paint issues are not applicable to their property, or that appropriate actions will be taken to correct any asbestos or lead-based paint issues prior to development of the site."

(3) Mitigation Measure HM-5 provides: "Compliance with Laws and Regulations. In order to minimize risks to life and property, projects within the plan area will be required to demonstrate compliance with all applicable federal, state and local laws and regulations governing the handling, transport, treatment, generation and storage of hazardous materials."

Supporting Explanation: The mitigation measures noted above will require the preparation of Environmental Surveys and the remediation of any hazardous materials, asbestos and lead-based paint problems in pre-1979 structures. In addition, they will require compliance with all laws and regulations concerning the handling, transport, treatment, storage and generation of hazardous materials in order to reduce all risks associated with such materials in the Project area.

3.6.6 Potential Effect. Without proper management practices, the exposure of surrounding populations to odors, dust emissions and related health hazards resulting from Co-Composting Facility air quality impacts during windy conditions would be potential concerns.

Findings. The City Council hereby makes finding (1) and (2).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) IEUA has implemented dust and odor control plans including measures to mitigate these potential effects from its operation of the Co-Composting Facility.

(2) The Specific Plan includes an overlay zone to establish an appropriate buffer around the Co-Composting Facility in the event that residential uses are developed prior to Facility relocation.

(3) Following Facility relocation, appropriate site remediation methods will be employed to ensure adequate site safety for residential use. No significant airborne or waterborne health or safety risks are anticipated.

3.6.7 Potential Effect. Scientific research has suggested that long-term direct exposure to electromagnetic fields may pose a risk to human health.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) The Specific Plan has located the Community Paseo and open space system along the alignment of the major Southern California Edison power line corridor that is roughly parallel with Pine Avenue. This land use will create a corridor that separates the power transmission lines from other land uses, further reducing the possibility of long term effects of electromagnetic fields. No significant health hazards or risks are anticipated.

3.6.8 Potential Effect. Implementation of the Specific Plan may result in an increase in the use and storage of hazardous materials and waste as commercial, airport-related and light industrial uses expand within the Project area.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance

(1) Mitigation Measures HM-3 and HM-5, as previously set forth above, are hereby incorporated by reference for this impact.

Supporting Explanation: Those mitigation measures will require the preparation of Phase I Environmental Surveys and compliance with all federal, state and local laws and regulations concerning hazardous materials in the Project Area in order to reduce the risks associated with this potential impact from the presence of additional hazardous materials.

3.7 Noise

3.7.1 Potential Effect. Construction activities, especially heavy equipment, will create short-term noise increases within and near the project site. Such impacts may be significant if project development occurs near the interface with existing noise-sensitive land uses.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance

(1) Mitigation Measure N-1, Construction Noise, provides: "The following construction noise reduction measures will be implemented. All construction activities conducted within 500 feet of any occupied dwelling shall not occur from 7 P.M. to 7 A.M. the following day, and at any time on Sundays or universally observed holidays. All construction equipment will use properly operating mufflers. All staging areas shall be located away from occupied dwellings and schools where feasible. The City of Chino

will approve construction access routes that minimize noise intrusion into sensitive areas, such as neighborhoods, schools, and parks."

Supporting Explanation: In order to reduce noise impacts, this mitigation measure will restrict noise producing construction activities within 500 feet of any occupied dwelling to between 7:00 AM and 7:00 PM, require properly operating mufflers on all construction equipment, require the location of construction staging areas away from dwellings, and require prior City approval of haul truck routes to minimize noise intrusion into sensitive areas.

3.7.2 Potential Effect. Potentially significant noise level differences between the Year 2020 Without Project and Year 2020 With Project conditions are predicted to occur at twenty-five (25) roadway links. This includes increases of +3 dB CNEL that are forecast to occur along 17 roadway links and measurable (+1 dB CNEL) increases along another 8 roadway links where existing levels already exceed 65 dB CNEL as far away as 100 feet from the roadway centerline. Area roadways will experience potentially significant noise level increases due to cumulative traffic growth, including traffic from the project area.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance

(1) Mitigation Measure N-2, Roadway Noise, provides: "Developer/builders shall submit acoustical studies to the City of Chino for subsequent tentative maps and noise sensitive uses (e.g. residences, schools, medical facilities) adjacent to the principal area roadways. Such studies shall assure that: usable exterior space meets noise standards of 65 dB CNEL through a combination of setback or barriers; habitable interior rooms along any project perimeter near noise impacted roadways meet the interior standard of 45 dB CNEL through dual-paned windows, central air conditioning and other structural upgrades."

(2) Future development projects adjacent roadways in the vicinity of the plan area will be required to demonstrate compliance with noise standards.

Supporting Explanation: The foregoing mitigation measures will attenuate noise impacts because they ensure that usable exterior space at noise sensitive uses is provided that meets 65 dB CNEL, and that habitable rooms meet an interior noise standard of 45 dB CNEL with design and structural features of the new buildings.

3.7.3 Potential Effect. Near airports, even at noise exposures well outside the 65 dB CNEL contour, there may be single flyover events that are perceived as intrusive even if the 65 dB CNEL standard is met with a large margin of safety.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance

(1) Mitigation Measure N-3, Airport Noise, provides: "In order to ensure that noise exposure is considered in review of subsequent development projects within the plan area, and in acknowledgment of possible single-event aircraft audibility even if standards are not exceeded, the following measures will be implemented: The City of Chino shall provide notice of development applications within adopted airport noise and safety zones to the Airport Land Use Commission (ALUC), in compliance with the Airport Comprehensive Land Use Plan (ACLUP). The City will coordinate with ALUC to assure the compatibility of specific development projects with Chino Airport operations; all real estate transaction within Subarea 2 within 1.0 mile of he airport boundary will contain advisory language that aircraft may be periodically audible even though the subject property is exposed to noise levels due to aviation activities that are well within State guidelines."

(2) The proposed Specific Plan includes a Chino Airport Overlay (CAO) zone that conforms to the airport limits, based on the 1991 ACLUP adopted noise contours and safety zones.

(3) The Specific Plan also requires new development in close proximity to the Airport to grant the Airport avigation in recognition of the potential noise impacts from Airport operation.

Supporting Explanation: The foregoing measures will minimize, the extent feasible, the possible noise impacts that may arise from single flyover events by requiring new projects to comply with the ACLUP and assuring compatibility with airport operations. In addition, all real estate transaction within 1 mile of the airport boundary will be required to contain an advisory to the landowner of the potential for aircraft noise.

3.8 Air Quality

3.8.1 Potential Effect. The maximum project-related carbon monoxide (CO) increment is less than 1.0 ppm at any intersection if recommended roadway improvements are constructed in concert with project development. This small increment would not cause the hourly standard to be exceeded. All "with-project" CO increments are dominated by the no-project area growth of traffic and congestion.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance

(1) With implementation of recommended roadway improvements, microscale air quality impacts are not considered significant.

(2) Mitigation Measure AQ-1, Mobile Source Emissions/Transit, provides: "The City of Chino shall contact appropriate transit agencies to encourage an expansion of transit services up to and within the project area. The City will coordinate with such agencies and other jurisdictions to promote express transit access from the Chino area to other regional employment centers."

Supporting Explanation: The mitigation measure will require the City to promote transit expansion in the Project area and the promotion of express transit service from Chino to other regional employment centers in order to reduce the use of single occupancy vehicles, thereby reducing the production of CO from those vehicles.

3.9 Population and Housing

3.9.1 Potential Effect. Employment growth will increase demand for housing in the Project area and vicinity. Because of the nature of the new jobs, including higher-paying manufacturing and wholesale trade jobs, the average household income associated with the Project is estimated to be higher than the current estimated household income for San Bernardino County.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) The proposed Plan area jobs/housing ratio in 2020 is projected to be 1.37, compared with a projected County ratio of 1.28, thus furthering subregional and regional jobs/housing balance objectives. The plan area jobs/housing ratio will be less than SCAG's projected year 2020 ratio of 4.13 for the City of Chino as a whole. Sub-regions with employment to housing ratios which reflect the SCAG regional average are generally considered to be balanced. Housing growth in the Plan area and vicinity is not inconsistent with SCAG regional forecasts

(2) The proposed Plan design including housing in close proximity to employment and retail centers is considered a positive effect on the local economy and the physical environment, because it may contribute to reduced reliance on the automobile and possible reductions in regional work trip commutes, with corollary air pollution and energy consumption reduction benefits.

3.10 Public Services--Schools

3.10.1 Potential Effect. Implementation of the proposed Specific Plan will result in a maximum increase of approximately 6,063 new students within the Chino Valley Unified School District ("CVUSD"), based on the District student generation factor (SGF) of .62 students, on average per dwelling unit. This represents a significant direct and cumulative impact on schools and school capacity within CVUSD. [Note: The student generation estimates in the EIR did not utilize the more recently CVUSD-adopted generation rates of 0.70 students for detached dwellings and 0.35 students for attached dwellings. When these rates are applied, the total

number of new students will be less than the 6,063 mentioned in the DEIR. The .62 student generation rate was based on all units being single family residences, with no multi family units. Consequently, the impact stated in the DEIR is an upper limit; the actual impact will be less because the Specific Plan contains both multi-family and single family residential land use designations.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Three K-8 school sites are identified in the proposed Project's Land Use Plan to accommodate the student population growth estimate by the affected school district. The location, size, and configuration of the school sites would be determined during site plan and tract map review.

(2) Mitigation Measure PS-S-1 provides: "Planning for School Services. Developers/builders within the Plan area shall work with the CVUSD to plan school service for the proposed development."

(3) Mitigation Measure PS-S-2 provides: "School Fees. Prior to issuance of a building permit, project developers shall pay statutory developer fees to the CVUSD, form a Community Facilities District, or provide land and improvements pursuant to the requirements established in SB 50. The amount of fees or special taxes to be paid or the land and improvements to be provided will be determined based on the established state formula for determining construction costs."

Supporting Explanation: The foregoing mitigation measures will require developers in the Plan area to work with CVUSD to plan school service, as well as require the payment of developer fees or otherwise finance the cost of needed school facilities with a community facilities district or as otherwise required by SB 50 in order to reduce and avoid impacts on the area's school system from new development and the students it will generate.

3.10.2 Potential Effect. Proposed plan development of approximately 695 acres of business uses, including commercial and industrial space, is expected to result in an indirect increase in the District's student population (i.e. non-resident student population). This indirect student enrollment impact will be mitigated by school impact fees.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure PS-S-2, as previously set forth above, is hereby incorporated by reference.

Supporting Explanation: This mitigation measure will require developers in the Plan area to work with CVUSD to plan school service, as well as require the payment of developer fees or otherwise finance the cost of needed school facilities with a community facilities district or as otherwise required by SB 50 for non-residential developments, as well as for residential developments, in order to reduce impacts on the school system.

3.10.3 Potential Effect. Construction activities adjacent to operating schools could result in potential safety hazards to students and others accessing the school site.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure PS-S-3 provides: "Construction Activity Notification. To reduce potential safety hazards during construction, the City shall require developer notification to Chino Valley Unified School District pending construction activity adjacent or near operating schools. Evidence of notification shall be provided to the City prior to issuance of grading and building permits for projects within any master plan, tentative map or site plan inclusive of, or immediately adjacent to, an operating school site."

Supporting Explanation: This mitigation measure will require advance notice to the school district so that it may take steps to safeguard its students from nearby construction activities and thereby avoid any safety issues.

3.11 Public Services—Police Protection

3.11.1 Potential Effect. Implementation of the proposed plan will significantly increase demands on police services within the plan area. Access and use of the planned recreational areas will increase the need for police responses to these areas. Until such time as a police facility is established near the site, overall response time to The Preserve Specific Plan area could be expected to increase by 2 to 3 minutes for emergency calls.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure PS-P-1 provides: "Police impact fees shall be paid to cover capital costs associated with the creation of additional facilities and improvements to service The Preserve area. The City may allow credit toward impact fees for any police facilities constructed by the developer."

(2) The Preserve Plan includes a Community Core (125 acres) with areas available for civic uses, possibly including a future police substation. Until expansion of the existing department or creation of a new facility, the police department plans to establish a police sub-station housed at the Chino Airport, near the proposed plan area. This temporary substation will give immediate aid to the proposed plan area and could become a permanent sub-station.

(3) To mitigate the need for additional police resources in the plan area, the City of Chino and the Police Department have implemented long-term budgetary strategies to ensure availability of necessary resources, as the project area develops.

(4) Pursuant to City requirements and standard conditions, the Chino Police Department will be consulted during site planning and design to ensure that adequate provisions for law enforcement protection/prevention are designed into the project. No significant security impacts are anticipated.

Supporting Explanation: This measure will require the payment of police impact fees by developers in order to fund the capital costs associated with additional public safety facilities and improvements to serve the Project area, thereby reducing the impact on police services from new development.

3.12 Public Services—Fire/Emergency Medical Services

3.12.1 Potential Effect. Development of the plan area will create additional fire service needs, and will place a significant burden on the Chino Valley Independent Fire District (CVIFD) to maintain sufficient resources and response times for all fire and medical emergency calls. At least one new fire station with adequate equipment and personnel to meet demand will be needed to reduce fire safety impacts to less than significant levels.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure PS-F-2 provides: "The City shall coordinate with the Fire District to evaluate potential new station sites within the area of the proposed project to provide adequate response times for emergency services."

(2) Mitigation Measure PS-F-3 provides: "Prior to construction, the developer shall contact the Fire District for verification of current fire protection development requirements. All new construction shall comply with all applicable statutes, codes, ordinances, and/or Fire District standards."

(3) Mitigation Measure PS-F-4 provides: "Water lines within the project site shall be designed to meet the fire requirements."

(4) Mitigation Measure PS-F-5 provides: "Fire hydrants shall be designed and placement specified by the Fire District at the time water lines to the Project area are built or as a condition of development project approval."

(5) Mitigation Measure PS-F-6 provides: "Upon annexation of the plan area, the City will be responsible for payment of services to the State Department of Forestry & Fire Protection rules and standards for wild land fire areas still receiving State protection."

(6) Designation and development of a fire facility within or near the plan area (i.e. Chino Airport), and payment of City and Fire Department fees (per Mitigation Measures PS-F-1 and PS-F-2) will offset impacts on fire resources and services.

(7) CVIFD will be expanding fire service capabilities to meet cumulative demands, consistent with its fire services master plan. With payment of fire fees and provisions for a new fire facility, the plan area's incremental contributions to cumulative fire impact will be mitigated to a less than significant level.

Supporting Explanation: The foregoing mitigation measures will reduce this impact by requiring new development to coordinate with the Fire District the location of new fire fighting facilities and compliance with all fire codes and Fire District standards. In addition, it will require the City to reimburse the State Department of Forestry & Fire for the cost of providing fire protection to wild land fire areas in order to continue fire protection services to those areas.

3.13 Public Services--Library

3.13.1 Potential Effect. Based on the current deficient library space utilization of .16 square feet per capita, approximately 5,319 additional square feet of library space would be needed to serve the plan area population. However, based on a desirable minimum space standard of .35 square feet per capita, approximately 11,637 additional square footage of library space would be needed to serve the plan area population.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure PS-L-1 provides: "The proposed project should address the need for additional library facilities and library services, and provide space or funding for library construction. The construction of a joint use library shared by the County of San Bernardino and Chino Valley Unified School District may be an appropriate option."

(2) Mitigation Measure PS-L-2 provides: "Project developers should contribute impact fees either toward expansion of existing library facilities or construction of new facilities, if such fees or requirements are adopted for general application by the County."

(3) The Project's Community Core will include approximately 10 acres for civic-related uses, including potential space for a branch library. CVUSD is planning with San

Bernardino County the potential construction of a joint-use library to serve the project and vicinity. [Letter dated 2/21/03 from CVUSD to Community Development Director, City of Chino]

Supporting Explanation: The foregoing mitigation measures will reduce this impact by requiring new development to provide space, funding or another financing mechanism for library construction, as well as requiring the payment of impact fees to fund the expansion of existing library facilities or the construction of new facilities to meet added demand for library services The Specific Plan has already identified a location for a new library in the Community Core area.

3.14 Public Services—Parks/Recreation

3.14.1 Potential Effect. Based on the City's existing parkland development standard of 3 acres per 1,000 population, approximately 100-acres of local park and recreational facilities will be needed at buildout. Buildout of the planned area and cumulative projects is expected to increase demands for parks and recreational facilities in the plan area.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure PS-PR-1 provides: "Every residential developer or person who develops land for residential purposes shall dedicate a portion of such land, pay a fee, or a combination of both at the option of the City for the purpose of providing park and recreational facilities at the time and according to City standards outlined in Chapter 18.04, Land Dedication Requirements Generally of the City Ordinances."

(2) As the Specific Plan allocates 100 acres of community and neighborhood parks, no significant local park impacts will occur. The Plan identifies over 2,600 acres in various open space designations potentially available for recreation opportunities.

Supporting Explanation: This mitigation measure will require the dedication of land or the payment of a fee, or both, for the purpose of providing park and recreational facilities to serve new residential development in the Project area. The Specific Plan has already allocated 100 acres of parks within the area to be urbanized to address this impact.

3.14.2 Potential Effect. Recreational use of Prado Regional Park and adjacent concession areas, including El Prado Golf Course, Prado Stables, Prado Olympic Shooting Park, Oranco Bowmen Archery Range, Prado Recreational Dog Training Facility, and the Prado Air Park, will increase with the Project, due to the increase in the population in close proximity.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure PS-PR-2 provides: "The City will coordinate with San Bernardino County to assure that traffic, access control, and safety needs of Prado Regional Park are met, and that the impacts of implementation of the proposed project on Prado Regional Park facilities are minimized to the extent practical. A traffic and access control plan may be a component of this collaboration. The City will also assure through subsequent development reviews, that project-related drainage does not adversely affect the Park and Prado Lake."

(2) As individual developments are phased within the plan area, park and recreational facilities will be planned to be developed to meet the future needs of area residents. Plan area residents will pay park use fees for access to regional park facilities.

Supporting Explanation: This mitigation measure will require the City to coordinate with San Bernardino County to assure that traffic, access control and the safety needs of Prado Regional Park are met and the Project's impacts are minimized to the extent practical.

3.15 Utilities—Water Supply

3.15.1 Potential Effect. The Project at buildout will generate a potable water demand of 6.1 million gallons daily (MGD) and an average daily recycled water demand of 4.0 MGD. The proposed project will contribute to significant cumulative demands on water supplies in the City of Chino and region.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) SAWPA's Chino Basin Desalination Plant is identified to supply 4.5 MGD of the needed 6.1 MGD of potable water to the Project area. The remaining 1.6 MGD will be obtained by the City through the following measures: 1) production of groundwater over entitlement based on Safe Yield limitations; and, 2) purchasing additional desalted water, if more is produced than is needed to satisfy the requirements of other purchasers.(See, RDEIR, Pages 5.12-12 to 5.12-20 and Appendix I)

(2) Mitigation Measure U-W-1 provides: "Consistent with SB 221, subsequent development projects within the plan area shall be reviewed by the City to confirm the availability of sufficient water supplies to meet project water needs."

(3) Mitigation Measure U-W-2 provides: "Consistent with requirements of AB 2838, the City shall periodically review and update its urban water management plan to ensure that adequate water supplies and facilities are available to meet future growth."

(4) Mitigation Measure U-W-3 provides: "Subsequent development projects should be designed to incorporate features that encourage and promote groundwater replenishment."

(5) Mitigation Measure U-W-4 provides: "Retention of precipitation and run-off onsite should be encouraged in development designs where appropriate."

(6) Mitigation Measure U-W-5 provides: "The City shall continue to support efforts to develop the water supply and to encourage water conservation. Water conservation techniques appropriate for new and existing development include: installing flow restrictors in showers; repairing leaky water fixtures; promoting drought resistant low maintenance vegetation."

(7) Mitigation Measure U-W-6 provides: "The City shall coordinate its efforts with the IEUA to expand the reuse of wastewater for such uses as the irrigation of parkways, golf courses, landscaped areas, and parks, and, if feasible, for industrial processes."

(8) Mitigation Measure U-W-7 provides: "The City shall engage in water conservation programs and activities including but not limited to, participation in the following conservation practices: water survey programs for single family residential customers; residential plumbing retrofits; system water audits, leak detectors and repair; large landscape conservation programs and incentives; high efficiency washing machine programs; conservation programs for commercial, industrial and institutional accounts; wholesale agency technical assistance program; conservation program."

(9) Mitigation Measure U-W-8 provides: "Where erosion or water runoff is not a problem, encourage use of onsite water recharge, such as dry wells."

(10) Recycled water will be obtained from IEUA sources. The total required operational storage capacity for recycled water at the project site is 8.9 MG of water.

(11) The City in coordination with SAWPA and IEUA has developed an Urban Water Management Plan to assure sufficient water supplies and facilities to meet future growth.

(12) Based on the City's Final Draft of Technical Memorandum of the Water System Master Plan for Subarea 2 and the City's approved Water Supply Assessment (RDEIR Appendix I) the City is expected to meet Project and cumulative water demands through multiple reliable sources, including potable, desalted, groundwater and recycled water sources.

Supporting Explanation: The foregoing mitigation measures will reduce the Project's impacts on the water supply by requiring the City to confirm that water is available to serve new development projects and meet future growth; requiring the incorporation of numerous features that promote groundwater replenishment; requiring water conservation measures on a wide scale, including but not limited to the use of flow restrictors in showers, the repair of leaky water fixtures, and the use of drought resistant low maintenance vegetation; require the City to expand the re-use of wastewater for irrigation of parkways, golf courses, landscaped areas, parks and

industrial processes; requiring participation in water conservation programs for residential, commercial, industrial and institutional uses; and implement programs for the use of desalted and recycled water obtained from reliable sources.

3.16 Utilities--Wastewater

3.16.1 Potential Effect. Increases in Specific Plan area's population and development of commercial and industrial uses will increase wastewater treatment demands on Inland Empire Utility Agency (IEUA) wastewater treatment facilities. Based on unit wastewater flow generation factors used in the City's Sewer Master Plan, it is estimated that wastewater will increase by approximately 4.8 million gallons per day (MGD) upon buildout of the Plan area.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure U-WW-1 provides: "The City shall assure that required backbone sewer lines or an equivalent system recommended by the City Engineer are implemented pursuant to the Sewer Master Plan."

(2) Mitigation Measure U-WW-2 provides: "Developers shall pay required sewage facilities development fees and system collection fees to cover City costs to construct master planned sewer mains

(3) IEUA has indicated it will provide sufficient sewage disposal capacity to serve additional sewage generated within the City of Chino, and the Specific Plan area. The City will coordinate with the IEUA to ensure that adequate wastewater facilities are available to meet future growth. Project design will be reviewed by the City, prior to individual project approval, to ensure that sufficient infrastructure and capacity are available.

(4) The increased use of reclaimed water will decrease the need for treatment capacity and provide a beneficial reuse of water resources. Sufficient capacity has been allocated by IEUA to serve the plan area through buildout.

Supporting Explanation: Implementation of the foregoing mitigation measures and programs will reduce the impacts arising from wastewater treatment at the Project because they will require specific projects to pay sewage facility development fees and will require construction of the necessary sewer system backbone infrastructure according to the City's Sewer Master Plan.

3.17 Utilities—Electricity

3.17.1 Potential Effect. Buildout of the proposed project will result in a total electrical demand of 164,547,624 megawatts per hour per year (MW/hr/yr). Approximately 33 percent of the demand, or 55,017,390 MW/hr/yr will be generated by residential uses; 27 percent, or 29,836,537 MW/hr/yr by industrial uses; and 40 percent, or 109,530,234 MG/hr/yr, by commercial uses. The increased level of service to the project area will require implementation of new service lines and support facilities.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure U-E-1 provides: "Energy efficient lighting and natural lighting should be encouraged and utilized where practical." (2) Development will be required to conform to Title 24 of the California Code of Regulations regarding efficient use of energy resources, and other State and/or City Regulations which may be in effect at the time of approval of individual projects."

Supporting Explanation: The mitigation measure and the Title 24 requirements will result in the conservation of electricity because they require the use of energy efficient lighting and natural lighting, and the construction of energy efficient buildings, thereby reducing the Preserve Project's overall demand for electricity.

3.18 Utilities—Natural Gas

3.18.1 Potential Effect. Natural gas demand at buildout of the Specific Plan is estimated at approximately 3.9 million cubic feet annually.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) The Southern California Gas Company anticipates it will be able to provide the resources and facilities necessary to meet these additional demands. The City and future developers within the plan area will also coordinate with The Southern California Gas Company to ensure adequate services and facilities are available to provide for future development. (See, DEIR, Pages 5.12-18 to 5.12-20)

3.19 Utilities—Solid Waste

3.19.1 Potential Effect. Buildout of the Specific Plan will result in the production of approximately 29,302 tons per day of residential, commercial, industrial, and public waste. Cumulative projects within the Chino Basin Dairy Area will increase daily solid waste production and place demands upon County landfills operated by Waste Management.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure U-SW-1 provides: "Future developments should be reviewed by the City for the provision of outside building space to accommodate the storage of large waste containers (e.g., 3 containers of 96-gallons)." This system reduces waste production by encouraging the recycling of material.

(2) Waste Management, the sole provider of waste collection and disposal services to the City, has indicated that the Specific Plan will not adversely affect El Sobrante Landfill's disposal capacity. The landfill can accommodate growth in waste generation for the next 50-70 years and Waste Management owns 6 other landfills that could offer services as well. (See, DEIR, Pages 5.12-21 to 5.12-22)

(3) In reviewing subsequent development projects, the City will continue to implement solid waste reduction measures pursuant to AB 939.

Supporting Explanation: The mitigation measure will require all new buildings to encourage the recycling of waste materials by providing space for the use of three separate containers for the separation of recyclable materials at all new buildings, thereby reducing the waste stream from new development at the Project.

3.20 Utilities—Dairy Waste

3.20.1 Potential Effect. The problems associated with stockpiled manure, high TDS and salts in groundwater, and degradation of surface waters from dairy runoff are existing conditions that have resulted in promulgation of regulations by the Regional Water Quality Control Board to protect water resources. Requirements for manure removal and management have been imposed on the dairies irrespective of the Project and other related projects.

Findings. The City Council hereby makes finding (1) and (2).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Deadlines for removal of stockpiled manure from the Chino Basin have been imposed by the Santa Ana Regional Water Quality Control Board ("SARWQCB") irrespective of the Project. Various initiatives to respond to the challenges imposed by these deadlines have either been proposed or are underway, including the Organics Management Facilities and plans to provide sewer service to the dairies.

(2) The Project represents a potential beneficial impact on waste management in that it provides an economic incentive to remove, recycle or otherwise dispose of manure within the Chino Basin. As implementation of the proposed development plan for The Preserve is anticipated to occur over approximately 20 years, the Project is not anticipated to exacerbate the existing waste management impact associated with dairy use.

Supporting Explanation: The SARWQCB is already implementing steps to reduce the volume of dairy waste found in the Project area in order to reduce water pollution of the existing water resources. The project will have a positive impact on those efforts because it will encourage the conversion of dairy lands to other uses and the remediation of manure stockpiles.

3.21 Utilities—Telecommunications

3.21.1 Potential Effect. Buildout of the Plan area would result in additional Project and cumulative demand relative to provision of telephone, cable television (and cable fiber-optic) services.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) The existing telephone service provider Verizon, has plans for locating future wire centers to distribute telephone services to customers in the plan area. Verizon plans its services provision to accommodate growth in service areas. Existing and planned distribution and supply of telephone service is expected to accommodate the proposed plan implementation and service area demands. (See. DEIR, Pages 5.12-31 to 5.12-32)

(2) Adelphia Communication Services is prepared to provide cable service to the Project area. Planned distribution and supply of cable services is expected to accommodate the proposed buildout of the plan area and service area demands. (See. DEIR, Pages 5.12-31 to 5.12-32)

3.22 Cultural Resources

3.22.1 Potential Effect. Proposed development of the plan area could have an adverse impact on as yet undiscovered significant archaeological resources. There is a significant potential that additional prehistoric materials will be encountered during earth-disturbing activities within planned development areas.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure CR-1, Survey and Mitigation Report, provides: "Phase I field surveys (surface survey and collection) by a certified archeologist should be conducted prior to all earth disturbing activities within the plan area. Existing natural open space, agricultural open space and dairy sites are included in this survey requirement. Excluded would be heavily disturbed areas, lagoons and detention ponds, and paved areas. The archeologist will identify all prehistoric and historic resources observed during the field survey, complete a preliminary evaluation of the resources, and recommend appropriate measures for the disposition and treatment of significant resources. A technical report shall be prepared including discussion of cultural site significance (depth, nature, condition and extent of resources), final mitigation recommendations, and cost estimates.

Excavated finds shall be offered to the City or its designee on a first refusal basis. Final mitigation shall be carried out based upon the report recommendations and a determination as to site disposition by the City. Possible determinations include, but are not limited to, preservation, salvage, partial salvage, or no mitigation necessary."

(2) Mitigation Measure CR-2, Archaeological Monitoring, provides: "Where recommended, archeological monitoring of earth disturbing activities shall be conducted. The monitoring certified archeologist will identify any prehistoric or historic resources exposed, complete a preliminary evaluation of the resource, and recommend appropriate resource management for the treatment of the resource. If additional or unexpected archeological features are discovered, the archeologist shall report such findings to the City. If the resources are found to be significant, the archeologist shall determine, in consultation with the City, appropriate actions for further exploration and/or salvage recovery."

Supporting Explanation: The foregoing mitigation measures provide a comprehensive method for discovering and preserving any significant cultural resources found earth disturbing activities at the Project by requiring pre-construction surveys by certified archeologists, implementation of the archeologist's recommended mitigation measures, and monitoring of earth-disturbing activities in culturally sensitive areas to prevent loss of cultural resources.

3.22.2 Potential Effect. Future recreational or agricultural uses within the planned open space system could have the potential to disturb or destroy recorded or as yet undiscovered archaeological resources within these areas. Much of the planned open space system below the 566' elevation is owned or controlled by other public agencies (i.e. U.S. Army Corps of Engineers, Orange County Flood Control District, and County of San Bernardino).

Findings. The City Council hereby makes findings (1) and (2).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure CR-1, Survey and Mitigation Report, and CR-2, Archaeological Monitoring, as set forth above, are hereby incorporated by reference to reduce this impact as well

(2) Use plans and permits for planned open space areas will be coordinated with the appropriate agencies to assure that no significant impacts occur to archaeological resources in these areas.

Supporting Explanation: The proposed mitigation will govern all earth disturbing activities in the entire Project area order to prevent/minimize the loss of historic and prehistoric cultural resources. To the extent other governmental agencies pursue their own projects within the Project area, they will be required to conduct their own environmental reviews and provide mitigation for the loss of any cultural resources impacted by those particular specific projects.

3.22.3 Potential Effect. There are forty-five (45) recorded historic sites within the plan area, with most of these located in the planned open space system. Proposed development of the plan area could have an adverse impact on significant historic resources. Additional as yet unrecorded historic resources could be encountered during earth-disturbing activities.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measures CR-1, Survey and Mitigation Report, and CR-2, Archaeological Monitoring, as previously set forth above, are hereby incorporated by reference for this impact.

(2) Use plans and permits for planned open space areas will be coordinated with the appropriate agencies to assure that no significant impacts occur to archaeological resources in these areas.

Supporting Explanation: The foregoing mitigation measures provide a comprehensive method for discovering and preserving any significant cultural resources found during earth disturbing activities at the Project by requiring pre-construction surveys by certified archeologists, implementation of the archeologist's recommended mitigation measures, and monitoring of earth-disturbing activities in culturally sensitive areas to prevent loss of cultural resources by a qualified archeologist. Most of the 45 recorded historic sites are located in the planned open space system and would not be impacted.

3.22.4 Potential Effect. Significant paleontological resources could be encountered during earth-moving activities. Older alluvium in the region and within the plan area has a high paleontologic sensitivity as a primary source of significant vertebrate fossils. Proposed development of the plan area could have an adverse impact on significant paleontological resources.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Mitigation Measure CR-3, Paleontological Monitoring, provides: "Monitoring fossil material should be conducted by a qualified paleontologist during construction grading activities within older alluvium (Pleistocene), in order to avoid any disturbances to possible unknown or unidentified paleontological resources.

Supporting Explanation: This measure will require monitoring for fossil material by a paleontologist during construction grading activities within older alluvium soils in order to avoid disturbance/damage to paleontological resources as a result of the grading activities.

3.23 Aesthetics

3.23.1 Potential Effect. The visual character of the Project area above the 566' elevation line will change substantially as agricultural land uses transition to an urban setting with a mix of residential, commercial, and industrial uses. While the land use change is significant, it does not represent a significant adverse visual or aesthetic impact as no significant visual resources are identified in this area. The visual character of the Project area below the 566' elevation line will not change significantly.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) The proposed Specific Plan includes design guidelines and criteria to create an attractive and positive visual condition for future development. These guidelines and criteria implemented through Design Review are essentially project design features. These features are intended to assure a quality urban visual environment, and minimize the visual impact associated with a significant change in land use.

(2) Scenic resources and aesthetic values associated with the southerly portions of the plan area will be preserved through open space, recreation and agriculture designations.

3.23.2 Potential Effect. Additional light and glare sources will be created within the plan area.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) The use of landscaping, directional lighting criteria, and building design criteria specified in the Specific Plan will reduce the impact to a level that is less than significant.

3.23.3 Potential Effect. The Project will be visible from surrounding vantage points at greater distances.

Findings. The City Council hereby makes finding (1).

Facts in Support of Findings. The following facts or mitigation measures indicate this potential impact is not significant, or will be mitigated below a level of significance.

(1) Due to the distance to planned urban uses, proposed Specific Plan and airport overlay building height limitations, and the effect of intervening landscaping, the quality of views from surrounding vantage points including SR 71, Chino Hills, Ontario, Eastvale, and Prado Basin will not significantly change.

(2) Scenic resources and aesthetic values associated with the southerly portions of the plan area will be preserved through open space, recreation and agriculture designations.

Supporting Explanation: As noted above, the quality of views from vantage points such as SR 71, Chino Hills, Ontario, Eastvale and the Prado Basin will not change due to the distance of such vantage points to the new urban uses within the plan area; consequently, there will be no significant impact. Moreover, the views and aesthetic values in the southern portion of the plan area will remain as they currently exist, since no new urban development is planned for that area.

4.0 FINDINGS REGARDING ALTERNATIVES

4.1 Introduction

This section presents findings regarding alternatives to the Project. The section provides a summary and discussion of the feasibility of the following alternatives evaluated in the DEIR:

- No Project
- Environmental Land Use Alternative
- Metropolitan Center Land Use Alternative
- Alternative Location

Prior to identification of these alternatives, the range of possible alternatives was initially narrowed in response to various issues, opportunities and constraints identified at the outset of the Specific Plan and EIR process. Among the significant factors in the regional context and local setting that have shaped the range of alternatives are those summarized in Section 4.1 of the DEIR.

Opportunities for public comment on alternatives have also been provided. Five Focus Group Workshops to solicit input on various topics for the Specific Plan and EIR were held between March 15, 2000 and June 7, 2000. Focus Group topics included Environmental Issues, Infrastructure and Services, Transportation and Mobility, Property Owner interests, and review of Alternative Land Use Plan Concepts. Summaries of comments from these workshops are included in the DEIR Appendix A. Beyond these workshops, comments on alternative Specific Plan concepts and environmental issues were also received by the City of Chino at a series of joint City Council/Planning Commission Workshops, held on June 14, August 16 and October 17, 2000.

The goals and objectives of the project are identified in the DEIR Section 3.3 Project Objectives.

4.2 Feasibility and Comparative Environmental Effects of Alternatives

4.2.1 The No Project Alternative

The No Project Alternative assumes the Project area would continue under the current land use designations in the County of San Bernardino's General Plan. The current County General Plan Land Use designation for the site is Agriculture-Agriculture Preserve (AG-AP). The minimum

lot size allowed within this category is 10 acres. The Project area would not be annexed to the City of Chino under the No Project Alternative. To provide a meaningful analytical frame work, it is assumed in this scenario that utilization of the area consistent with the County's General Plan land use designations continues with the existing agricultural-related and recreational uses.

The No Project Alternative is infeasible or not environmentally preferable for the following reasons:

(1) The No Project Alternative maintains the existing rural land use pattern that avoids or minimizes some environmental impacts within the Plan area. Some of the impacts that are avoided or minimized include agricultural land conversion, traffic and circulation, noise, biological resources and impacts to public services and utilities.

(2) The existing land uses would continue to degrade the area's existing surface and groundwater quality, create significant odor, air quality, particulate and vector problems.

(3) Aesthetic values are compromised due to the industrialized quality and density of dairy operations, the outside storage of equipment, extensive manure stockpiles, and the lack of area improvements.

(4) Overall, this alternative would be considered slightly environmentally superior to the Preserve Project. However, other than meeting selected environmental goals, it does not meet any of the objectives of the Preserve Project.

4.2.2 'The Environmental Alternative'

The 'Environmental Land Use Alternative' was considered as a preliminary land use concept during the formulation of the Specific Plan and proposed land use development plan. For the Plan area , the Environmental Land Use Alternative represents a decrease in the number of residential units from 9,779 to 6,958 (approx. 29% reduction), and a reduction in the amount of square feet devoted to business related land uses, from 10,238,744 to 7,840,800 (approx. 24% reduction). The number of acres devoted to open space areas would increase by 20% from 2,988 acres to 3,587.

The features of this concept that originally distinguished it from the proposed project (i.e. Specific Plan's land use plan) included the following:

- The Community Core would be reduced in size and shifted to the west, north of Pine Avenue (adjacent an extension of the Community Paseo and Open Space System that follows an existing drainage course);
- Reduced size of Regional Commercial component (along Euclid Avenue);
- Reduction in total Commercial and employment-generating uses;
- Concentration of lower density residential uses south of Pine Avenue;
- Emphasis on passive, regional recreational use and natural habitat below the 566' elevation (i.e. no agricultural designations below the 566' elevation).

The Environmental Land Use Alternative is infeasible or not environmentally superior for the following reasons:

(1) The Environmental Land Use Alternative would result in a significant reduction in residential units and business related square footage. This alternative would result in a decrease in the total number of employment opportunities, although the jobs/housing ratio for the Plan area would be slightly above that estimated for the proposed Project.

(2) Due to the reduced scale and density of this alternative, the feasibility of operating public transit, an integral feature of the proposed project, is diminished. The implementation of local transit with future connections to the regional transit system is a key design feature and objective of the Preserve Project.

(3) Due to the reduced scale and density of this alternative, the ability of the development to support substantial needed infrastructure improvements is diminished. In addition, the reduced density and number of units in this alternative would adversely impact the City's ability to implement the mitigation fee needed to fully fund the Resources Management Plan.

(4) The land use design of the alternative would result in a significant departure from the intent of the Specific Plan, and would not respond as favorably to design goals and objectives of the Project. This alternative lacks a Community Core. The Community Core in the Specific Plan is intended to provide a variety of commercial, institutional, entertainment, and residential uses in close proximity to each other, thereby allowing for greater pedestrian-type movement and interaction, with density levels and concentrations amenable to the use of public transit.

(5) This alternative reduces the amount of Agriculturally-designated land as compared with the Project, and would completely eliminate the Agricultural use designation below the 566' elevation line. As such, it would not allow for retention of appropriate agricultural uses consistent with passive open space and habitat values within this area, and would not facilitate an orderly transition of agricultural use to other open space uses. Its impact on agriculture and the loss of farmland would be greater than those of the proposed Project.

(6) While this alternative would increase the amount of open space relative to the Project, no significant differences in the aesthetic character of the planned open space and in protection of biological resources are apparent as compared with the Project. Through a process of review and refinement of the Specific Plan, the predominantly passive open space character of the major open space system below the 566' elevation line has been assured. The proposed Project includes a Resources Management Plan with specific measures to assure the conservation and management of significant biological resources within the Plan area. Unlike the proposed Project, it is unclear whether the Environmental Land Use Alternative includes a sufficient density of development to support a Biological Resources Mitigation Fee to establish and maintain proposed conservation areas within the open space system.

(7) The EIR also considers 'Further Density Reductions to the Environmental Land Use Alternative'. At a further reduced density, it is unlikely such alternatives would provide the broad range of living, working and recreational opportunities desired by the City for Subarea 2. The alternative would not respond favorably to the goal of accommodating a broad range of uses that capitalize on adjacent uses, and may not respond to the goal to enhance the City of Chino's fiscal outlook. The reduced densities would not promote public transit usage, and the variety of housing opportunities and neighborhoods would be diminished. More importantly, it is unlikely this alternative would provide sufficient density of development to support needed major

infrastructure improvements. Substantial investments in infrastructure, including new roads, water, wastewater, and drainage systems, are needed to support the planned development of this rural area. A sufficient size and density of development is needed to finance needed improvements and spread infrastructure costs to the development.

4.2.3 'The Metropolitan Center Land Use Alternative'

The 'Metropolitan Center Land Use Alternative' was considered as a preliminary land use concept during the formulation of the Specific Plan and proposed land use development plan. For the Plan area, the Metropolitan Center Land Use Alternative represents a decrease in the number of residential units from 9,779 to 4,818 (approximately 51 percent) and an increase in the amount of square footage devoted to business related land uses, from 10,238,744 to 11,803,671 (15 percent). The number of acres devoted to open space areas will increase from 2,988 acres to 3,369 or approximately 13 percent.

Distinguishing features of this concept from the Project (i.e. Specific Plan's land use plan) include the following:

- Community Core scaled-down to community serving commercial center along realigned Pine Avenue
- Intense corridor of regional serving business and commercial uses along Euclid Avenue
- Business Park/Industrial uses along Kimball Avenue, further separating residential development from Chino Airport.
- Reduction in total housing units, with higher proportion of both high density and estate residential units.
- An active, regional recreational and golf center within the open space system to the south.
- Extension of the land use concept to include Chino Subarea 1 .

The Metropolitan Center Land Use Alternative is infeasible or not environmentally superior for the following reasons:

(1) This alternative would result in a significant reduction in residential units and would not respond as favorably to the objective of offering a variety of housing opportunities and types within unique, livable neighborhoods.

(2) The higher development intensity associated with this alternative could result in additional concern for impacts upon biological resources within the planned open space system below the 566' elevation line. The alternative includes an 18-hole golf course in the southerly portion of the project area, and potentially greater loss of windrows with related farmland habitat value in the northeast portion of the plan area.

(3) This alternative reduces the amount of Agriculturally-designated land as compared with the proposed project, and includes no Agricultural use designation within the northeast sector of

the community. This conflicts with the existing agricultural land trust and County agricultural preserve lands status in this northeast area.

(4) Implementation of this alternative would result in traffic and circulation impacts that are similar to the proposed project. The number of vehicle trips would continue to represent a significant impact upon the region's circulation system.

(5) The scaled-down Community Core does not respond favorably to this objective and design feature of the proposed Specific Plan, intended to provide a focal point for the Community, including a variety of commercial, institutional, entertainment, and residential uses in close proximity to each other--thereby allowing for greater pedestrian-type movement and interaction, with density levels and concentrations amenable to the use of public transit.

4.2.4 Alternate Location

Pursuant to CEQA Guidelines 15126.6(f)(2), the City of Chino has considered alternative locations for the proposed Project.

An Alternative Location for the Project is infeasible or not environmentally preferable for the following reasons:

(1) There are no remaining locations within the City's sphere of influence or the Chino Basin capable of supporting a major new planned community that meets the goals and objectives of The Preserve, while avoiding or substantially lessening any of the significant effects of the Project. As discussed in EIR Section 4.2, remaining lands within the Chino Basin potentially capable of supporting a project of this size are already approved for development in other jurisdictions (i.e. New Model Colony-Ontario, Eastvale-Riverside County).

(2) The City of Chino's Subarea 1 has already been planned, annexed and approved for a combination of General Industrial, Agricultural/Transitional and Greenspace (Open Space) uses. This 1,800-acre area is subject to environmental constraints that are similar to those in Subarea 2, and insufficient buildable area is available to create a compact, balanced community of residential and business uses similar to the proposed Project.

(3) While several developments are pending or approved in Chino Hills, Norco and Corona, these are on smaller development sites that are zoned for specific uses, and are not suitable for the type of development envisioned by The Preserve Specific Plan.

(4) In its action placing Subarea 2 within the City of Chino's sphere of influence, the San Bernardino County LAFCO recognized the need to comprehensively plan for the eventual transition of this portion of the County's Agricultural Preserve to alternative uses. No feasible alternative locations are available and suitable for the proposed project.

5.0 STATEMENT OF OVERRIDING CONSIDERATIONS

The City Council has carefully balanced the benefits of the Project against the adverse impacts and residual impacts identified in the DEIR, RDEIR and FEIR that could not be feasibly mitigated to a level of insignificance. Notwithstanding the identification and analysis of impacts which are identified herein as being significant but which have not been eliminated, lessened or mitigated to a level of less than significant, the City Council, acting pursuant to CEQA and the CEQA Guidelines, hereby determines that the benefits of the Project outweigh the unmitigated adverse impacts and remaining residual impacts, and that the Project should be approved.

This Statement of Overriding Considerations applies specifically to those impacts found to be significant and unavoidable in Section 2.0 above, as well as any residual impacts in Section 3.0 above. Such impacts include, but re not limited to:

Impact 2.1.1	Land use change from rural to urban
Impact 2.1.2	Land use conflicts between urban and agricultural uses
Impact 2.1.3	Land use conflicts between urban uses and IEUA Co-Composting Facility
Impact 2.1.4	Conversion of agricultural/open space to urban uses
Impact 2.2.1	Loss of prime farmland
Impact 2.2.2	Acceleration of Williamson Act contract non-renewals and cancellations
Impact 2.2.3	Offsite relocation of dairies
Impact 2.3.1	Loss of burrowing owl habitat
Impact 2.3.2	Loss of raptor habitat
Impact 2.3.3	Loss of land cover types
Impact 2.4.1	Traffic impacts on local and regional intersections, streets and highways to LOS "E" or "F"
Impact 2.4.2	Impacts on 35 freeway segments needed to provide adequate LOS
Impact 2.5.1	Construction activity emissions impacts on air quality
Impact 2.5.2	Project related increases in NOx and CO emissions at Buildout
Impact 2.5.3	Odor impacts on sensitive uses during the transition to urban uses
Impact 2.6.1	Uncertainty over future electricity supplies to serve Project

In addition to the above impacts, this Statement of Overriding Considerations applies to those residual impacts that have been substantially lessened or avoided, but not necessarily reduced to a level of insignificance.

Although the City Council believes that many of the unavoidable and irreversible environmental effects, as well as many of the environmental effects which have not been mitigated to the point of insignificance, will be substantially lessened by the mitigation measures incorporated in the Project, the DEIR, RDEIR, the Resources Management Plan and FEIR, the Council recognizes that the implementation of the Project will result in certain potentially irreversible environmental effects.

In reaching the City Council's decision to approve the Project and all related documentation, the Council has carefully considered each of the unavoidable impacts, each of the impacts that have not been substantially mitigated to the point of insignificance, as well as each of the residual impacts over which there is a dispute concerning the impact's significance following mitigation.

The Program EIR for The Preserve Specific Plan (Chino Subarea 2) indicates that if the proposed project is implemented, certain significant effects may be unavoidable. However, if the benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable". The City Council finds the unavoidable significant effects described in Section 2.0 above are acceptable, any residual effects from the impacts described in Section 3.0 are not substantial, and that the alternatives with less significant environmental impacts described in Section 4.0 are not preferable, due to the following overriding considerations:

1) The Project's planned mix of commercial, office, industrial and business park uses will generate approximately 13,376 new jobs at buildout. Because of the nature of the new jobs, including higher-paying manufacturing and wholesale trade jobs, the average household income associated with the Project is estimated to be higher than the current household income for both the City of Chino and San Bernardino County. (Source: Projected Fiscal Impacts—The Preserve Specific Plan; Stanley R. Hoffman Assoc.; 3/2001).

2) The Project will provide approximately 9,779 housing units and 13,376 jobs, which will promote local and regional jobs and housing balance goals. There is a shortage of housing which the Project will lessen, and the Project will provide a wide range of housing types.

3) The Specific Plan establishes a range of housing densities that will allow the project to offer a variety of housing opportunities and types within unique, livable neighborhoods to a broad cross section of the City's residents. The Project will assist in satisfying an unmet housing need for the region which is now at a critical stage.

4) A City General Fund recurring annual revenue surplus of $2.53 million is projected for the Project at buildout of the Specific Plan. (Source: Projected Fiscal Impacts—The Preserve Specific Plan; Stanley R. Hoffman Assoc.; 3/2001).

5) The Project implements the City of Chino's 'Vision' for use and development of Subarea 2, as originally articulated in City Council Vision Workshops in October/November 1999

and carried forward through formulation of the proposed Specific Plan. This vision emphasizes a livable, sustainable planned community as an extension of the City of Chino, and incorporates a mixture of residential neighborhoods focused around a Community Core activity center and a regional commercial center, interconnected with a regional open space amenity via a system of paseos and trails. The adoption of the Preserve Specific Plan for the entire remaining area within the City's southern sphere of influence will provide for integrated, well planned, orderly development, as opposed to piecemeal development of this area.

6) The Specific Plan, with its major Community Core and employment-generating uses, surrounded by higher and medium density residential uses, will facilitate implementation of the planned local transit system. The community has been specifically designed to accommodate local transit, including street sections with dedicated or prioritized transit lanes within a continuous loop system. This local transit system, with future connections to regional transit, will reduce dependence upon the private automobile and promote local and regional air quality goals.

7) Approximately 55% of the Project site (almost 3,000 acres) is retained with a variety of agricultural and open space designations that protect sensitive habitats, and preserve opportunities for agricultural and recreational uses that are compatible with habitat values. Much of this open space is located within a large, contiguous manageable open space area below the 566-foot elevation line, including the most sensitive environmental resources within the site.

8) The Project contributes to the restoration, preservation and enhancement of high quality wildlife habitat through implementation of a Resources Management Plan, including payment of fees towards the acquisition and installation of enhancement/restoration improvements for a permanent 300-acre Conservation Area.

9) The Project would ultimately result in the remediation of much of the environmental degradation which has taken place during decades of industrial scale dairy operations in the Plan area, including the removal of manure stockpiles, removal of a significant amount of the soils containing excessive amounts of manure, and the prevention of further contamination of surface waters and the groundwater by dairy wastes and runoff. Urbanization also will accelerate the termination of dairy operations, which will have a significant positive benefit on surface and groundwater quality. The urban runoff management plan will control future urban runoff from new development, having further beneficial impacts on water quality.

10) Dairy operations are being discontinued in a haphazard manner at the present time. Alternative or replacement land uses are pursued on an ad hoc basis with little thought being given to overall planning of the area. The new Specific Plan will provide for an orderly transition from agricultural/dairy uses to urban uses as part of a well reasoned plan.

11) The increasing costs of dairy operations in the Plan area have caused an adverse impact on the local economy due to the closure or relocation of existing dairies. Implementation of the Specific Plan and its urban development will revitalize the area's economy.

12) The improvement to the City's jobs/housing balance that will result from the Preserve Project will also reduce the total vehicle miles traveled, thereby reducing air quality impacts of the Project by reducing the need for the City's residents to travel beyond the City to find employment opportunities.

13) Air quality impacts from the Preserve Project are further lessened by the Project's promotion of non-motorized travel within the Plan Area's system of paseos, trails, and bike paths.

14) The Specific Plan's right to farm policies and agricultural overlay provisions will allow agricultural operations to continue in the Plan Area.

15) The Preserve Project contains a comprehensive master plan for the use of reclaimed/recycled water as a means of conserving water from the very beginning of the area's development. Such a feature is uncommon in most communities that have to be retrofitted for recycled water use, rather than being designed to use recycled water from their inception.

16) Urban development will be concentrated and clustered in the Project's northern area in order to avoid impacts to sensitive biological species and habitats located below the 566' line in the southern portion of the Project. Such urban development will also become less dense as it radiates outward from the community core.

17) As dairy operations are phased out over time in the Plan Area, there will reductions in emissions of PM-10, ROG, methane and ammonia, which will benefit the region's air quality.

CONCLUSION

The City Council has determined that any remaining significant effects on the environment attributable to the Project which are found to be unavoidable, irreversible or not substantially mitigated are acceptable due to the overriding considerations set forth in this Statement of Overriding Considerations. The Board has concluded that with all the environmental trade-offs of the Project taken into account, the Project's implementation will represent a net positive impact on the City, and based upon such considerations after a comprehensive analysis of all the underlying planning and environmental documentation, the City Council has approved the Project.

FINAL ENVIRONMENTAL IMPACT REPORT
FOR
THE PRESERVE – CHINO SPHERE OF INFLUENCE – SUBAREA 2

STATE CLEARING HOUSE #2000121036

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SECTION 1
INTRODUCTION

1.1 PURPOSE AND SCOPE OF THE EIR

PURPOSES OF THE EIR

The City of Chino is the lead agency under the California Environmental Quality Act (CEQA) and is responsible for preparation of The Preserve Environmental Impact Report (EIR). The Preserve Planning Area, also known as Chino Subarea 2, encompasses 5,435 acres within the Chino Valley Dairy Preserve.

This EIR has been prepared in conformance with CEQA (California Public Resources Code δδ 21000 et seq.), California CEQA Guidelines (California Code of Regulations, Title 14, δδ 15000 et seq.), and the City of Chino CEQA Guidelines. It is intended to serve as an informational document for the public agency decision-makers and the general public regarding the characteristics and objectives of the proposed project, potential environmental impacts, recommended mitigation measures and reasonable alternatives to the project.

Consistent with Section 15146 ('Degree of Specificity') of the State CEQA Guidelines, this document analyzes the environmental effects of The Preserve at a degree of specificity corresponding to the underlying activity—adoption of a Master Plan/General Plan Amendment (GPA) with companion policy-level Specific Plan. Therefore, the EIR has been prepared as a *Program EIR* consistent with CEQA Guidelines Section 15168, which reads in part:

> "(a) General. A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:
>
> - Geographically,
> - As logical parts in the chain of contemplated actions,
> - In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or
> - As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways."

Various advantages of use of a program EIR and its use with later activities are detailed in Guidelines 15168 (b)(c). This EIR is further intended to serve as the foundation environmental document for review of subsequent actions within The Preserve Planning Area, including all local discretionary approvals requested to implement the proposed Master Plan/General Plan Amendment, Specific Plan and Annexation.

The essential elements of the Master Plan are addressed in a Specific Plan that has been prepared consistent with Sections 65450 through 65457 of the California Government Code. Among the purposes of the Master Plan/GPA and Specific Plan is the need to establish a clear and comprehensive guide for the future development of The Preserve Planning Area. It is the intent of the City of Chino to use the EIR to evaluate impacts associated with land use designations and densities provided for in the Specific Plan in order to facilitate the development of a complementary and successful pattern of land uses that will occur over the next 20 years. Future development projects subject to additional discretionary review (i.e., tentative maps, conditional use permits, etc.) may require subsequent environmental review in compliance with the State CEQA Guidelines, and will utilize this Program EIR as a foundation document for tiered-review under CEQA.

The City of Chino, which has the principal responsibility for processing and approving the project, and other public agencies (i.e., Responsible and Trustee Agencies) that may use this EIR in their decision making or permit processing, will consider the information in this EIR along with other information that may be presented during the CEQA process. A more detailed discussion and identification of the Responsible Agencies has been provided in Section 3, Project Description, of this document. In accordance with CEQA, the public agencies will be required to make findings for each environmental impact of the project that cannot be mitigated to below a level of significance. If the lead agency determines the benefits of the proposed project outweigh unmitigated significant environmental effects, the agency will be required to adopt a statement of overriding considerations, stating the reasons supporting their action notwithstanding the project's significant environmental effects.

Scope of the EIR

This EIR addresses the potential environmental effects of the proposed project. The scope of the EIR includes the areas of controversy identified by the Notice of Preparation (NOP) issued by the City of Chino, as well as issues raised by agencies and the general public at workshops and in response to the NOP, as described below.

In compliance with the State CEQA Guidelines, the City of Chino has taken steps to maximize the public's opportunity to participate in the environmental process. Five Focus Group Workshops to solicit input on various topics for the Master Plan and EIR were held between March 15, 2000 and June 7, 2000. Focus Group topics included Environmental Issues, Infrastructure and Services,

Transportation and Mobility, Property Owner interests, and review of Alternative Land Use Plan Concepts. Summaries of comments from these workshops are included in EIR Appendix A.

Beyond these workshops, comments on alternative master plan concepts and environmental issues were also received by the City of Chino at a series of joint City Council/Planning Commission Workshops, held on June 14, August 16 and October 17, 2000.

An EIR Notice of Preparation (NOP) was distributed on December 5, 2000, via certified mail to agencies and other interested parties to solicit comments and inform the public of the proposed project. As a determination had previously been made by the Lead Agency that an EIR would be required, and that the EIR would need to be comprehensive in scope to evaluate the potentially significant environmental effects of the proposed project, an Initial Study pursuant to CEQA Guidelines 15063 was not required.

The public was invited to review the NOP and comment on the issues discussed. Subsequently, an Amended NOP was issued on January 5, 2001 to reflect an increase in the total residential units proposed within the Plan Area. Both the original and amended NOP, the distribution list, and comment letters received during the NOP review periods are included in EIR Appendix A.

As described in both the original and amended Notices of Preparation (NOP), the potentially significant impacts of the proposed plan for The Preserve include the following categories:

- Land Use
- Agriculture
- Water Resources (Hydrology/Flood/Groundwater/Water Quality)
- Biological Resources
- Geology and Soils (Geologic Hazards/Soils/Mineral Resources)
- Hazards (including Airport Safety and Hazardous Materials)
- Transportation and Circulation
- Noise
- Air Quality
- Population and Housing
- Public Services (Schools, Police, Fire, Libraries, Parks/Recreation)
- Utilities (Water, Wastewater, Solid Waste, Public Facilities)
- Cultural Resources (Historical, Archaeological, Paleontological)
- Aesthetics (Scenic Resources, Visual Character, Light/Glare)

On the basis of the NOP, all environmental impact categories were determined to have at least one potentially significant impact. Therefore, this draft EIR has been prepared as a full scope environmental document. Agencies, organizations, and interested parties not previously contacted or who did not respond to the NOP currently have the opportunity to comment during the 45-day public review period on the draft EIR.

1.2 COMPONENTS OF THE EIR ANALYSIS

The analysis of each environmental category within Section 5 is organized into the following subsections: Environmental Conditions; Environmental Impacts; Cumulative Impacts; Mitigation Measures; and Significant Unavoidable Adverse Impacts.

- "Existing Conditions" describes the physical environmental conditions that exist at the time of publication of the notice of preparation (Guidelines 15125(a)), and which constitute the baseline physical conditions that determine whether an impact is significant.

- "Project Impacts" describes potential environmental changes to the existing physical conditions that may occur if the proposed project is implemented. This section includes identification of various 'Thresholds of Significance', which represent the criteria and standards by which an impact is determined to be significant.

- "Cumulative Impacts" describes the potential changes in environmental conditions which result from the incremental impact of the proposed project when added to other closely related past, present and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

- "Mitigation Measures" are those specific measures that may be required of the project by the decision maker in order to: (1) avoid an impact; (2) minimize an impact; (3) rectify an impact by restoration; (4) reduce or eliminate an impact over time by preservation and maintenance operations; or (5) compensate for the impact by replacing or providing substitute resources or environment.

- "Level of Significance After Mitigation" describes the remaining significant adverse impacts identified where mitigation measures are not expected to reduce the project impacts to a level of less than significant.

Consistent with requirements of CEQA Guidelines 15126.6 this EIR analyzes a reasonable range of alternatives that could feasibly attain the basic objectives of the project, and evaluates the comparative merits of the alternatives. This EIR includes an evaluation of the following alternatives to the proposed project: (1) a No Project alternative; (2) Alternatives Considered in the Formulation of the Master Plan; and (3) a Reduced Development Intensity Scenario. An environmentally superior alternative from among these alternatives is identified.

1.3 PROJECT SPONSORS AND CONTACT PERSONS

The City of Chino is the lead agency in the preparation of this EIR. Michael Brandman Associates is the environmental consultant to the City for the project. Preparers of this EIR are identified in Section 9. Key contact persons are as follows:

Lead Agency:	City of Chino Community Development Department Robert Prasse, AICP 13220 Central Avenue Chino, California 91710
Environmental Consultant:	Michael Brandman Associates Thomas Holm, AICP Director of Environmental Services 15901 Red Hill Avenue, Suite 200 Tustin, California 92780-7318

1.4 REVIEW OF THE DRAFT EIR

This draft EIR has been distributed to responsible agencies, trustee agencies, and surrounding cities for review during the 45-day public review period. The draft EIR is also available to other interested parties for review both at the City of Chino Community Development Department, 13220 Central Avenue, Chino, CA, and the Chino Branch Library, 13180 Central Avenue, Chino, CA.

Written comments on the draft EIR, or requests to purchase a copy of the draft EIR, should be addressed to:

City of Chino
Community Development Department
13220 Central Avenue
Chino, California 91710
Attn: Robert Prasse, AICP

SECTION 2
SUMMARY

This document is a draft Program Environmental Impact Report (PEIR) prepared to analyze and disclose the potential environmental effects associated with implementation of the Specific Plan and related actions for The Preserve, a 5,435-acre planning area within the City of Chino sphere of influence.

The Preserve, also known as Chino Sphere of Influence Subarea 2, 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. The Preserve is located in the vicinity of the cities of Chino, Chino Hills, Ontario, Norco, and Corona, as well as the unincorporated community of Eastvale in Riverside County, and the Prado Flood Control Basin. State Route 71 is located to the west of the site, State Route 91 to the south, Interstate 15 to the east, and State Route 60 to the north. The Santa Ana River is located to the south and Chino Hills State Park is located to the west.

The proposed project includes a City of Chino General Plan Amendment, a Specific Plan, and annexation of the planning area. The Specific Plan and related actions will guide development through buildout of the plan area, anticipated to occur over the next 20 years and beyond.

2.1 PROPOSED PROJECT

The Preserve planning area of 5,435 acres is currently within the Chino Valley Dairy Preserve in the unincorporated area of the County of San Bernardino. 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 (Subarea 2) to allow for development of a portion of approximately 5,435 acres currently within the Preserve. The Preserve Master Plan and related actions are intended to facilitate the orderly transition of existing dairylands within the City of Chino sphere of influence to a sustainable land use pattern and mixed use planned development.

The City of Chino has prepared the master plan to guide the future development and annexation of The Preserve. The master plan consists of a comprehensive, specific plan/land use plan. An 'umbrella' General Plan Amendment, which links the specific plan to the City's existing General Plan and satisfies the requirement for consistency with the General Plan, has also been prepared. The General Plan Amendment will function as an Area Plan, as authorized by Government Code Sections 65301(b) and 65303.

State law allows cities to adopt general plans and zoning, including specific plans, for areas outside their city limits. Such land use plans and regulations for The Preserve will become effective upon

annexation of the plan area to the City of Chino. The annexation process is a separate, parallel process that must be approved by the San Bernardino County Local Agency Formation Commission (LAFCO). The City of Chino will file an annexation application following circulation of the draft EIR.

The Preserve is proposed to allow up to 9,779 dwelling units on 1,236 acres; 626 acres of business uses (Community Core, Light Industrial, Airport Related, Regional Commercial, Neighborhood Commercial); 586 acres of Public Facilities and Rights-of ways; and approximately 2,987 acres in Open Space (Recreation, Agricultural and Natural Open Space). Proposed development will be concentrated in the northern portion of The Preserve, above the Prado Basin high water inundation line (elevation 566'), which is a significant development constraint on the planning area. Lands generally south of the 566' elevation are planned for low intensity uses, such as Recreation, Agriculture and Natural Open Space.

2.2 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

Significant facilities either within or adjacent to The Preserve planning area include Chino Municipal Airport, the California Institution for Women (CIW-Chino), and Inland Empire Utility Agency's Co-Composting Facility. Issues to be addressed in the Specific Plan and environmental review processes include regional transportation linkages, ties to the rural heritage of Chino, sensitive habitats and recreational opportunities within the Prado Basin, agricultural lands conversion, dairy waste management and water quality, and financing major infrastructure.

The EIR addresses areas of controversy and issues requiring resolution that were known to the City of Chino or were raised by agencies and the public during the environmental scoping process. Many of these issues were identified either in response to Focus Group Workshops sponsored by the City, or issuance of the NOP, as described previously. The following section summarizes the *primary areas of controversy* related to environmental effects and identifies the sections of the EIR in which each issue is addressed:

- The project area is constrained by the **Prado Dam inundation area** that will extend up to the 566-foot elevation upon the completion of improvements that will raise the dam 28.6 feet and the spillway twenty (20) feet. (Section 5.3 Water Resources)

- The project area is located within the San Bernardino County Dairy Preserve and will require an **orderly transition of land uses** from agricultural-related uses to urban uses in order to avoid future land use conflicts and compatibility problems. (Sections 5.1 Land Use and 5.2 Agriculture)

- The current dairy operations affect **water quality** due to the lack of flood control facilities and containment areas for dairy waste and waste run-off. Dairy wastes have contributed to excess salts and nutrient loading within the Lower Chino Basin—more

specifically total dissolved salts (TDS) and nitrates, present in both the groundwater and surface water systems. (Section 5.3 Water Resources)

- Without proper community design and buffering of various existing land uses both within and adjacent to the project area, **land use compatibility** problems could arise with new development. Existing uses include the California Institute for Women, the Inland Empire Utility Agency Co-Composting Facility and the nearby Chino Municipal Airport. (Sections 5.2 Land Use, 5.6 Hazards, and 5.8 Noise)

- The project area is constrained by the **lack of infrastructure and utilities** (e.g. roads, sewer, water, power, storm drains.) to support new development. Significant demands may be placed upon utilities and service providers. (Sections 5.11 Public Services and 5.12 Utilities)

- **Sensitive biological resources and habitats** are located below the 566-foot elevation inundation area within Chino Creek, Mill Creek, and the Prado Basin. Without adequate resource protection measures, new development and increased public access have the potential to degrade these significant resources. (Section 5.4 Biological Resources)

- **Circulation** through the Plan Area and connections to the regional transportation system are constrained by existing ownership patterns and land uses, such as the Prado Flood Control Basin, Correctional Institution for Men—Chino, and the Chino Airport. (Section 5.7 Transportation and Circulation)

- Future Chino Airport expansion could alter **noise contours and safety zones**, and impact the development of residential and recreational uses within the Plan Area. (Sections 5.1 Land Use, 5.6 Hazards, and 5.8 Noise)

The foregoing does not reflect an exhaustive listing of environmental issues to be resolved or areas of potential controversy. Please see Section 5. Environmental Impact Analysis, for a more complete review of environmental issues, impacts and proposed mitigation measures.

2.3 SUMMARY OF ALTERNATIVES

Section 15126(d) of the CEQA Guidelines requires that an EIR…"Describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives."

Various alternatives to the proposed Land Use Plan have been identified in the EIR, each with varying capacity to avoid or substantially lessen the environmental impacts of the proposed project, and each with varying potential to achieve the basic objectives of the proposed project. The proposed project is intended to facilitate the orderly transition of the remaining Chino dairylands to a

sustainable urban form that responds to important local and regional goals. Section 3.3 of this EIR identifies the basic goals and objectives of this Master Plan program.

Section 8 of this EIR includes an evaluation of the following alternatives to the proposed project:

- No Project Alternative
- The 'Environmental Land Use Alternative' (previously considered in the formulation of the Specific Plan Land Use Plan)
- The 'Metropolitan Center Land Use Alternative' (previously considered in the formulation of the Specific Plan Land Use Plan)
- Alternative Location

These alternatives are briefly described as follows:

No Project Alternative

The No Project Alternative assumes The Preserve planning area (Chino Subarea 2) would continue to be largely governed by the current plans and regulations of the County of San Bernardino without any major annexations by the City of Chino, and without adoption of the proposed Master Plan/General Plan Amendment and Specific Plan by the City of Chino. The County of San Bernardino General Plan and Development Code would continue to regulate land use consistent with the existing Agricultural Preserve status and zoning. However, various environmental, regulatory, and land use constraints to a sustainable dairy industry within the planning area would likely continue or increase over time, and dairies would seek to relocate to other parts of the State or western United States.

The 'Environmental Land Use Alternative'

The Environmental Land Use Alternative would result in significant reduction in residential units and land area devoted to business related uses. In addition, this alternative would increase the amount of open space areas by approximately 20 percent. Implementation of this alternative would result in a significant decrease in vehicle trips, primarily due to a 29 percent decrease in residential units, and 24 percent decrease in business uses square footage. However, the number of vehicle trips would continue to represent a significant impact upon the region's circulation system. This alternative would result in a decrease in the total number of employment opportunities, but due to the substantial reduction in housing units, would probably result in an increase proportion of jobs and increase the jobs/housing ratio above that projected by the proposed Specific Plan.

This alternative is considered to have a similar impact upon aesthetics and biological resources as the proposed Specific Plan due to the nature of the project area and the design of the land use plan. Infrastructure and service needs for the alternative plan would be generally similar, although some services and facilities could be reduced from that required for the proposed Specific Plan. The land use design of the alternative would also result in a significant departure from the intent of the proposed Specific Plan. In comparison to the proposed Specific Plan, this alternative would not afford easy access to businesses, recreational opportunities, and open space areas, and is not likely to support a viable local transit system.

The complications of further density reductions to this alternative are also disclosed.

The 'Metropolitan Center Land Use Alternative'

The Metropolitan Center Land Use Alternative would result in a significant reduction in residential units and a substantial increase in land area devoted to business related uses. This alternative would allocate approximately the same amount of open space areas as the proposed plan. Implementation of this alternative would result in a similar number of vehicle trips, due to an offsetting effect of decreased residential trips and increased business related trips. However, the number of vehicle trips would continue to represent a significant impact upon the region's circulation system. In comparison to the proposed Specific Plan, this alternative would result in an increase in the total number of employment opportunities, reinforcing the City of Chino as an employment center.

This alternative is considered to have a greater impact upon biological resources than the proposed Specific Plan due to the inclusion of an 18-hole golf course in the southerly portion of the project area. Infrastructure and service needs for the alternative plan would be generally similar, although some services and facilities could be reduced from that required for the proposed Specific Plan due to the reduction in housing units and population. As was the case for the Environmental Land Use Alternative, this alternative would result in a departure from the intent of the proposed Specific Plan to create a compact community design, organized around a major community core. Contrary to the proposed Specific Plan, it would not afford easy access to businesses, recreational opportunities, and open space areas.

Alternative Location

Pursuant to CEQA Guidelines 15126.6(f)(2), the City of Chino has considered alternative locations for the proposed project. A viable alternative location within the Chino Basin Dairy Area (CBDA) would need to be capable of supporting a major new planned community that meets the goals and objectives of The Preserve, while avoiding or substantially lessening any of the significant effects of the project. As discussed in EIR Section 4.2, remaining lands within the CBDA potentially capable

of supporting a project of this size are already approved for development (i.e. New Model Colony-Ontario, Eastvale-Riverside County).

2.4 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

A thorough discussion and analysis of project impacts, recommended mitigation measures and identification of significant, unavoidable adverse impacts are presented in Section 5, Environmental Impact Analysis. A summary of this discussion is provided in Table 2.4-1 that follows.

TABLE 2.4-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
LAND USE		
Community Character		
Implementation of The Preserve land use plan will result in a fundamental change in the rural character of the plan area to a more suburban or urban setting. The proposed project will accelerate the conversion of existing agricultural and dairy uses to a mix of residential, commercial, business park, industrial, airport-related uses, and public facilities. Approximately 85 percent of the project area is currently in agriculture and dairy use, with the remaining 15 percent largely in other open space, recreation and institutional uses.	The proposed land use plan includes design features that minimize potential land use impacts at plan buildout. These features include but are not limited to: • A compact urban form and community core • A gradation of land use intensity/density from the community core outward, and from northerly portions of the plan near Chino Airport south to the open space and sensitive resources below the 566' elevation • Appropriate buffering and separation of potentially incompatible uses through application of linear open space (e.g. Community Paseo and Open Space System, linear park and other recreational open space) • Retention and consolidation of the major open space resources within a vast, manageable open space unit below the 566' elevation • Preserved opportunities for long-term agricultural use within agricultural units defined by the AG and AG/OS-N designations. Implementation of policies in the General Plan Amendment through provisions of the proposed specific plan will mitigate land use impacts to the extent feasible. This includes the application of various specific plan overlay zones to reduce potential land use impacts.	Significant
Land Use Compatibility		
Potentially significant urban use conflicts with adjacent agriculture may occur during the implementation of The Preserve plan (i.e. during the transition phase). The types of impacts commonly associated with adjacent agricultural and urban uses include, but are not limited to dust, harmful chemicals, noise, odor and flies, intrusion by pets, trespass and vandalism. At buildout of The Preserve plan, land use compatibility impacts would be substantially reduced.		Not Significant (at plan buildout)

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Correctional Institution for Women		
The proposed land use plan locates potentially incompatible residential uses in close proximity to CIW-Chino. Without careful design of the linear paseo to fully buffer and screen these potentially incompatible uses, significant land use conflicts could occur.	**LU-2. Correctional Institution for Women (CIW-Chino).** Special attention should be focused during subsequent review of specific development projects on providing an adequate buffer and separation between the existing CIW-Chino and planned residential uses immediately to the east. The planned linear Community Paseo along Chino-Corona Road separating these uses should include some combination of landscape screening, berms and/or walls, and setbacks to achieve an adequate physical and visual separation between these uses.	Not Significant.
Chino Airport Influence Area		
The proposed specific plan includes a Chino Airport Overlay Zone to assure subsequent project review for consistency with the ACLUP. No significant land use compatibility impacts with current Chino Airport operations and adopted safety zones and noise contours will result from plan implementation. However, potential future changes to the Airport Master Plan and airport operations could result in significant safety and/or noise impacts to proposed land uses depending on the type and magnitude of such changes.	**LU-1. Chino Airport Influence Area.** The City of Chino shall provide notice of development applications within adopted airport noise and safety zones to the Airport Land Use Commission (ALUC), in compliance with the Chino Airport Comprehensive Land Use Plan (ACLUP). The City will coordinate with the ALUC to assure specific development projects' compatibility with Chino Airport operations.	Not Significant.
Co-Composting Facility		
Until the facility is relocated or enclosed, nearby properties may be adversely impacted by the noise, odors, dust, traffic and visual/aesthetic impacts associated with facility operations. The	None available (until facility relocation or enclosure)	Significant (until facility relocation or enclosure; thereafter Not Significant)

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Specific Plan Co-Composting Facility Overlay (300' interim buffer) and the planned enclosure of this facility by IEUA would reduce these potentially significant adverse impacts to residential uses and other sensitive receptors (e.g. schools).		
Prado Dam Inundation Influence Area		
Proposed plan land use designations below the 566' elevation consist almost entirely of Open Space-Recreation (OS-R), Open Space-Water (OS-W), Agriculture/Open Space-Natural (AG/OS-N) and Open Space-Natural (OS-N) uses. These designations include uses that are potentially allowed by the Prado Flood Control Basin Master Plan, subject to ACOE review of specific development proposals. The proposed specific plan includes a 566-Foot Dam Inundation Elevation Overlay (DIO) applied to all lands below 566' elevation inundation area. This overlay requires that all specific development proposals be submitted for ACOE review and approval, and that allowable land uses comply with provisions of any cooperative management plans that may apply to the Lower Chino Basin/Prado area. As a result, no significant conflicts with the Prado FCB Master Plan or other ACOE plans within the Prado Dam inundation area are anticipated.	No measures necessary.	Not Significant.
The proposed plan includes approximately 52 acres of the 566'elevation inundation area above Pine Avenue at its intersection with Euclid	No measures are necessary.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Avenue (northeast corner) within the Regional Commercial designation. This would potentially conflict with U.S. Army Corps of Engineers use requirements within the Prado Basin inundation area. However, the affected area falls within the proposed DIO Overlay Zone, requiring ACOE review and approval of specific development projects. As the ACOE would retain land use authority over this area, no significant land use conflict is likely to result.		
Loss of Open Space		
Implementation of the proposed plan will result in the conversion of approximately 2,055 acres of agricultural open space to urban uses. Although limited to approximately 38% of the total plan area, this loss of open space is irretrievable, and is considered a significant, unavoidable impact of the proposed project.	No measures are available.	Significant.
Conflict with Land Use Plans, Policies or Regulations		
Implementation of the proposed plan and related actions by the City of Chino would conflict with the existing County General Plan and Development Code Agriculture-Agriculture Preserve (AG-AP) designations for the site, and the site's agricultural status within the Chino Valley Dairy Preserve and West Valley Subregion Planning Area. However, master planning for the area and annexation to the City of Chino was specifically contemplated by	No measures are necessary.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
LAFCO's inclusion of the area within the City's sphere. The pattern of cancellation or non-renewal of Williamson Act contracts within the plan area dates back to 1992-93, precipitating a transition to urban uses. Therefore, implementation of the proposed plan and related actions by the City do not represent a substantial adverse land use impact or conflict with applicable land use planning for the area.		
Cumulative Land Use Impacts		
Implementation of the proposed plan, in combination with past, present and probable future projects in the vicinity of the Chino Valley Dairy Preserve, will result in a significant and irretrievable cumulative loss of open space. Though the proposed project phasing and specific plan provisions would reduce urban use conflicts with adjacent dairy uses during the transition period, the project will nonetheless contribute to cumulative land use conflicts and compatibility problems during the long-term transition of the greater Chino Valley dairylands to urban uses. The proposed project will accelerate the fundamental change in community character already occurring within the dairylands. This change involves the transition from an established community of dairy owners and operators, to new planned developments with a mix of urban uses and variety of housing types and lifestyle opportunities.	No measures are available.	Significant

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
AGRICULTURE		
Prime Agricultural Land		
Implementation of the proposed plan would result in the conversion of approximately 1,265 acres of prime farmland to non-agricultural use. This represents approximately 56% of the total 2,268 acres of prime farmland within the plan area, and is considered a significant impact. Approval of the proposed project and the introduction of residential and other urban uses within the plan area will accelerate the conversion of prime farmlands.	Project design features that reduce significant impacts to agricultural resources include retention of approximately 862 acres in agricultural-related use designations, and Specific Plan right-to-farm provisions. The following measures are also recommended to reduce the significant agricultural and farmland conversion impacts of the proposed project.	Significant
Conflict with Existing Zoning for Agricultural Use and Williamson Act Contracts		
The proposed project would require annexation of the site by the City of Chino and rezoning consistent with the proposed Specific Plan and City Zoning Code. Existing County of San Bernardino Agriculture-Agriculture Preserve (AG-AP) zoning designations on the site would be removed. These actions were contemplated in LAFCO's 1994 inclusion of this portion of the dairy preserve within the City's sphere of influence, and do not in and of themselves represent a significant adverse impact.	**AG-1. Agricultural Land Preservation.** The City of Chino will propose to participate in the Williamson Act Easement Exchange Program (WAEEP) and any plan that may be adopted pursuant to SB 831.	Not Significant.
The project would accelerate Williamson Act contract non-renewals and/or cancellation notices on the remaining 1,148 acres under contract within the plan area. This is considered a	See Measure AG-1.	Significant

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
significant and unavoidable impact of the proposed project.		
Indirect Impacts on Farmland		
Buildout of the proposed plan will place the new local resident population near farmlands and agricultural uses that choose to locate within the AG and AG/OS-N designated areas within the plan area (i.e. northeast corner and below the 566' elevation). Without managed access, buffers and other measures to protect these remaining farmlands, conflicts may arise that would ultimately lead to their conversion to non-agricultural use.	**AG-2. Agency Coordination and Planning for Agricultural Uses.** The City of Chino shall participate in a coordinated multi-agency planning program for sustainable agricultural uses within the Lower Chino/Prado Basin. This program should involve the principal public landowners within the basin, including but not limited to the U.S. Army Corps of Engineers, Orange County Flood Control District, and County of San Bernardino. Components of this program may include an agricultural feasibility study, acquisitions plan, and management plan for sustainable agricultural uses within the basin. Also see Biological Resources Measure B-3(4), RMP-Urban Buffer/Transition Area	Not Significant.
Agricultural Productivity		
Development of the project area will accelerate the relocation of dairies from the CBDA and plan area, resulting in an annual milk production value loss to the region. Approximately 700 acres of cultivated cropland will be converted, although some of these farming operations may choose to relocate to AG and AG/OS-N designated areas within the plan area. New dairies and expansions of existing dairies within these designated areas are prohibited under the proposed Specific Plan. As such, the proposed project will result in a significant impact on agricultural productivity.	See measures AG-1 and AG-2.	Significant

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Cumulative Impacts		
The proposed project will contribute to significant cumulative losses of prime farmlands and other important farmlands within the Chino Basin Dairy Area (CBDA). The project will accelerate the conversion of prime agricultural lands to urban uses within the plan area. Ultimately, with other approved annexations and master planned development within the CBDA (i.e. Ontario 'New Model Colony', other Chino, Eastvale/Riverside County, Corona), in excess of 23,000 acres may be removed from agricultural preserve status.	See measures AG-1 and AG-2.	Significant
Agricultural productivity associated with dairies and milk production will be displaced to other parts of the state and nation. Although the project retains approximately 862 acres within the Agricultural (AG) and Agricultural/Open Space-Natural designations that will be available for farming activities, the project's contribution to the loss of croplands in the CBDA is still considered cumulatively significant. The project will contribute to the cumulative loss of agricultural productivity within the CBDA region.	See measures AG-1 and AG-2.	Significant
HYDROLOGY AND WATER QUALITY		
Flooding and Storm Water Management		
At buildout of the proposed plan, existing problems associated with flooding of the dairies, lack of containment and related pollution of downstream receiving waters would be alleviated.	**HWQ-1.** All development shall comply with the National Pollutant Discharge Elimination System (NPDES) regulations. Prior to the issuance of a grading permit, applicants shall demonstrate compliance with NPDES	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
With implementation of the Storm Drainage Plan and project-level detailed storm water management studies and measures specified in the specific plan, no significant storm water runoff impacts are anticipated from future development. The proposed plan would not result in significant alteration of the principal streams and watercourses through the site. Existing natural channels within the open space system, including Chino Creek and Mill Creek, would remain unaltered.	Stormwater Permit requirements to the satisfaction of the City of Chino. Applicable BMP provisions shall be incorporated into the NPDES Permit. **HWQ-6.** The City of Chino shall assure that storm drain facilities and outlets to Prado Regional Park and the natural open space system are designed in a manner that minimizes disruption of park operations and protects park and open space resources. Specific drainage facility designs at outlets to the major open space system below the 566' elevation shall be made available for review by the County of San Bernardino Flood Control District and U.S. Army Corps of Engineers, as appropriate. **HWQ-7.** Prior to any development approvals, a plan for managing urban runoff to protect sensitive drainages within the open space system shall be approved by the City of Chino. This Urban Runoff Management Plan (URMP) will be integrated with the project Storm Drain Plan, and provide the framework and mechanism for: 1) Phased implementation of structural and non-structural best management practices (BMP's) to control stormwater discharges and protect water quality; 2) Review of subsequent projects for inclusion of 'mini-basins' for detention, filtration and recharge to groundwater; 3) The design and location of Natural Treatment Systems (NTS) for water quality purposes within drainages; and	

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	4) Implementation of a water quality monitoring program at storm drain outlets to Prado Lake, Chino Creek and Mill Creek. The URMP shall be made available for review and comment by the Flood Control Districts of the counties of San Bernardino and Orange, the U.S. Army Corps of Engineers, and Orange County Water District during the City of Chino's review and approval process. The URMP shall assure to the satisfaction of the City of Chino that project development that drains into Chino Creek and Mill Creek will not unacceptably contribute to flooding, scour and erosion, or water quality degradation of these environmentally sensitive drainages.	
Prado Flood Control Basin		
The proposed plan limits urban development to areas above the 566-foot Prado high water inundation line, consistent with the Prado Dam project and acquisition program. An exception to this is an approximate 55-acre area at the northeast corner of Euclid and Pine Avenues designated Regional Commercial in the proposed plan. Any future development at this location would require use agreements and permits with the USACE to offset the loss of flood volume. As a result, no significant impact on Prado Dam inundation capacity is anticipated.	No measures are necessary.	Not Significant.
Water Quality		
Proposed urban uses would have the potential to	**HWQ-2.** Individual projects within the specific plan area	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
degrade surface waters through discharges of urban runoff, containing a variety of pollutants including but not limited to oils, greases, solvents, pesticides and urban debris. These contaminants may enter the storm drain system in the form of street runoff, indiscriminate household use or other sources. Without proper management, potentially significant water quality impacts could occur. Both Chino Creek and Mill Creek within the plan area have been listed as impaired waters due to high nutrient, pathogen, salinity/TDS/chlorides and suspended solids concentrations. Without proper management of runoff to protect water quality in Chino and Mill Creeks, potentially significant water quality impacts could occur.	shall be reviewed by the City of Chino for the inclusion of appropriate structural and non-structural Best Management Practices (BMPs) to control stormwater discharges and protect water quality. Structural controls may include, but are not limited to filtration, common area efficient irrigation, common area runoff-minimizing landscape design, velocity dissipation devices, oil/grease separators, inlet trash racks, and catch basin stenciling. Non-structural BMPs can include education for property owners, tenants and occupants, activity restrictions, common area landscape management, litter control, and catch basin inspection, BMP maintenance; and street sweeping. The following are examples of BMPs that may be included within NPDES permit requirements for individual projects: • Use of sand bags and temporary desilting basins during project grading and construction during the rainy season (October through April) to prevent discharge of sediment-laden runoff into stormwater facilities. • Installation of landscaping as soon as paracticable after completion of grading to reduce sediment transport during storms. • Hydroseeding, soil binders or other measures to retain soil on graded building pads if they are not built upon before the onset of the rainy season. • Incorporation of structural BMPs (e.g., grease traps, debris screens, continuous deflection separators, oil/water separators, drain inlet inserts) into the project design to provide detention and filtering of contaminants in urban runoff from the developed site prior to discharge	

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	to stormwater facilities. • Stenciling of catch basins and other publicly visible flood control facilities with the phrase "No Dumping-Drains to the Ocean." **HWQ-3.** The City shall review subsequent development projects within the specific plan area for the application of Best Management Practices (BMPs) to reduce water pollution from urban runoff. Among the source-reduction BMPs that may be required by the City for application to such projects are the following: • Animal waste reduction • Exposure reduction • Recycling/waste disposal • Parking lot and street cleaning • Infiltration (exfiltration) devices • Oil and grease traps • Sand traps • Filter strips • Regular/routine maintenance The specific measures to be applied shall be determined in conjunction with review of required project hydrology and hydraulic studies, and shall conform to City standards and the standards of the County's Municipal Stormwater Permit, under the NPDES program. **HWQ-4.** A water quality monitoring program should be implemented to regularly test the water quality at the	

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	project storm drainage outlets to Prado Lake, Chino Creek and Mill Creek. The program should be devised to differentiate the pollutant contributions of project development from dairies during the transitional period. If test results determine that the water quality standards established by the RWQCB are not being met, corrective actions acceptable to the RWQCB would be taken to improve the quality of surface runoff discharged from the outlets to a level in compliance with the adopted RWQCB standards. See measure HWQ-7.	
Cumulative Impacts Implementation of the proposed plan, along with other projects in the surrounding area Chino Basin Dairy Area (CBDA), will contribute to increases in impervious surfaces (which will increase runoff rates), and incrementally add to the amount of urban pollutants discharged into the drainage system. However, the proposed project's incremental impact would be substantially reduced with application of identified mitigation measures and compliance with state and federal regulations protecting receiving waters. Consequently, the project's contribution to cumulative water resources impacts is considered less than significant.	See measures HWQ-1, -2, -3, -4, -5, -6, and -7.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
BIOLOGICAL RESOURCES		
Loss of Land Cover Type		
The project will result in the loss of approximately 2,349 acres of land cover type above the 566' elevation line. Acres lost above the 566' line include approximately 1,580 acres of agricultural industry (dairy/pasture), 702 acres of cultivated fields (croplands), 1 acre of fallow fields, 38 acres of surface water bodies (dairy detention/livestock watering/irrigation ponds), 1 riparian acre, and 17 acres of windrows. Proposed development will result in the loss of most of the remaining ruderal plant species within the northern portion of Subarea 2 above the 566' line.	**See attached listing of mitigation measures for Biological Resources** Compliance with the following mitigation measures: • B-1, Zoning and Land Use Regulation • B-2, Required Biological Studies • B-3, Resources Management Plan – B-3(1) 300-acre Conservation Area – B-3(2) Alternate Location for the 300-acre Conservation Area – B-3(4) Burrowing Owls – B-3(5) Surface Water and Riparian Habitat – B-3(6) Existing Windrows – B-3(7) Agricultural Easements – B-3(8) Mitigation Fee – B-3(10) Administration and Monitoring	Not Significant.
Biological Resources Below the 566-Foot Line		
Proposed land use designations below the 566-foot elevation consist of open-space related uses that will also fall under the jurisdiction of the U.S. Army Corps of Engineers. Biologically sensitive areas within the Chino Creek and Mill Creek floodways are included within an extreme resource area that is protective of biological resources. These areas include critical habitat areas identified as suitable only for extremely low	Compliance with the following mitigation measures: • B-1, Zoning and Land Use Regulation • B-2, Required Biological Studies • B-3, Resources Management Plan – B-3(4) Urban Buffer/Transition Area – B-3(7) Agricultural Easements – B-3(8) Mitigation Fee	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
intensity use. However, without adequate mitigation, additional impacts to sensitive biological resources below the 566-foot elevation line could occur from increased public access and use of the open space system, as well as uncontrolled stormwater discharges from planned development above the 566-foot elevation.	– B-3(9) Participation in Regional Efforts – B-3(10) Administration & Monitoring • Also, see Hydrology and Water Quality Measure HWQ-7	
Wildlife		
Without resource protection and management measures, plan implementation could result in significant impacts to the following resources: • Loss of Surface Water and Riparian Habitat • Loss of Least Bell's Vireo Critical Habitat • Loss of Southwest Willow Flycatcher Habitat • Loss of Western Yellow-Billed Cuckoo Habitat • Loss of Windrows and Agricultural Fields • Loss of Migratory Corridors • Delhi Sands Flower-loving Fly Recovery • Loss of Burrowing Owl Habitat	Compliance with the following mitigation measures: • B-2, Required Biological Studies • B-3, Resources Management Plan – B-3(5) Surface Water and Riparian Habitat – B-3(6) Existing Windrows – B-3(7) Agricultural Easements – B-3(1) 300-acre Conservation Area – B-3(2) Alternate Location for 300-acre Conservation Area – B-3(3) Burrowing Owls	Significant for Burrowing Owls (all other wildlife impacts not significant at project level)
Wetlands and Drainage Areas		
Waterbodies likely to fall under the jurisdiction of the U.S. Army Corps of Engineers and California Department of Fish and Game are included within a variety of Open Space plan designations. Any development activity proposed within wetlands and jurisdictional drainages would require coordinated review and permitting with the US ACOE, CDFG and Santa Ana Regional Water	Compliance with the following mitigation measures: • B-2, Required Biological Studies • B-3, Resources Management Plan – B-3(5) Surface and Riparian Habitat	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Quality Control Board. Through the permitting process, loss of wetlands and jurisdictional drainages would be mitigated to less than significant levels, or permits would not be issued.		
Cumulative Impacts		
Planned development in Subarea 2 and the surrounding Prado Basin region will contribute to the incremental loss of open space and, with it, habitat for plants and wildlife. Past agricultural activities in Subarea 2 and the rate of present development in the surrounding region has already resulted in the decline of several species. The economic value of the remaining areas is expected to continue to increase, resulting in increased pressure for further development. The loss of burrowing owl nesting and foraging habitat above 566-foot elevation line within Subarea 2 was determined to be significant at the project level and cumulatively at the regional level. The loss of raptor foraging habitat within Subarea 2 will contribute to a cumulative significant adverse impact to regional raptor populations.	Compliance with all aspects of mitigation measures B-1 thru B-3.	Significant for regional Burrowing Owl and raptor populations.
GEOLOGY AND SOILS		
The potentially significant geologic hazards affecting land use and development in the plan area are: • Fault rupture and severe groundshaking due to	**GS-1.** All applications for individual development projects shall include a detailed Geotechnical and Soils Engineering Study which addresses potential hazards associated with fault rupture, seismicity and groundshaking, liquefaction, subsidence and near-surface groundwater. Such studies	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
a local moderate to large earthquake • Liquefaction (including lateral spread landslides) due to shallow groundwater and severe groundshaking from local and major regional faults Subsidence-induced ground fissures due to groundwater withdrawal. Development and buildout according to the proposed plan would have the potential to expose additional people, residences, commercial and industrial development, and public facilities to these geologic and seismic hazards. However, federal, state and local laws, regulations, codes, and policies are in effect to mitigate geologic and seismic hazards experienced within the region and at the project site. Conformance with standard measures, code requirements, and recommendations of detailed geotechnical and soils engineering studies required for subsequent development projects should serve to reduce hazards to less than significant levels. Of special concern in the plan area is the definition of the distribution, character and thickness of surface organic residue (e.g. manure and other organic deposition) within the soils that remain from activities of the dairy industry. A related concern for development and building foundations is the potential accumulation and/or	shall: • Conform to code requirements, and standards and guidelines established by the City of Chino; • Fully and accurately reflect site conditions regarding the possible hazards identified herein; and • Include all mitigation measures necessary for reducing risks posed by geologic hazards on the project site. **GS-2.** All individual developments shall be constructed according to requirements established in geologic studies pertaining to the project site, and general engineering practices established by the City of Chino. **GS-3.** Grading operations on all former dairy lands and other agricultural properties will be conducted in accordance with the soils report prepared by a registered soils engineer approved by the City of Chino. The soils engineer will make recommendations concerning removal of any organic material or the proper handling of such material during grading. All manure from dairy corrals and other surface areas shall be stripped and removed prior to grading operations, in accordance with applicable codes and regulations. The potential for methane in remaining soils shall be specifically addressed in soils reports on all former dairy lands and other agricultural properties. Where the potential for methane accumulation or release is identified, soils testing shall occur with results and remedial measures identified in the soils report.	

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
release of methane in soils with manure and other organic content. **Cumulative Impacts** Development of the proposed project and other approved, pending and probable future projects may expose future populations to regional seismic hazards. However, compliance with seismic safety standards for new construction, recommendations of project geotechnical engineering reports, and ongoing provisions for emergency preparedness and response are anticipated to reduce such risks, on a project-by-project basis, to acceptable levels. Other geologic and soils influences are largely site specific, and there is little if any cumulative relationship between proposed project development and development of other cumulative projects.	See measures GS-1, -2, -3.	Not Significant.
HAZARDS The possible location of wildlife areas or large water features near airports is a safety concern for aircraft operations, particularly with regard to waterfowl near runways. No significant conflicts with Chino Airport land use restrictions are anticipated. Planned land uses surrounding the airport are compatible with Airport Safety Zones and the adopted Airport Comprehensive Land Use Plan (ACLUP). School sites within two miles of the airport will require special review by Caltrans Division of	**HM-1.** To minimize aircraft/wildlife hazards, sizeable water features that might attract waterfowl should be prohibited in the plan area east of the Airport. **HM-2.** The maximum building heights outside of the runway protection zones may not exceed 160 feet to prevent any conflict with adopted flight patterns. **HM-3.** Prior to City consideration of any specific development projects within the plan area, developers will be required by the City to submit a completed Phase 1 Environmental Site Assessment (ESAs), which at a	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Aeronautics and Chino Valley Unified School District to assure compliance with siting criteria. Surface organic residues (e.g. manure and other organic deposition) within the soils that remain from activities of the dairy industry are a potential concern for development. Related concerns are possible exposure of new development and human populations to explosive concentrations of methane released from such soils, and exposure to pesticide residues in agricultural soils. Mosquito populations may continue to breed during the dairy transition to urban uses, and buildout of the community. Control of these populations can be achieved with non-chemical methods (i.e. mechanical methods) and the use of pesticides. With proper, vector control practices, health and safety impacts are not expected to be significant. A number of existing buildings within Subarea 2 may contain potentially hazardous materials, including asbestos and lead-based paints. These buildings may include, but are not limited to, pre-1979 residential structures as well as commercial and industrial buildings. Without proper management practices, the exposure of surrounding populations to odors, dust emissions and related health hazards	minimum, meets with the requirements of the most current standards of investigation established by the American Society of Testing and Materials (ASTM Standard E 1527). The recommendations of such ESAs, including testing and soil remediation, if necessary, shall be adhered to reduce any identified hazards to acceptable levels. **HM-4.** Prior to issuance of permits by the City of Chino for major renovation or demolition of any pre-1979 structure within the project area, the project developer will be required to submit documentation to the City Building Department that asbestos and lead-based paint issues are not applicable to their property, or that appropriate actions will be taken to correct any asbestos or lead-based paint issues prior to development of the site. **HM-5.** In order to minimize risks to life and property, projects within the plan area will be required to demonstrate compliance with all applicable federal, state and local laws and regulations governing the handling, transport, treatment, generation and storage of hazardous materials.	

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
resulting from Co-Composting Facility air quality impacts during windy conditions would be potential concerns. However, IEUA has implemented dust and odor control plans including measures to mitigate these potential effects. The proposed Specific Plan includes an overlay zone to establish an appropriate buffer around the facility in the event that residential uses are developed prior to facility relocation. Following facility relocation, appropriate site remediation methods will be employed to ensure adequate site safety for residential use. No significant airborne or waterborne health or safety risks are anticipated. Scientific research has suggested that long-term direct exposure to electric and magnetic fields (electromagnetic fields) may pose a risk to human health. The proposed land use plan has located an element of the community paseo and open space system along the alignment of the major SCE power line corridor that is roughly parallel with Pine Avenue. This land use will create a corridor that separates the power transmission lines from other land uses, further reducing the possibility of long term effects of electromagnetic fields. No significant health hazards or risks are anticipated. Implementation of the Specific Plan may result in an increase in the use and storage of hazardous materials and waste as commercial, airport-related and light industrial uses expand within the project		

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
area. **Cumulative Impacts** Compliance with federal, state and local regulations concerning the handling, transport and disposal of hazardous materials and wastes would reduce impacts to less than significant levels. As related projects in the CBDA and project vicinity will be required to mitigate their own hazardous materials impacts, no significant cumulative impacts related to hazardous materials are anticipated. With cumulative development within the Chino Airport vicinity, additional populations will be exposed to some level of risk associated with aircraft activities and hazards. However, safety zones have been established to protect future uses and reduce hazards to an acceptable level of risk. No significant cumulative impact is anticipated.	See measures HM-1 through HM-5.	Not Significant.
TRANSPORTATION AND CIRCULATION The projected level of development for the Interim Year (2010) will generate a total of approximately 71,499 trip-ends per day with 5,722 vehicles per hour during the AM peak hour and 7,793 vehicles per hour during the PM peak hour. For Buildout conditions, development is estimated to generate a total of approximately 244,930 trip-ends per day with 18,993 vehicles per hour during the AM peak hour and 25,911vehicles per hour during the PM peak hour.	A cumulative listing of all project related roadway and signal improvements to be provided for post-2020 buildout conditions, including the proposed project, is contained in RDEIR Table 5.7-5. **T-1.** Notification: Since the project contributes significant traffic to a State Highway (I-15 Freeway, SR-71 Freeway, SR-60 Freeway, and SR-91 Freeway), and it also contributes significant traffic to roadway segments serving CMP intersections within the jurisdictions of the City of Chino Hills, City of Ontario, County of San Bernardino,	Significant

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
<u>Future Traffic Conditions</u> **Year 2010 Conditions.** For Interim Year (2010) Without Project traffic conditions, fifteen (15) intersections are projected to be at LOS "E" or "F". For the Interim Year (2010) With Project conditions, twenty-five (25) intersections are projected to be at LOS "E" or "F". The additional ten (10) intersections projected to operate at LOS "E" or "F" as a result of project implementation are as follows: • El Prado Rd. (NS) at Kimball Ave. (EW) • El Prado Rd. (NS) at Pine Ave. (EW) • Euclid Ave. (NS) at Kimball Ave. (EW) • Grove Ave. (NS) at Merrill Ave. (EW) • Grove Ave. (NS) at Kimball Ave. (EW) • Grove Ave. (NS) at Pine Ave. (EW) • Hellman Ave. (NS) at Kimball Ave. (EW) • Hellman Ave. (NS) at Chandler St. (EW) • Archibald Ave. (NS) at Pine Ave. (EW) • Hamner Ave. (NS) at Cloverdale Rd. (EW) **Year 2020 Conditions.** By the Year 2020, thirty-five (35) intersections are projected to be at LOS "E" or "F" for the Without Project condition. Forty-two (42) intersections are projected to be at LOS "E" or "F" for the With Project condition by 2020. The additional seven (7) intersections projected to operate at LOS "E" or "F" as a result	City of Norco, City of Corona, and the County of Riverside, the City of Chino shall notify the Congestion Management Agency (SANBAG), the California Department of Transportation (Caltrans), the City of Chino Hills, City of Ontario, County of San Bernardino, City of Norco, City of Corona, and the County of Riverside in accordance with CMP requirements. Each of these agencies must be provided with a copy of the CMP traffic study, once the document is accepted by the City of Chino. **T-2.** The proposed project shall construct or otherwise provide for all internal roadway improvements. The provision of such improvements shall be phased to address the incremental impacts of individual development projects. **T-3.** The City of Chino shall work cooperatively through SCAG and SANBAG to develop regional/subregional projects and identify regional transportation funding needed to minimize future freeway deficiencies. The City will actively participate in other future regional and/or subregional efforts to reduce freeway congestion. **T-4.** The City of Chino shall participate in planning efforts to develop subregional and/or regional transportation facilities based on equitable cost sharing programs among cities and counties. **T-5.** The City of Chino shall provide traffic operations and traffic systems management (TSM) improvements, including signal system coordination, automated traffic control, Smart Corridors, intelligent transportation systems,	

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
of project implementation are as follows: • SR-71 Fwy. NB Ramps (NS) at Pine Ave. (EW) • Euclid Ave. (NS) at Merrill Ave. (EW) • Grove Ave. (NS) at Kimball Ave. (EW) • Hellman Ave. (NS) at Merrill Ave. (EW) • Archibald Ave. (NS) at Cloverdale Rd. (EW) • Archibald Ave. (NS) at Pine Ave. (EW) • River Rd. (NS) at Corydon St. (EW)	and other measures. **T-6.** Individual development projects shall be reviewed by the City for integration of trip reduction measures, travel demand management (TDM) strategies and alternative transportation modes, consistent with the Specific Plan. **T-7.** In the initial phases of development, the City of Chino shall require that a Transit Feasibility Study be prepared of the proposed project transit system. The feasibility study should address the timing of transit development vis-a-vis development phasing, and the interface with future regional transit works. To respond to potential issues related to the development of such a system, the following actions must be undertaken: • Identify the various funding mechanisms associated with the construction and operation of the system. • Require each proposed project to provide adequate right of way for such a system and construct the required infrastructure. • Establish design criteria and an evaluation process for determining transit stop locations that ensure pedestrian access prior to tentative map approval. • Operational issues, such as the future management of the system, may be deferred until the appropriate time, based upon discussions with current regional transit providers. **T-8.** The City of Chino shall contact appropriate transit agencies to encourage an expansion of transit services up to and within the project area.	

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	T-9. Traffic studies shall be required as deemed necessary by the City Engineer. Each study will identify the timing, and extent of required improvements to adequately evaluate future traffic impacts of individual projects needed to mitigate the impacts of such development.	
Freeway Segments		
The traffic report included an analysis of 35 freeway segments based upon the San Bernardino County CMP. The proposed project traffic study identified the number of general use and high occupancy traffic lanes required to accommodate the proposed project and other future development. Providing the number of lanes necessary to provide an adequate level of service for all segments, except those on the SR-91 which are currently under study by the Counties of Riverside, San Bernardino, and Orange, is based upon obtaining adequate funding. A portion of the traffic generated by the proposed project will contribute toward the need to expand these freeway segments.	See measures T-1, T-3, T-4, T-6, T-7.	Significant
Transit Plan		
The Specific Plan transit plan will require further study to properly evaluate the potential impact it may have upon traffic patterns, vehicle trip reduction, land use, and air quality. Implementation of the transit system would have the potential to reduce the number of vehicle trips within the proposed plan area and on the regional	No measures are necessary.	Beneficial impact.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
system, thereby providing a beneficial effect. **Cumulative Impacts** The proposed project will contribute to significant and cumulatively adverse traffic conditions at buildout of the plan area.	See measures T-1 through T-9.	Significant
NOISE **Construction Noise** Construction activities, especially heavy equipment, will create short-term noise increases within and near the project site. Such impacts may be significant if project development occurs near the interface with existing noise-sensitive land uses.	**N-1.** Construction Noise. The following construction noise reduction measures will be implemented: All construction activities conducted within 500 feet of any occupied dwelling shall not occur from 7 P.M. to 7 A.M. the following day, and at any time on Sundays or universally observed holidays. • All construction equipment will use properly operating mufflers. • All staging areas shall be located away from occupied dwellings and schools where feasible. • The City of Chino will approve construction truck access routes that minimize noise intrusion into sensitive areas, such as neighborhoods, schools, and parks.	Not Significant.
Vehicular Noise Potentially significant noise level differences between the Year 2020 Without Project and Year 2020 With Project conditions are predicted to occur at twenty-five (25) roadway links. This includes increases of +3 dB CNEL that are forecast to occur along 17 roadway links and	**N-2.** Roadway Noise. Developers/builders shall submit acoustical studies to the City of Chino for subsequent tentative maps and noise-sensitive uses (e.g. residences, schools, medical facilities) adjacent the principal area roadways. Such studies shall assure that: • Usable exterior space meets noise standards of 65 dB	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
measurable (+1 dB CNEL) increases along another 8 roadway links where existing levels already exceed 65 dB CNEL as far away as 100 feet from the roadway centerline.	CNEL through a combination of setback or barriers. • Habitable interior rooms along any project perimeter near noise-impacted roadways meet the interior standard of 45 dB CNEL through dual-paned windows, central air conditioning and other structural upgrades.	
Aircraft Noise Exposure		
The proposed Specific Plan includes a Chino Airport Overlay (CAO) zone that conforms to the airport limits, based on the 1991 ACLUP adopted noise contours and safety zones. Near airports, even at noise exposures well outside the 65 dB CNEL contour, there may be single flyover events that are perceived as intrusive even if the 65 dB CNEL standard is met with a large margin of safety.	**N-3.** Airport Noise. In order to ensure that noise exposure is considered in review of subsequent development projects within the plan area, and in acknowledgement of possible single-event aircraft audibility even if standards are not exceeded, the following measures will be implemented: • The City of Chino shall provide notice of development applications within adopted airport noise and safety zones to the Airport Land Use Commission (ALUC), in compliance with the Airport Comprehensive Land Use Plan (ACLUP). The City will coordinate with the ALUC to assure the compatibility of specific development projects with Chino Airport Operations (same as Mitigation Measure LU-1). • All real estate transactions within Subarea 2 within 1.0 mile of the airport boundary will contain advisory language that aircraft may be periodically audible even though the subject property is exposed to noise levels due to aviation activities that are well within State guidelines.	Not Significant.
Cumulative Impacts		
Area roadways will experience potentially significant noise level increases due to cumulative traffic growth, including traffic from the project area. Increases of +3 dB CNEL are forecast to	See measures N-1 and N-2.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
occur along 17 roadways, with another 8 experiencing a measurable (+1 dB CNEL) increase where existing levels already exceed 65 dB CNEL as far away as 100 feet from the roadway centerline.		
AIR QUALITY **Construction Impacts** Project development will create temporary emissions of fugitive dust from soil disturbance, and combustion emissions from on-site construction equipment and from off-site trucks moving dirt, delivering construction materials, and from worker travel. A significant source of air pollution from project construction will be the dust generated during clearing, excavation and site preparation. Nitrogen oxide (NO_x) emissions are likely to exceed the SCAQMD significance threshold. However, the mobile nature of the on-site construction equipment and off-site trucks will minimize any localized violations of the NO_x or other standards. With mitigation to keep equipment in good tune (low-NO_x tune-ups), average daily construction equipment emissions can be reduced, but not to less than significant levels during maximum grading activity days.	The proposed project will employ standard mitigation measures, such as dust control measures during construction mandated by the SCAQMD, and energy efficient design practices required by Title 24 of the California Code of Regulations. **AQ-2.** Construction Emissions. Per SCAQMD Rule 403, the City shall enforce the following measures: • During all construction activities, construction contractors shall use low emission mobile construction equipment where feasible to reduce the release of undesirable emissions. • During all construction activities, construction contractors shall encourage rideshare and transit programs for project construction personnel to reduce automobile emissions. • During all grading and site disturbance activities, construction contractors shall water active grading sites at least twice a day, and clean construction equipment in the morning and/or evening to reduce particulate emissions and fugitive dust. • During all construction activities, construction	Significant (for construction phase PM_{10} and NOx emissions)

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	contractors shall, as necessary, wash truck tires leaving the site to reduce the amount of particulate matter transferred to paved streets as required by SCAQMD Rule 403. • During all construction activities, construction contractors shall sweep on and off site streets if silt is carried over to adjacent public thoroughfares, as determined by the City Engineer to reduce the amount of particulate matter on public streets. • During all construction activities, construction contractors shall limit traffic speeds on all unpaved road surfaces to 15 miles per hour or less to reduce fugitive dust. • During grading and all site disturbance activities, at the discretion of the City's Planning Director, construction contractors shall suspend grading operations during first and second stage smog alerts to reduce fugitive dust. • During grading and all site disturbance activities, at the discretion of the City's Planning Director, construction contractors shall suspend all grading operations when wind speeds (including instantaneous gusts) exceed 25 miles per hour to reduce fugitive dust. • During all construction activities, the construction contractors shall maintain construction equipment engines by keeping them tuned. • During all construction activities, the construction contractors shall use low sulfur fuel for stationary construction equipment as required by AQMD Rules 431.1 and 431.2 to reduce the release of undesirable emissions.	

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	• During all construction activities, the construction contractors shall use existing on site electrical power sources to the maximum extent practicable. Where such power is not available, the Contractor shall use clean fuel generators during the early stages of construction to minimize or eliminate the use of portable generators and reduce the release of undesirable emissions. • During all construction activities, the construction contractors shall use low emission, on site stationary equipment (e.g., clean fuels) to the maximum extent practicable to reduce emissions, as determined by the City Engineer. • During all construction activities, the construction contractors, in conjunction with the City Engineer, shall locate construction parking to minimize traffic interference on local roads. • During all construction activities, the construction contractors shall ensure that all trucks hauling dirt, sand, soil or other loose materials are covered or should maintain at least two feet of freeboard (i.e. minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of the California Vehicle Code Section 23114 to reduce spilling of material on area roads.	
Operational Impacts		
Project implementation will create significant increases in CO and NO_x levels due to traffic exhaust emissions. At buildout, project-related emission levels for the three primary exhaust pollutants (CO, NO_x and ROG) would	Effective emissions reduction of mobile source emissions requires a unified transportation system management (TSM) approach where a variety of transportation control measures (TCM's) are integrated into a comprehensive system of procedures and goals. The proposed project	Significant (within South Coast Air Basin non-attainment area)

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
substantially exceed SCAQMD thresholds. However, displacement of dairy operations will cause a significant net reduction in reactive organic gases and in particulates. There is no basis for comparing pollutants as one type being better or worse than another. The basin is in attainment for CO, but not for ozone (created by ROG + NO_x + sunlight), or for particulates. The net effect of project implementation is that two non-attainment pollutants or precursors (ROG and PM-10) will be significantly reduced, while one non-attainment precursor (NO_x) and one attainment pollutant (CO) will be increased significantly. Odor impacts of dairies on sensitive uses (e.g. residential, schools) are anticipated to be significant during the transition period to urban use. Residential development in the vicinity of the IEUA Co-Composting facility (e.g. within approximately ½ mile) may be affected by facility-generated odor prior to facility relocation. The Specific Plan establishes a 300-ft. overlay zone setback from this facility for residential and other sensitive uses. The maximum project-related carbon monoxide (CO) increment is less than 1.0 ppm at any intersection if recommended roadway improvements are constructed in concert with project development. This small increment would not cause the hourly standard to be exceeded. All "with-project" CO increments are dominated by the no-project area growth of traffic	includes several important components of an effective mobile source emissions reduction program. These components include basic project design features which are consistent with air quality objectives and "smart growth" principles, and include: • Community design to facilitate local transit (The Preserve) Mobility Plan and Transit System); • Development of park-and-ride facilities. • Encouragement of bicycle and pedestrian circulation alternatives (The Preserve Community Paseo and Open Space System and Bicycle System. • Encouragement of local employment-generating uses to reduce jobs-housing imbalances that promote long commutes in and out of the local area (The Preserve Land Use Development Plan, including approximately 626 acres of Business Uses). To further reduce mobile source emissions and promote local and regional transit access, the following measure is added: **AQ-1**. Mobile Source Emissions/Transit. The City of Chino shall contact appropriate transit agencies to encourage an expansion of transit services up to and within the project area. The City will coordinate with such agencies and other jurisdictions to promote express transit access from the Chino area to other regional employment centers.	

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
and congestion. With implementation of recommended roadway improvements, microscale air quality impacts are not considered significant.		
Cumulative Impacts		
The proposed plan area is within the South Coast Air Basin (SCAB) non-attainment area for several criteria air pollutants. The proposed project will contribute to cumulatively significant and adverse air emissions within the SCAB non-attainment area.	See measures AQ-1 and AQ-2.	Significant (within South Coast Air Basin non-attainment area)
POPULATION AND HOUSING		
Total employment generation from the planned mix of non-residential commercial, industrial and recreation activities is estimated to be 13,376 jobs. These jobs could include both skilled and unskilled commercial retail jobs; manufacturing and assembly positions; warehouse positions and commercial office jobs, and would ultimately displace jobs under current dairy use and agricultural zoning. Employment growth will increase demand for housing in the project area and vicinity. Because of the nature of the new jobs, including higher-paying manufacturing and wholesale trade jobs, the average household income associated with the project is estimated to be higher than the current estimated household income for San Bernardino County. Housing growth in the plan area and	No mitigation measures are necessary.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
vicinity is not inconsistent with SCAG regional forecasts. The proposed plan area jobs/housing ratio in 2020 is projected to be 1.37, compared with a projected County ratio of 1.28, thus furthering subregional and regional jobs/housing balance objectives. The plan area jobs/housing ratio will be less than SCAG's projected year 2020 ratio of 4.13 for the City of Chino as a whole. Sub-regions with employment to housing ratios which reflect the SCAG regional average are generally considered to be balanced. The proposed plan design including housing in close proximity to employment and retail centers is considered a positive effect on the local economy and the physical environment, because it may contribute to reduced reliance on the automobile and possible reductions in regional work trip commutes, with corollary air pollution and energy consumption reduction benefits. There are no significant adverse impacts related to population, housing, or employment growth from the proposed project.		
Cumulative Impacts		
There are no significant adverse impacts related to population, housing, or employment growth from the proposed project. The project's incremental contributions to cumulative	No measures are necessary.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
population, housing, and employment impacts within the SCAG region are seen as less than significant.		
PUBLIC SERVICES **Schools** Implementation of the proposed development plan will result in 9,779 new dwelling units within the Chino Valley Unified School District (CVUSD) boundaries at plan buildout. This would result in an increase of approximately 6,063 new students within the District, based on the District student generation factor (SGF) of .62 students, on average per dwelling unit. This represents a significant direct impact on schools and school capacity within CVUSD. Three school sites are identified in the proposed project Land Use Plan to accommodate the student population growth estimate by the affected school district. Two 10-acre elementary schools (K-6) and one 15-acre K-8 school are anticipated. The location, size, and configuration of the school sites would be determined during site plan and tract map review. Proposed plan development of approximately 695 acres of business uses, including commercial and industrial space, is expected to result in an indirect increase in the District's student population (i.e. non-resident student population).	**PS-S-1.** Developers/builders within the plan area shall work with the CVUSD to plan school service for the proposed development. **PS-S-2.** Prior to issuance of a building permit, project developers shall pay statutory developer fees to the CVUSD, form a Communities Facilities District, or provide land and improvements pursuant to the requirements established in SB 50. The amount of fees or special taxes to be paid or land and improvements to be provided will be determined based on the established state formula for determining construction costs.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
This indirect student enrollment impact will be mitigated by school impact fees.		
Construction activities adjacent to operating schools could result in potential safety hazards to students and others accessing the school site.	**PS-S-3.** To reduce potential safety hazards during construction, the City shall require developer notification to Chino Valley Unified School District of pending construction activity adjacent or near operating schools. Evidence of notification shall be provided to the City prior to issuance of grading and building permits for projects within any Master Plan, Tentative Map or Site Plan inclusive of, or immediately adjacent to, an operating school site.	Not Significant.
Cumulative Impacts		
Buildout of the proposed plan will generate a substantial increase in student population and contribute to a significant cumulative impact on public school facilities.	See measures PS-S-1 and PS-S-2.	Not Significant.
Police Protection		
Implementation of the proposed plan will significantly increase demands on police services within the plan area. Access and use of the planned recreational areas will increase the need for police responses to these areas. Until such time as a police facility is established near the site, overall response time to The Preserve Specific Plan area could be expected to increase by 2 to 3 minutes for emergency calls. The Preserve Plan includes a Community Core (125 acres) with areas available for civic uses,	**PS-P-1.** Police impact fees shall be paid to cover capital costs associated with the creation of additional facilities and improvements to service The Preserve area. The City of Chino may allow credit toward impact fees for any police facilities constructed by the developer.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
possibly including a future police substation. Until expansion of the existing department or creation of a new facility, the police department plans to establish a police sub-station housed at the Chino Airport, near the proposed plan area. This temporary substation will give immediate aid to the proposed plan area and could become a permanent sub-station. To mitigate the need for additional police resources in the plan area, the City of Chino and the Police Department have implemented long-term budgetary strategies to ensure availability of necessary resources, as the project area develops. Pursuant to City requirements and standard conditions, the Chino Police Department will be consulted during site planning and design to ensure that adequate provisions for law enforcement protection/prevention are designed into the project. No significant security impacts are anticipated. **Cumulative Impacts** Buildout of the project area, by increments of development, will contribute to a significant cumulative impact on police services.	See measure PS-P-1.	Not Significant.
FIRE SERVICE/EMERGENCY MEDICAL SERVICE Development of the plan area will create additional fire service needs, and will place a	**PS-F-1.** Developer impact fees shall be paid to contribute to the cost of new fire facilities, apparatus, and equipment	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
significant burden on the Chino Valley Independent Fire District (CVIFD) to maintain sufficient resources and response times for all fire and medical emergency calls. At least one new fire station with adequate equipment and personnel to meet demand will be needed to reduce fire safety impacts to less than significant levels. Designation and development of a fire facility within or near the plan area (i.e. Chino Airport), and payment of City and Fire Department fees will help to offset impacts on fire resources and services.	to offset the increase in fire services demand created by the project. **PS-F-2.** The City of Chino shall coordinate with the Fire District to assure construction of a new fire station site to serve the proposed project. The fire station shall be constructed and ready for Fire District occupancy prior to the issuance of the 1,350th building permit for the proposed project. The station location may either be within the project site or at Chino Airport, subject to agreement by San Bernardino County Department of Airports. The station shall be adequately attenuated from noise effects of airport operations. **PS-F-3.** Prior to construction, the developer shall contact the Fire District for verification of current fire protection development requirements. All new construction shall comply with all applicable statutes, codes, ordinances, and/or Fire District standards. **PS-F-4.** Water lines within the project site shall be designed to meet the fire requirements. **PS-F-5.** Fire hydrants shall be designed and placement specified by the Fire District at the time water lines to the project area are built or as a condition of development project approval. **PS-F-6.** Upon annexation of the plan area, the City will be responsible for payment of services to the State Department of Forestry & Fire Protection in conformance with rules and	

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	standards for wild land fire areas still receiving State protection.	
Cumulative Impacts		
CVIFD will be expanding fire service capabilities to meet cumulative demands, consistent with its fire services master plan. With payment of fire fees and provisions for a new fire facility, the plan area's incremental contributions to cumulative fire impact will be mitigated to a less than significant level.	See measures PS-F-1 through PS-F-6.	Not Significant.
LIBRARY SERVICES		
The plan area Community Core will include approximately 10 acres for civic-related uses, including space for a potential branch library. Based on the current deficient library space utilization of .16 square feet per capita, approximately 5,319 additional square feet of library space would be needed to serve the plan area population. However, based on a desirable minimum space standard of .35 square feet per capita, approximately 11,637 additional square footage of library space would be needed to serve the plan area population. The proposed project has the potential to place significant demands upon library facilities and services.	**PS-L-1.** The proposed project should address the need for additional library facilities and library services, and provide space or funding for library construction. The construction of a joint use library shared by the County of San Bernardino and Chino Valley Unified School District may be an appropriate option. **PS-L-2.** Project developers should contribute impact fees either toward expansion of existing library facilities or construction of new facilities, if such fees or requirements are adopted for general application by the County.	Not Significant.
Cumulative Impacts		
The proposed project will contribute to significant cumulative demands on library facilities and services within the City of Chino.	See measures PS-L-1 and PS-L-2.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
PARKS/RECREATION		
Based on the City's existing parkland development standard of 3 acres per 1,000 population, approximately 110-acres of local park and recreational facilities will be needed at buildout. As the proposed plan allocates 110 acres of community and neighborhood parks, no significant local park impacts will occur. The proposed plan identifies over 2,600 acres in various open space designations potentially available for recreation opportunities. Recreational use of Prado Regional Park and adjacent concession areas, including El Prado Golf Course, Prado Stables, Prado Olympic Shooting Park, Oranco Bowmen Archery Range, Prado Recreational Dog Training Facility, and the Prado Air Park, will increase with the proposed project, due to the increase in the population in close proximity. Recreational demands on this county facility are a potentially significant impact of the proposed project.	**PS-PR-1.** As Per the City of Chino, every residential developer or person who develops land for residential purposes shall dedicate a portion of such land, pay a fee, or a combination of both at the option of the city for the purpose of providing park and recreational facilities at the time and according to City standards outlined in Chapter 18.04, "Land Dedication Requirements Generally." **PS-PR-2.** The City of Chino will coordinate with San Bernardino County to assure that traffic, access control and safety needs of Prado Regional Park are met, and that the impacts of implementation of the proposed project on Prado Regional Park facilities are minimized to the extent practical. A Traffic and Access Control plan may be a component of this collaboration. The City will also assure through subsequent development reviews, that project-related drainage does not adversely affect the park and Prado Lake.	Not Significant.
Cumulative Impacts		
Buildout of the planned area and cumulative projects is expected to increase demands for parks and recreational facilities in the plan area. As individual developments are phased within the plan area, park and recreational facilities are planned to be developed to meet the future needs of area residents. Plan area residents will pay park	See measures PS-PR-1 and PS-PR-2.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
use fees for access to regional park facilities. No significant cumulative impacts on parks and recreational facilities.		
WATER SUPPLY The project at buildout will generate a potable water demand of 6.1 million gallons daily (MGD) and an average daily recycled water demand of 4.0 MGD. SAWPA's Chino Basin Desalination Plant is identified to supply 4.5 MGD of the needed 6.1 MGD to the project area. The remaining 1.6 MGD will be obtained by the City through the following measures: 1) production of groundwater over entitlement based on Safe Yield limitations; 2) increasing imported water purchases; 3) purchasing additional desalted water, if more is produced than is needed to satisfy the requirements of other purchasers. The City in coordination with SAWPA and IEUA will develop an urban water management plan to assure sufficient water supplies and facilities to meet future growth. Recycled water will be obtained from IEUA sources. The total required operational storage capacity for recycled water at the project site is 8.9 MG of water.	**U-W-1.** Consistent with SB 221, subsequent development projects within the plan area shall be reviewed by the City to confirm the availability of sufficient water supplies to meet project water needs. **U-W-2.** Consistent with requirements of AB 2838, the City shall periodically review and update its urban water management plan to ensure that adequate water supplies and facilities are available to meet future growth. **U-W-3.** Subsequent development projects should be designed to incorporate features that encourage and promote groundwater replenishment. **U-W-4.** Retention of precipitation and runoff on-site should be encouraged in development designs where appropriate. **U-W-5.** The City shall continue to support efforts to develop the water supply and to encourage water conservation. Water conservation techniques appropriate for new and existing development include: • Installing flow restrictors in showers. • Repairing leaky water fixtures. • Promoting drought resistant low maintenance vegetation.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	U-W-6. The City shall coordinate its efforts with the IEUA to expand the re-use of wastewater for such uses as the irrigation of parkways, golf courses, landscaped areas, and parks, and, if feasible, for industrial processes. **U-W-7.** The City shall engage in water conservation programs and activities, including but not limited to, participation in the following water conservation practices: • Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers • Residential Plumbing Retrofits • System Water Audits, Leak Detectors and Repair • Large Landscape Conservation Programs and Incentives • High Efficiency Washing Machine Programs • Public Information and School Education Programs • Conservation Programs for Commercial, Industrial and Institutional Accounts • Wholesale Agency Technical Assistance Program • Conservation Pricing **U-W-8.** Where erosion or water runoff is not a problem, encourage use of on-site water recharge, such as dry wells.	
Cumulative Impacts The proposed project will contribute to significant cumulative demands on water supplies in the City of Chino and region. Based on the city's Final Draft of Technical Memorandum of the Water	See measures U-W-1 through U-W-8.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
System Master Plan for Subarea 2 (2001) and the City's Water Supply Assessment (RDEIR Appendix I) the City is expected to meet project and cumulative water demands through multiple reliable sources, including potable, desalted, groundwater and recycled water sourcers.		
WASTEWATER		
Increases in plan area population and development of commercial and industrial uses will increase wastewater treatment demands on Inland Empire Utility Agency (IEUA) wastewater treatment facilities. Based on unit wastewater flow generation factors used in the City's Sewer Master Plan, it is estimated that wastewater will increase by approximately 4.8 million gallons per day (MGD) upon buildout of the plan area. IEUA will continue to expand their treatment capacity consistent with growth projections, associated increased demand, and funding mechanisms. The increased use of reclaimed water will decrease the need for treatment capacity and provide a beneficial reuse of water resources. Sufficient capacity has been allocated by IEUA to serve the plan area through buildout. No significant impacts to wastewater treatment and disposal will occur.	IEUA has indicated it will provide sufficient sewage disposal capacity in RP-5 to serve additional sewage generated within the City of Chino, and proposed plan area. The City will coordinate with the IEUA to ensure that adequate wastewater facilities are available to meet future growth. Project design will be reviewed by the City, prior to project approval, to ensure that sufficient infrastructure and capacity are available. **U-WW-1.** The City shall assure that required backbone sewer lines, or an equivalent system recommended by the City Engineer are implemented pursuant to the Sewer Master Plan. **U-WW-2.** Developers shall pay required sewage facilities development fees and system collection fees to cover City costs to construct master planned sewer mains.	Not Significant.
Cumulative Impacts		
IEUA provides service to a broad geographic area covering seven cities and a portion of the Chino	See measures U-WW-1 and U-WW-2.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
Basin Dairy Area. As development occurs within the Agency's service area, it makes additional funds available to construct necessary facilities to provide for the growth. The Agency has allocated sufficient sewage disposal capacity in RP-5 to serve additional sewage generated within the City of Chino, throughout buildout of the plan area. No significant cumulative impact on wastewater treatment facilities is anticipated.		
ELECTRICITY		
Buildout of the proposed project will result in a total electrical demand of 164,547,624 megawatts per hour per year (MW/hr/yr). Approximately 33 percent of the demand, or 55,017,390 MW/hr/yr will be generated by residential uses; 27 percent, or 29,836,537 MW/hr/yr by industrial uses; and 40 percent, or 109,530,234 MG/hr/yr, by commercial uses. The increased level of service to the project area will require implementation of new service lines and support facilities. Development will be required to conform to Title 24 of the California Code of Regulations regarding efficient use of energy resources, and other State and/or City Regulations which may be in effect at the time of approval of individual projects.	**U-E-1.** Energy efficient lighting and natural lighting should be encouraged and utilized where practical.	Not Significant.
Cumulative Impacts		
Given the current electrical energy shortfall in California and the western United States due to	See measure U-E-1.	Significant

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
high wholesale costs of electricity brought about by deregulation in 1996, it is uncertain that electrical supplies will be sufficient to meet future growth demand. Therefore, the project may contribute to significant cumulative impacts on electrical energy supplies.		
NATURAL GAS		
Natural gas demand at buildout of the proposed plan is estimated at approximately 3.9 million cubic feet annually. The Gas Company anticipates it will be able to provide the resources and facilities necessary to meet these additional demands. The City and future developers within the plan area will also coordinate with The Gas Company to ensure adequate services and facilities are available to provide for future development. No significant impact is anticipated with the provision of natural gas supplies to the project.	No mitigation measures are necessary.	Not Significant.
Cumulative Impacts		
At buildout of the plan area and other cumulative projects, significant cumulative demands will be placed on natural gas resources. The Gas Company anticipates it will be able to provide the resources and facilities necessary to meet these additional demands. Significant adverse cumulative impacts to natural gas supply and distribution are not expected.	No measures are necessary	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
SOLID WASTE		
Buildout of the proposed plan will result in the production of approximately 29,302 tons per day of residential, commercial, industrial, and public waste. Waste Management, the sole provider of waste collection and disposal services to the City, indicates that the proposed plan will not adversely affect El Sobrante Landfill's disposal capacity. The landfill can accommodate growth in waste generation for the next 50-70 years and owns 6 other landfills that could offer services as well. In reviewing subsequent development projects, the city will continue to implement solid waste reduction measures pursuant of AB 939.	Although no significant impacts to solid waste disposal are anticipated as a part of the project, the following measure is recommended to minimize waste disposal and assist the City of Chino in compliance with AB 939: **U-SW-1.** Future developments should be reviewed by the City for the provision of outside building space to accommodate the storage of large waste containers (e.g. 3 containers of 96-gallons). This system reduces waste production by encouraging recycling of material.	Not Significant.
Cumulative Impacts		
Cumulative projects within the Chino Basin Dairy Area will increase daily solid waste production and place demands upon County landfills operated by Waste Management. Waste recycling measures consistent with AB 939 requirements will be applied to development projects within the plan area to reduce incremental contributions to solid waste generation. As the increased solid waste generation from cumulative sources is not projected to exceed the tonnage capacity of El Sobrante Landfill, cumulative impacts are not anticipated to be significant.	See U-SW-1.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
DAIRY WASTE		
The problems associated with stockpiled manure, high TDS and salts in groundwater, and degradation of surface waters from dairy runoff are existing conditions that have resulted in promulgation of regulations by the Regional Water Quality Control Board to protect water resources. In most respects, the proposed project represents a beneficial impact on waste management in that it provides an economic incentive to remove, recycle or otherwise dispose of manure within the basin. Deadlines for removal of stockpiled manure from the basin have been imposed irrespective of the proposed project. Various initiatives to respond to the challenges imposed by these deadlines have either been proposed or are underway, including the Organics Management Facilities and plans to sewer the dairies. As implementation of the proposed development plan for The Preserve is anticipated to occur over approximately 20 years, the project is not anticipated to exacerbate the existing waste management impact associated with dairy use.	No mitigation measures are necessary.	Not Significant.
Cumulative Impacts		
The proposed project is not anticipated to contribute to cumulative impacts on dairy waste management. Requirements for manure removal and management have been imposed irrespective of the proposed project and other related projects.	No measures are necessary.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
TELECOMMUNICATIONS		
Telephone		
The existing telephone service provider Verizon, has plans for locating future wire centers to distribute telephone services to customers in the plan area. Verizon plans its services provision to accommodate growth in service areas. Existing and planned distribution and supply of telephone service is expected to accommodate the proposed plan implementation.	No mitigation measures are necessary.	Not Significant.
Cable Television		
Adelphia Communication Services is prepared to provide cable service to the project area. Planned distribution and supply of cable services is expected to accommodate the proposed buildout of the plan area. Impacts on cable services are not anticipated to be significant.	No mitigation measures are necessary	Not significant.
Cumulative Impacts		
Buildout of the cumulative projects would result in additional demand relative to both telephone and cable television service provision in the areas of the cumulative projects. However, existing and planned service in these areas is expected to be sufficient by the service providers.	No measures are necessary.	Not Significant.
CULTURAL RESOURCES		
Proposed development of the plan area could have an adverse impact on as yet undiscovered significant archaeological resources. There is a	**CR-1.** Survey and Mitigation Report. Phase 1 field surveys (surface survey and collection) by a certified archaeologist should be conducted prior to all earth	No Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
significant potential that additional prehistoric materials will be encountered during earth-disturbing activities within planned development areas. Future recreational or agricultural uses within the planned open space system could have the potential to disturb or destroy recorded or as yet undiscovered archaeological resources within these areas. Much of the planned open space system below the 566' elevation is owned or controlled by other public agencies (i.e. U.S. Army Corps of Engineers, Orange County Flood Control District, and County of San Bernardino). Use plans and permits for these areas will be coordinated with the appropriate agencies to assure that no significant impacts occur to archaeological resources in these areas. There are forty-five (45) recorded historic sites within the plan area, with most of these located in the planned open space system. Proposed development of the plan area could have an adverse impact on significant historic resources. Additional as yet unrecorded historic resources could be encountered during earth-disturbing activities.	disturbing activities within the plan area. Existing natural open space, agricultural open space and dairy sites are included in this survey requirement. Excluded would be heavily disturbed areas, lagoons and detention ponds, and paved areas. The archaeologist will identify all prehistoric and historic resources observed during the field survey, complete a preliminary evaluation of the resources, and recommend appropriate measures for the disposition and treatment of significant resources. A technical report shall be prepared including discussion of cultural site significance (depth, nature, condition, and extent of the resources), final mitigation recommendations, and cost estimates. Excavated finds shall be offered to the City of Chino, or its designee on a first refusal basis. Final mitigation shall be carried out based upon the report recommendations and a determination as to site disposition by the City. Possible determinations include, but are not limited to, preservation, salvage, partial salvage, or no mitigation necessary. **CR-2.** Archaeological Monitoring. Where recommended in culturally-sensitive areas pursuant to Survey and Mitigation Reports (CR-1 above), archeological monitoring of earth-disturbing activities shall be conducted. The monitoring certified archaeologist will identify any prehistoric or historic resources exposed, complete a preliminary evaluation of the resource, and recommend appropriate resource management for the treatment of the resource. If additional or unexpected archaeological features are discovered, the archaeologist shall report such findings to the City. If the resources are found to be significant, the archaeologist shall determine, in	

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
	consultation with the City, appropriate actions for further exploration and/or salvage recovery.	
Significant paleontological resources could be encountered during earth-moving activities. Older alluvium in the region and within the plan area has a high paleontological sensitivity as a primary source of significant vertebrate fossils. Proposed development of the plan area could have an adverse impact on significant paleontological resources.	**CR-3. Paleontological Monitoring.** Monitoring for fossil material should be conducted by a qualified paleontologist during construction grading activities within older alluvium (Pleistocene), in order to avoid any disturbances to possible unknown or unidentified paleontological resources.	Not Significant.
Cumulative Impacts		
The incremental effects of the proposed project on cultural resources will be mitigated with implementation of recommended mitigation measures. The planned development of the project is not anticipated to contribute to a potential cumulative impact on cultural resources.	See measures CR-1, CR-2, CR-3.	Not Significant.
AESTHETICS		
The visual character of the project area above the 566' elevation will change substantially as agricultural land uses transition to an urban setting with a mix of residential, commercial, and industrial uses. While the land use change is significant, it does not represent a significant adverse visual or aesthetic impact as no significant visual resources are identified in this area. Scenic resources and aesthetic values associated with the southerly portions of the plan area will be preserved through open space,	The proposed Specific Plan includes design guidelines and criteria to minimize the visual impact associated with a significant change in land use. No other mitigation measures are necessary.	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
recreation and agriculture designations. The proposed Specific Plan includes design guidelines and criteria to create an attractive and positive visual condition for future development. These guidelines and criteria implemented through Design Review are essentially project design features. These features are intended to assure a quality urban visual environment, and minimize the visual impact associated with a significant change in land use. Additional light and glare sources will be created within the plan area. The use of landscaping, directional lighting criteria, and building design criteria in the Specific Plan would reduce the impact to a level that is less than significant. Due to the distance to planned urban uses, proposed Specific Plan and airport overlay building height limitations, and the effect of intervening landscaping, the quality of views from surrounding vantage points including SR 71, Chino Hills, Ontario, Eastvale, and Prado Basin will not significantly change.		
Cumulative Impacts		
The visual character of the project area will change to reflect the urbanizing pattern of the surrounding region. Light and glare will increase within the plan area similar to that found within the existing and proposed development pattern	No measures are necessary	Not Significant.

TABLE 2.4-1 (Cont.)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Level of Significance After Mitigation
surrounding the project site. Surrounding views of the plan area will not be substantially altered or adversely impacted. No significant cumulative impacts are anticipated.		
GENERAL PLAN CONSISTENCY Section 5.15 of the EIR includes a consistency analysis of The Preserve Specific Plan and the City of Chino General Plan. This section documents each of the goals of the Chino General Plan and describes how the proposed Specific Plan responds to and implements such goals.	No mitigation measures are necessary.	Not Significant.

BIOLOGICAL RESOURCES MITIGATION MEASURES
ATTACHMENT TO TABLE 2.4-1

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 and waterfowl habitat, and cumulative loss of agricultural and open space lands with habitat value. These impacts are largely restricted to areas planned for development above the 566-foot elevation inundation line, away from the most sensitive areas below the 566-foot elevation line. Land Use Designations in these more sensitive areas have been designated for open space and agricultural uses, thereby avoiding impacts to biological resources. Additional impacts to the sensitive biological resources below the 566-foot elevation line could occur from increased public access and use of the open space system if not mitigated. The Specific Plan zoning designations for all land below the 566-foot inundation line restricts development likely to cause significant adverse impacts to biological resources.

The following mitigation measures shall be implemented to eliminate or reduce potentially significant impacts to biological resources.

B-1 <u>Zoning and Land Use Regulation</u>

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 <u>Required Biological Studies</u>

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 <u>Resources Management Plan</u>

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 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. An illustrative example of an artificial burrow is provided in Exhibit 5.4.4). Nesting sites will be located and designed to facilitate use by burrowing owls.

c.) 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.

d.) 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 (Exhibit 5.4.4). 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 (see Exhibit 5.4.4).

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 study 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 5.4.5) 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. Exhibit 5.4.6 provides an illustrative example of how the drainage area may be designed. 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 study 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 ornithologist.

7. Agricultural Easements

   Under Mitigation Measure AG-1 (see Section 5.2 in the Draft EIR), which addresses mitigation for loss of prime agricultural land, the City has committed to their involvement

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.

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 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 EXHIBIT MODIFICATIONS AND ADDITIONS

This section presents exhibit modifications and additions to the DEIR and RDEIR that are described in the Responses to Comments. A listing of Exhibit changes is as follows:

- Exhibit 5.1-1, Existing Land Use: Prior annexation and location of AG-AP and RC land use categories now reflected.
- Exhibit 5.2-3, Williamson Act: Prior annexation area and location of AG-AP and RC land use categories now reflected.
- Exhibit 5.6-1, Airport Noise & Safety Zone Overlay: Chino Airport boundary and Airport Safety Zone II/Referral Area B added. Location of Safety Zone III clarified.
- Exhibit 5.8-3, Adopted Airport Noise Contours: Chino Airport boundary added.

New exhibits are as follows:

- Exhibit 5.3-3, Potential Wetland Project sites
- Exhibit 5.11-1, Bicycle Plan
- Exhibit 5.11-2, Equestrian Plan

SECTION 3
PROJECT DESCRIPTION

3.1 PROJECT LOCATION

The Preserve planning 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 (Exhibit 3.1-1). The Preserve is adjacent 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 site and Chino Hills State Park to the west. The Preserve planning area is approximately two (2) miles wide and three (3) miles long, encompassing 5,435 acres (Exhibit 3.1-2)

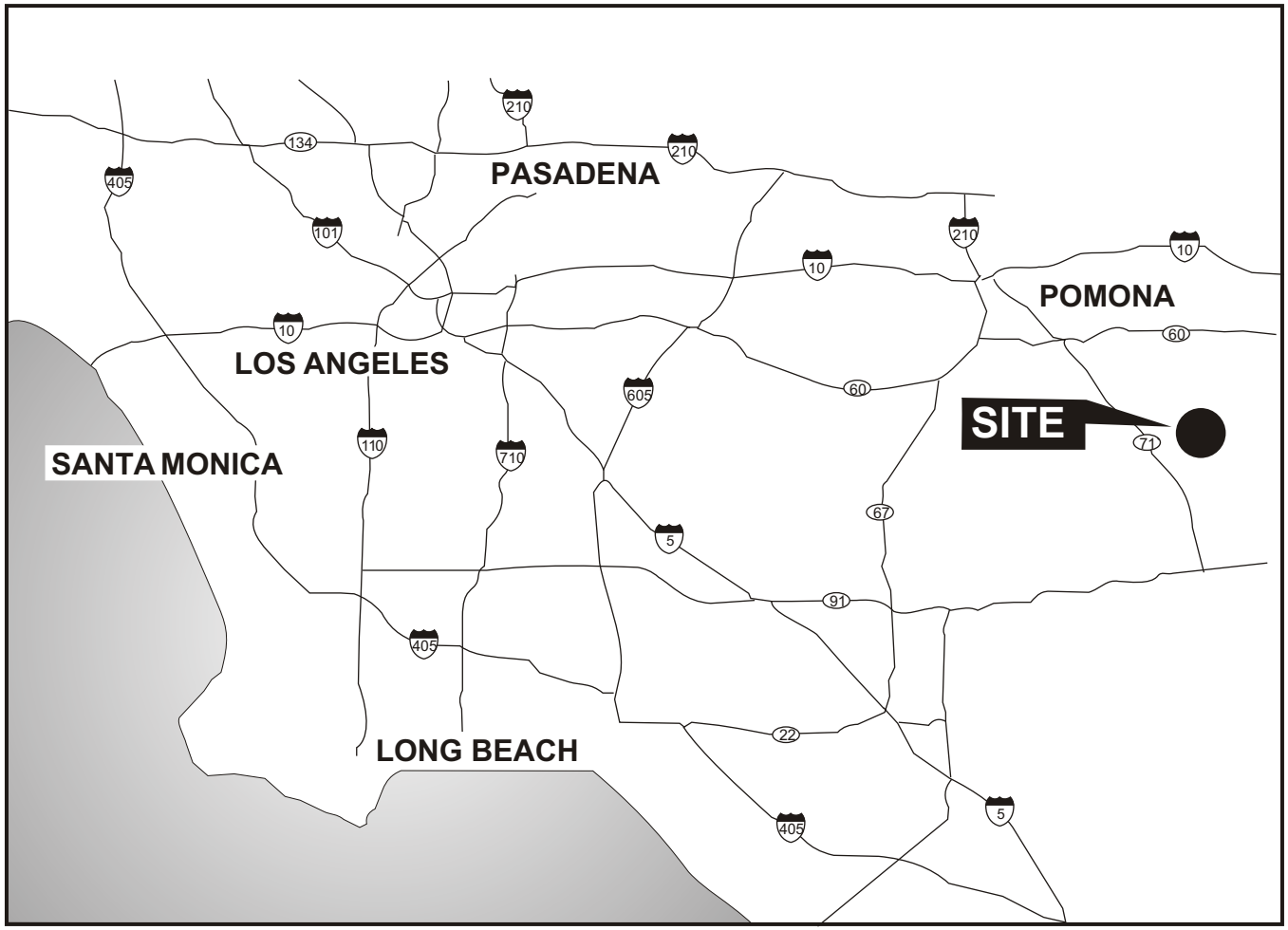
Regional access to The Preserve is provided via State Route 71 to the west, State Route 91 to the south, Interstate 15 to the east, and State Route 60 to the north. Euclid Avenue (SR 83) defines the western boundary of the planning area. Pine Avenue runs east-west through the planning area, providing a link via Schleisman Avenue to Interstate 15. Portions of Kimball and Merrill Avenues form the northern boundary (Exhibit 3.1-3)

3.2 PROJECT CHARACTERISTICS

Project Background

The project area comprises the largest remaining unit of the Chino Valley Dairy Preserve within the greater San Bernardino County Dairy Preserve in the unincorporated area of San Bernardino County. In 1994, the Local Agency Formation Commission (LAFCO) placed a portion of the Dairy Preserve north of Merrill Avenue within the City of Ontario Sphere of Influence, and the area between Merrill Avenue and the San Bernardino County line in the City of Chino Sphere of Influence. The portion within the City of Chino Sphere of Influence represented approximately 7,200 acres and increased the City's planning area by more than 50 percent. The City subsequently divided the area into two planning areas—Subareas 1 and 2.

Subarea 1, located south of the California Institute for Men-Chino and between State Route 71 and Euclid Avenue, encompasses 1,810 acres and was annexed to the City in 1998. Portions of this subarea north of the 566' elevation are zoned for Manufacturing-Industrial use. The larger, 5,435-acre eastern portion, Subarea 2 ('The Preserve'), represents the balance of the City's sphere and is the subject of this master plan program and EIR.



NORTH

9 4.5 0 9
SCALE IN MILES

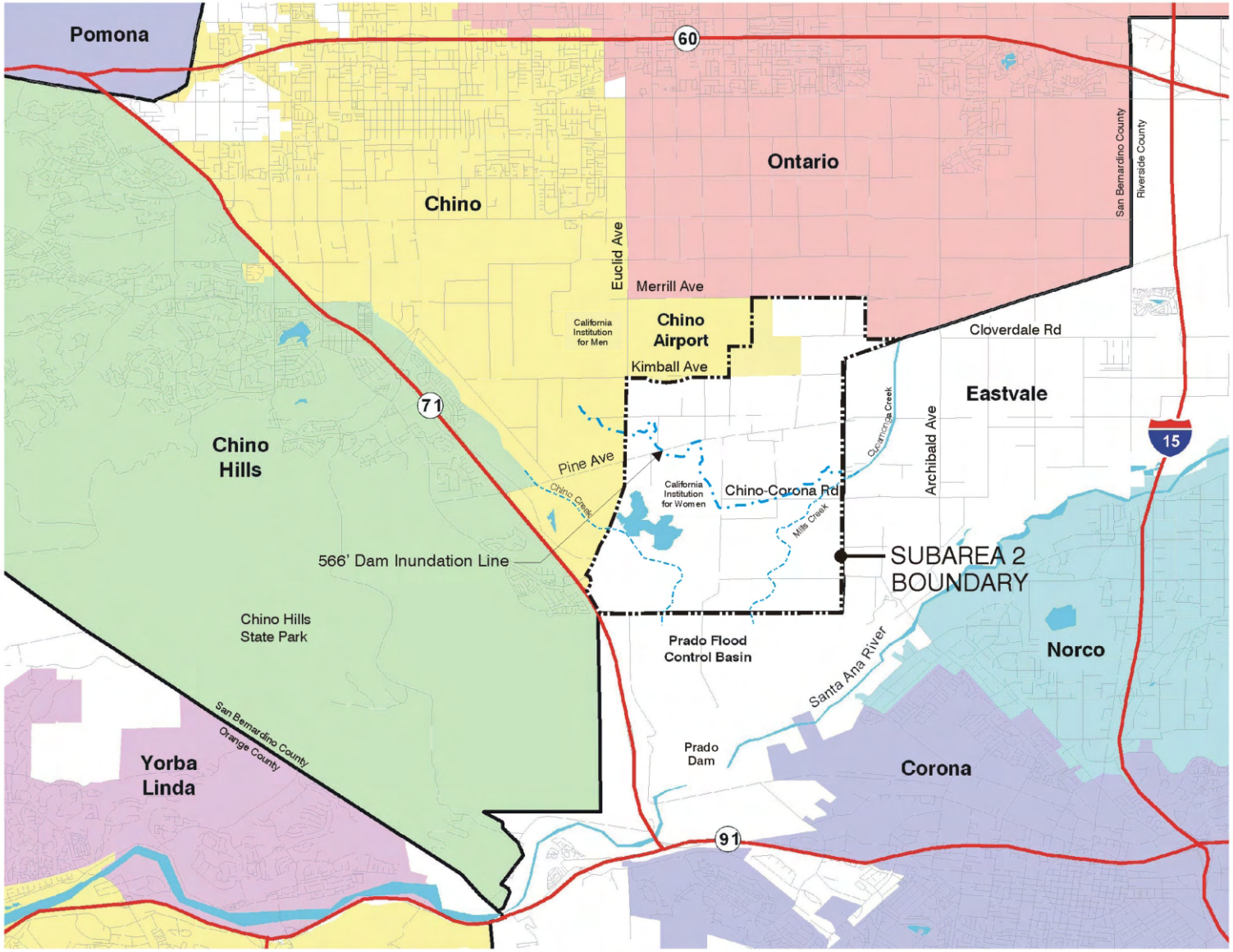
Michael Brandman Associates

05760012 • 8/2000

Exhibit **3.1-1**

Regional Location Map

THE PRESERVE • CHINO SUBAREA 2



SOURCE: The Planning Center

NORTH

MAP NOT TO SCALE

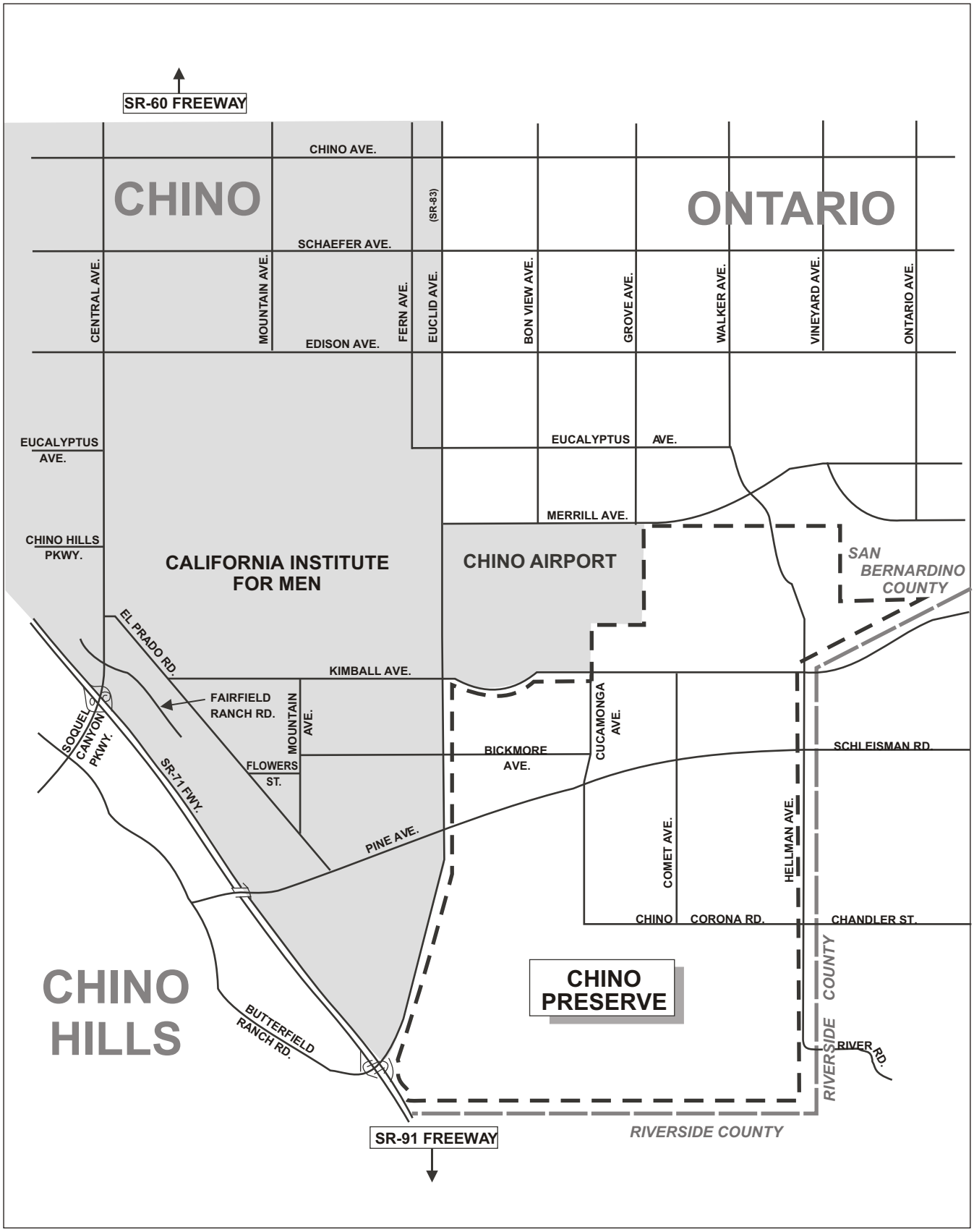
Michael Brandman Associates

05760012 • 6/2001

Exhibit **3.1-2**

Local Vicinity Map

THE PRESERVE • CHINO SUBAREA 2



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Michael Brandman Associates

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Exhibit **3.1-3**

Project Location

THE PRESERVE • CHINO SUBAREA 2

A 290-acre portion of Subarea 2 adjacent Chino Airport was annexed by the City of Chino in 2000. Though previously annexed, this area is retained within the 5,435-acre master plan area and Specific Plan component of the proposed project. A remainder area of approximately 5,145 acres is identified for purposes of the current proposed annexation and related actions.

The County of San Bernardino will retain authority over all land use decisions within The Preserve planning area until the area is annexed to the City of Chino. The existing San Bernardino County General Plan designates the site as Agriculture–Agriculture Preserve (AG-AP), allowing agriculture and dairy uses.

Proposed Regulatory Authority

The State of California requires that all cities and counties adopt a comprehensive General Plan for the physical development of their area of jurisdiction. The General Plan is primarily a policy level document that establishes a City's vision and general guidelines for future development. Following adoption of the General Plan, a jurisdiction is required to adopt regulatory programs (zoning) that will implement the policies of the General Plan.

State law also allows for the adoption of a specific plan consistent with the General Plan to provide development regulations tailored to the needs of a particular site (California Government Code Section 65450 et seq). In preparing the master plan for The Preserve, the City of Chino has determined that more detailed standards and guidelines were needed than those provided by the City's existing General Plan and zoning provisions alone. The master plan for The Preserve includes a comprehensive, specific plan/land use plan. A General Plan Amendment, which would link the specific plan to the City's existing General Plan and satisfy the requirements for consistency with the General Plan, is also proposed.

Section 65453 of the California Government Code establishes the authority for cities and counties to adopt specific plans either by resolution or by ordinance. Though The Preserve Specific Plan in its entirety is proposed for adoption by resolution to establish clear policy direction, Section V, Development Plan, is proposed for adoption by ordinance to provide land use regulation. The key elements of the Development Plan are described below.

The Preserve Specific Plan

The proposed Specific Plan includes a variety of land uses intended to implement the City of Chino's vision for the project area, as defined by the City Council through a series of public workshops in 1999-2000. The Specific Plan is comprised of the *Development Concept*, which articulates the City's vision; the *Development Plan,* including the land use plan, general development standards, mobility

plan, community paseo and open space system, park plan, and infrastructure plans; *Design Guidelines*, including community design, landscape and streetscape, grading, non-residential design, the community core, walls and fences, signage and lighting; *Administration,* including responsibilities, development processing and administration, phasing, and funding.

Development Concept

The development concept for The Preserve integrates a number of key features into a single, balanced community. A multi-purpose open space area encompassing approximately 55% of the plan area is linked to a vast open space system in the Prado Basin and the Santa Ana River. A community of residential neighborhoods of varying densities is served by a Community Core, envisioning a mixture of entertainment, commercial, civic, cultural, educational, religious and other residential uses. A regional commercial center along Euclid Avenue and an employment center focused around Chino Airport provide additional shopping and jobs opportunities, and balance to the community design concept.

These major features of the proposed development concept are illustrated in Exhibit 3.2-1 and described below.

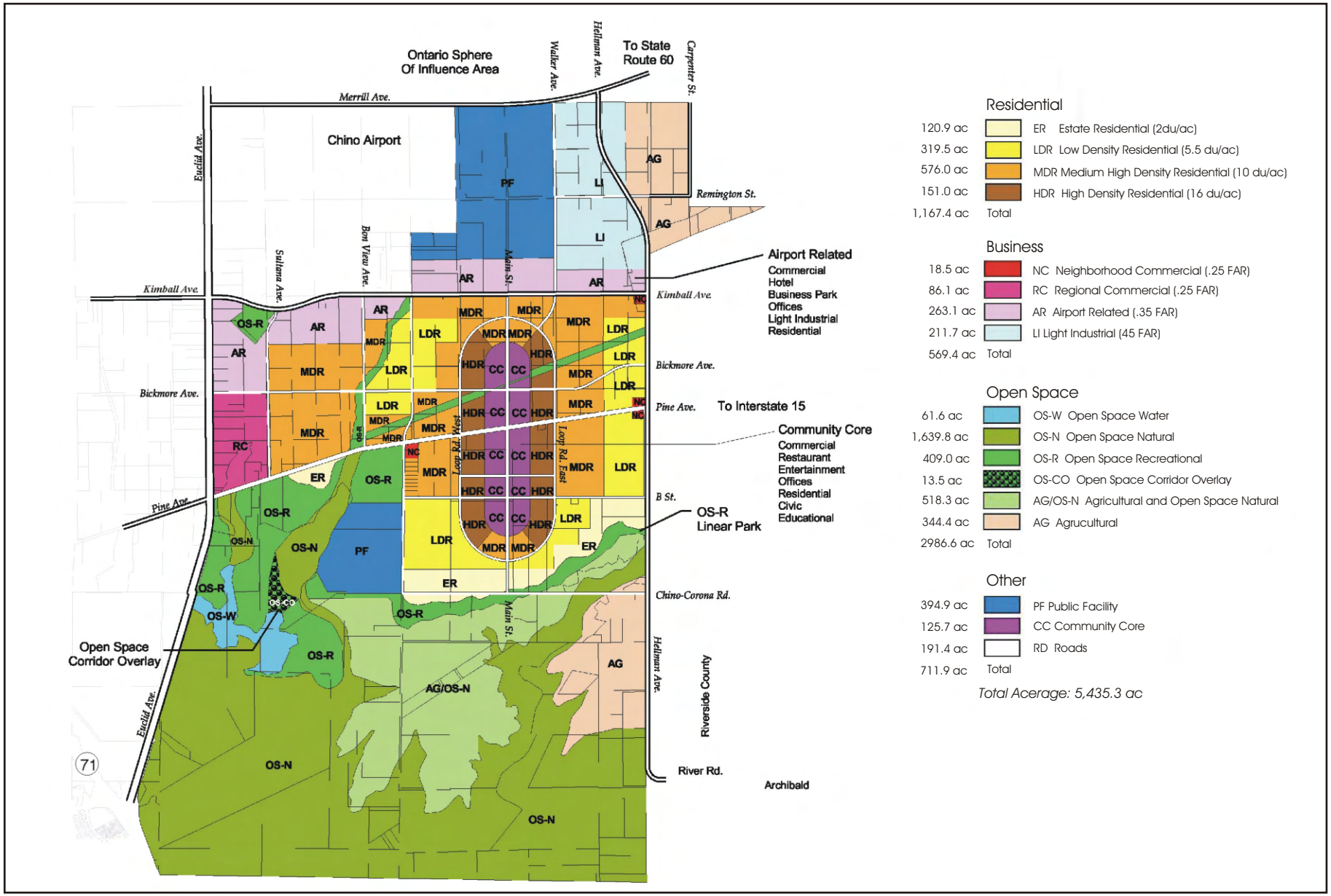
Multi-Purpose Open Space Feature

The area below the 566-foot dam inundation elevation is planned to provide a combination of active and passive recreation, habitat and agricultural uses. The active recreational portion would accommodate lighted sports fields, golf and equestrian facilities, while a passive recreational area would provide an area for natural habitat, and space for agricultural activities potentially reflective of Chino's agricultural heritage. Trail connections are planned to provide access to this area, and eventually to the Santa Ana River and the Crest to Coast Trail.

Community Paseo and Open Space System

The Community Paseo and Open Space System is planned as a system of trails and linear open spaces that connect the major features of The Preserve, and would provide a viable alternative to use of the automobile in the plan area. The system would be oriented in such a manner as to link the developed community with the Multi-Purpose Open Space Feature.

The paseos and open spaces would provide distinctive edges, create identity for the various components and neighborhoods of the plan, and would buffer or separate potentially incompatible uses.



SOURCE: The Planning Center

NORTH

MAP NOT TO SCALE

Michael Brandman Associates

05760012 • 6/2001

Exhibit **3.2-1**

Land Use Plan

THE PRESERVE • CHINO SUBAREA 2

Community Core

The Community Core is also planned to include an elementary and/or junior high school and learning center, which consists of shared school, day care, library, satellite civic uses, community center, and recreational facilities.

The Community Core is envisioned as a pedestrian-oriented "main street" with a mix of uses, themed landscaping, street furniture, textured paving and tasteful signage. Uses allowed in the Community Core would include a mixture of commercial, retail, office, entertainment and residential uses. The Core would accommodate both neighborhood and community serving commercial uses, such as a supermarket, bookstore, restaurants and cafes; entertainment uses, such as theaters or a community playhouse; cultural uses, such as a museum; as well satellite civic uses, such as a satellite city hall, police substation or recreation department.

The Community Core is also planned to include an elementary and/or junior high school and learning center, which consists of shared school, day care, library, satellite civic uses, community center, fire station, and recreational facilities. Religious facilities could also be accommodated.

A concentration of residential densities is planned within a ½ mile radius of the core uses. This would provide support for a viable downtown core and allow convenient access to shops and services without the necessity to utilize the automobile.

Euclid Regional Commercial Center

A proposed regional commercial center along Euclid Avenue is planned to capture a high proportion of revenue producing uses, promote jobs-housing balance and act as a center for diversified employment uses. The center would expand and intensify as this regionally strategic location captures increased business activity.

This center is envisioned as an area of intensive business, retail, office and entertainment uses, providing an employment and commercial base for the region. Active recreational uses, created by the Chino Airport Runway Protection Zone to the north and Open Space areas to the south, are woven into the design of the regional commercial area and help create a distinctive regional complex.

Airport-related land use designations along Kimball Avenue would interact with the Euclid Regional Commercial Center and Chino Airport, should the airport facility take on a more diversified air transportation role.

Residential Neighborhoods

Diverse residential neighborhoods offering a variety of densities, housing types and price ranges, to appeal to a variety of market and economic segments are planned. Higher density residences, such as multifamily dwellings, townhomes and garden apartments, are planned in and adjacent to the Community Core, and adjacent the Euclid Regional Commercial Center and Kimball Avenue. This would provide the opportunities for access to employment and service uses, as well as convenient live-work opportunities. Low-density residential uses are planned mainly along the eastern portion of the community, and south of Pine Avenue. Estate Residential areas would be located in the southern portion of the developed area adjacent to the open space and regional recreational feature, in order to accommodate potential equestrian uses.

Development Plan

A statistical summary of the Land Use Plan is provided in Table 3.2-1. A variety of land use designations are included within the broader Residential, Business, Open Space and Public Facilities categories identified below. The plan identifies a maximum of 9,779 dwelling units, based on calculation of adjusted units with park requirements and school acreage assumptions factored in. Calculation of development potential is based on adjusted gross acreage, which excludes land devoted to arterial roadways or flood control facilities.

TABLE 3.2-1
CITY OF CHINO—THE PRESERVE
PROPOSED LAND USE SUMMARY AT BUILDOUT

Land Use	No. of Units or Sq. Ft.	Adjusted Acres[1]	Population	Employment
Residential	No. of Units			
Estate	237	118	805	
Low Density	1,658	302	5,639	
Medium Density	5,076	508	17,258	
High Density	2,021	126	6,871	
Subtotal	**8,992**	**1,054**	**30,573**	
Mixed Use	787	49	2,676	
Total	**9,779**	**1,103**	**33,249**	
Non-Residential	Square Feet			
Neighborhood Commercial	92,892	9		186
Regional Commercial	656,112	60		1,312
Airport Related Business Park	803,678	53		2,296
Airport Related Light Industrial	2,841,574	145		1,894
Airport Related Hotel	200,919	13		201
Light Industrial	4,156,996	212		2,772
Subtotal	**8,752,717**	**492**		**8,661**
[2]Commercial (Airport and Mixed Use)[3]	615,583	35		1,231
Office (Regional, Airport, Mixed Use)[4]	870,990	58		3,484
Total	**10,238,744**	**585**		**13,376**
Public Facilities		411		
Parks		115		
Schools		35		
Open Space		3,000		
R.O.W.		186		
Subtotal		**3,747**		
TOTAL		**5,435**	**33,249**	**13,376**

[1] Adjusted acres are based on the December 19, 2000 land use plan from The Planning Center. Acres for parks and schools are shown separately from residential and non-residential acreage.
[2]

[3] Includes 26 acres of airport-related commercial and 9 acres of mixed-use commercial.
[4] Includes 13 acres of regional office, 26 acres of airport related, and 19 acres of mixed-use office.

Infrastructure Plans

The water, wastewater, drainage, and utility systems are designed to serve the development within The Preserve with appropriate connections to the regional/local systems. The detailed text for each plan is available in the City of Chino Community Development Department. The following is a summary of the major infrastructure features of The Preserve.

Water

Potable Water Sources

The Preserve will have a dual (potable and recycled) water system to conserve potable water and make best use of available supplies. According to the City of Chino's Water Master Plan, The Preserve is estimated to generate a need for 4,267.5 gallons per minute (GPM) (6.1 MGD) of potable water and 2,776.5 GPM (4.0 MGD) of recycled water. The Chino Basin Desalination Plant, which is owned and operated by the Santa Ana Water Project Authority (SAWPA), is identified to supply 4 MGD to the project area, which will be contained in a reservoir at the corner of Schaefer and Benson Avenue. The remaining 2.1 MGD must be obtained from other potable water supply sources, to be determined in the citywide Water Master Plan Update.

The Water Master Plan calculates total required storage capacity for the potable water system at 9.2 MG Design Criteria for Storage Requirements and capacities determination of water storage requirements for the potable water distribution system is based on three requirements: (1) operational storage; (2) emergency storage; and (3) fire protection. In order to store and transport the potable water, additional facilities must be constructed. It is proposed that the total storage of 9.2 MG be maintained in two reservoirs: each with a capacity of 4.6 MG. It is proposed that one storage reservoir and multi-pump station to be located in the vicinity of Kimball Avenue and Euclid Avenue. An additional pump station is proposed for the northern side of the Preserve in the proximity of the Chino airport. The location of the second reservoir depends on the additional water source, which will be determined in the citywide water supply analysis for the Water Master Plan Update. To provide a reliable water source, the second reservoir is proposed in the northern portion of Subarea 2, because this location has the best potential to tie in with the existing water system of the City of Chino. This location allows for the equal distribution of flows in Subarea 2, while maintaining a close proximity to areas of high demand and existing developments, such as Chino Airport and the southeastern portion of the City.

If a water system with gravity supply can be realized in accordance with the expansion needs in the City of Chino, the location of the second reservoir will be adjusted to provide gravity supply. A system with gravity feed will reduce the capacity of the pump station, decrease energy costs, and increase the reliability of the system.

Recycled Water Sources

A total recycled water demand of 4.0 MGD was allocated for the average day need and 10.4 MGD for the maximum day need. For the supply of recycled water, it is assumed that the City will obtain recycled water from the Inland Empire Utilities Agency's (IEUA's). The Preserve is well situated for the maximum use of recycled water because of the location of the IEUA's existing recycled water pipelines. The existing pipelines provide a readily available backbone transmission piping system to supply recycled water to future customers with low capital investments.

The four potential sources of IEUA recycled water are Regional Plant No. 1 (RP-1), Regional Plant No. 2 (RP-2), Regional Plant No. 5 (RP-5) and Carbon Canyon Water Reclamation Facility (CCWRF). Currently IEUA is completing the interconnection of all four wastewater treatment facilities. The RP-1 outfall will be connected with a 20" main to the discharge pipelines on El Prado Road that connect RP-2 and CCWRF. After RP-2 is phased out, this pipeline will be connected to RP-5. This interconnection offers the possibility to supply recycled water in The Preserve from all four sources and from two directions, from the north (RP-1 and RP-4) and from the west (RP-2, RP-5, and CCWRF).

Wastewater

The project area will be tributary to IEUA's existing RP-2 located at the northwest corner of the intersection of Pine Avenue and El Prado Road. Upon completion of construction of RP-5 all wastewater flow presently tributary to RP-2 will be diverted to RP-5 for treatment and disposal. IEUA is planning to construct a sewer lift station at RP-2 to pump sewerage that cannot be diverted by gravity to RP-5.

The only sewer collection facility presently serving Subarea 2 is the El Prado Pump Station, that delivers wastewater flows generated from the California Institute for Women to RP-2 via a combination of 10-inch diameter forcemain and 8 inch diameter sewer. The Santa Ana Regional Interceptor (SARI) sewer line traverses this area, flowing southwesterly in Pine Avenue from the Riverside County line to Euclid Avenue and south in Euclid Avenue to Prado Regional Park. To accommodate flow, the proposed backbone facilities are comprised of 80,498 feet of line for The Preserve, with sizes based on tributary peak dry weather flows using peak factor formula developed in the City of Chino's Sewer Master Plan.

Drainage

Existing drainage patterns and flows through The Preserve will be substantially altered with implementation of storm drain plans to support proposed developments. A series of backbone drainage improvements required to reduce onsite flood hazards and support the proposed plan at

buildout will be developed. The Storm Drainage Plan divides the plan area into ten drainage basins. Each basin is tributary to a proposed storm drain system identified as Lines A through J. The proposed lines range in size from 10" to 102". Onsite drainage facilities will be designed to standards and criteria of the City of Chino and County Flood Control District. Pursuant to City requirements, the necessary facilities will be constructed either prior to or in phase with planned development.

Additional onsite private systems to address collection and distribution of runoff will also be provided, pursuant to specific plan requirements. Detailed drainage studies, including hydrology and hydraulic calculations will be required for all proposed developments. In conjunction with Design Review requirements of the Specific Plan, the City of Chino will be required to make specific findings that grading and drainage of specific projects are coordinated and compatible with surrounding properties. Such reviews will assure that runoff from new development is contained and controlled to prevent impacts on surrounding dairies during the phased transition to buildout under the proposed plan.

The Storm Drainage Plan includes trapezoidal earthen channels along Euclid Avenue and south from Chino Airport along an existing drainage channel to outlets within open space areas above Prado Lake. These channels provide opportunities for augmentation to provide water features that enhance filtration and percolation to the groundwater basin, and potential habitat for waterfowl. Storm drain outlets to the major open space system will be designed to reduce velocities and protect drainage channels from erosion and sedimentation during storm events. No significant scouring or erosion and sedimentation impacts to the receiving channels in the open space system are anticipated.

Mobility Plan

The ability to access population and employment centers within The Preserve and throughout the surrounding area is a critical consideration of the plan. Given its regional location and the limitations on north-south movement, The Preserve has been specifically designed to accommodate a wide spectrum of mobility options, from vehicles, to transit, to bicycles, to pedestrian and equestrians. Mobility within The Preserve and surrounding areas will be accommodated through an efficient roadway system, bicycle and trail system, as well as an innovative future transit system.

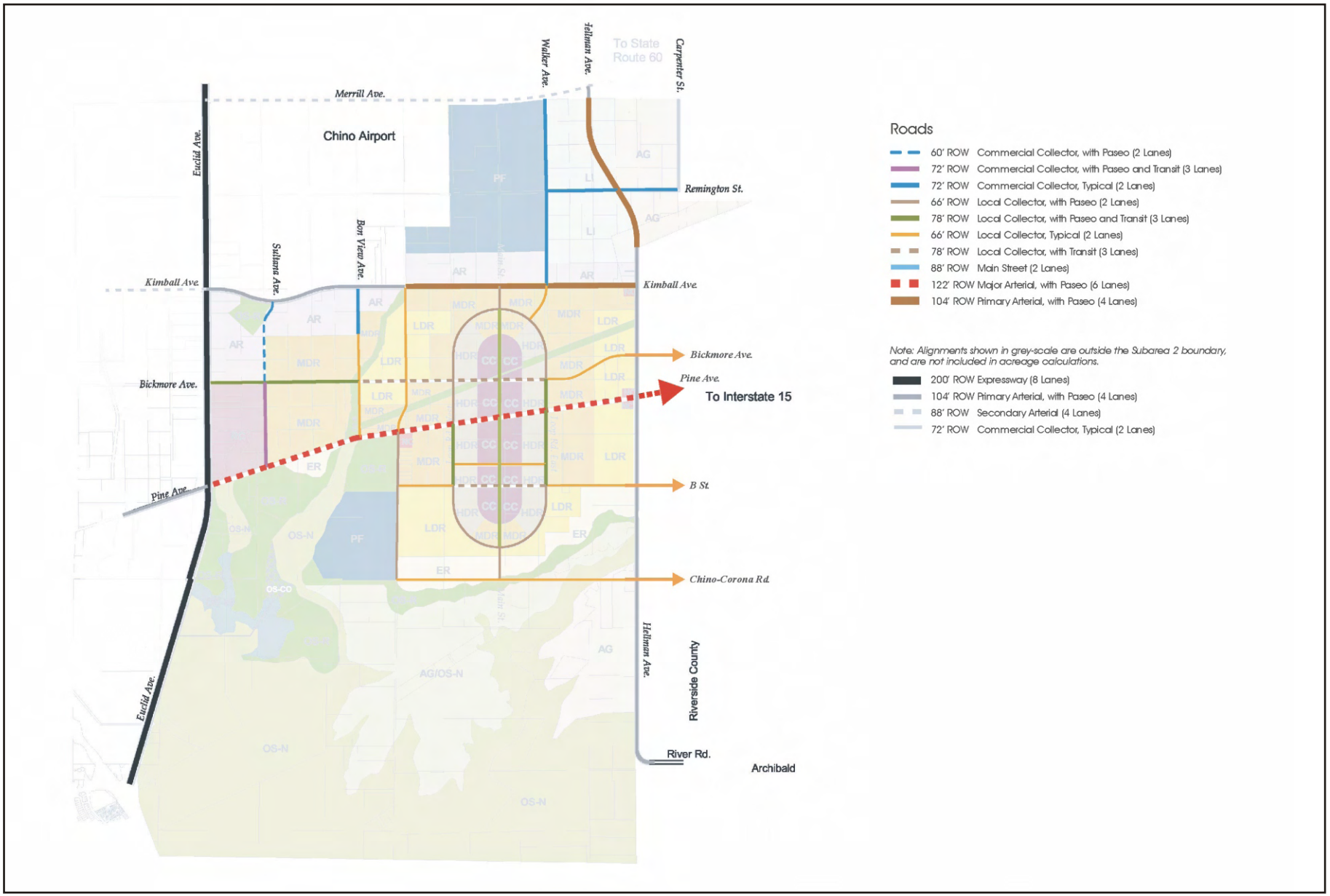
Vehicular Mobility

The vehicular circulation plan is depicted in Exhibit 3.2-2, Circulation Plan. The Circulation Plan features two levels of functional roadways. The first in this hierarchy are roadways of regional significance, expressways and major arterials that cross The Preserve area, and thereby serve through-traffic as well as traffic generated by this project. The second is a local internal roadway system, which connects to the regional roadway system and serves the land uses in the Plan itself. This local

internal roadway system consists of primary arterials, secondary arterials, local collectors, and local streets. Roadway standards are based on the City of Chino Design Standards.

The following eight (8) roadway classifications form the backbone of the on-site circulation system:

- Expressway—Urban/Rural (8 lanes/200 ft. right-of-way)
- Major Arterial—(6 lanes/minimum 122 ft. right-of-way)
- Primary—(4 lanes/minimum 104 ft. right-of-way)
- Secondary—(4 lanes/minimum 88 ft. right-of-way)
- Local Collector—(2 lanes/rights-of-way vary)
- Main Street—(2 lanes/typical 88 ft. right-of-way)



SOURCE: The Planning Center

NORTH

MAP NOT TO SCALE

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Exhibit **3.2-2**

Circulation Plan

THE PRESERVE • CHINO SUBAREA 2

Transit Mobility

Plans for The Preserve accommodate a transit system. The planned transit system is two-tiered, consisting of a local, on-site transit system and the regional bus service. The on-site transit system is envisioned as a one-way, continuous loop on dedicated or prioritized travel lanes. A conceptual transit route is depicted in Exhibit 3.2-3, and is assumed in the Circulation Plan and roadway sections described above.

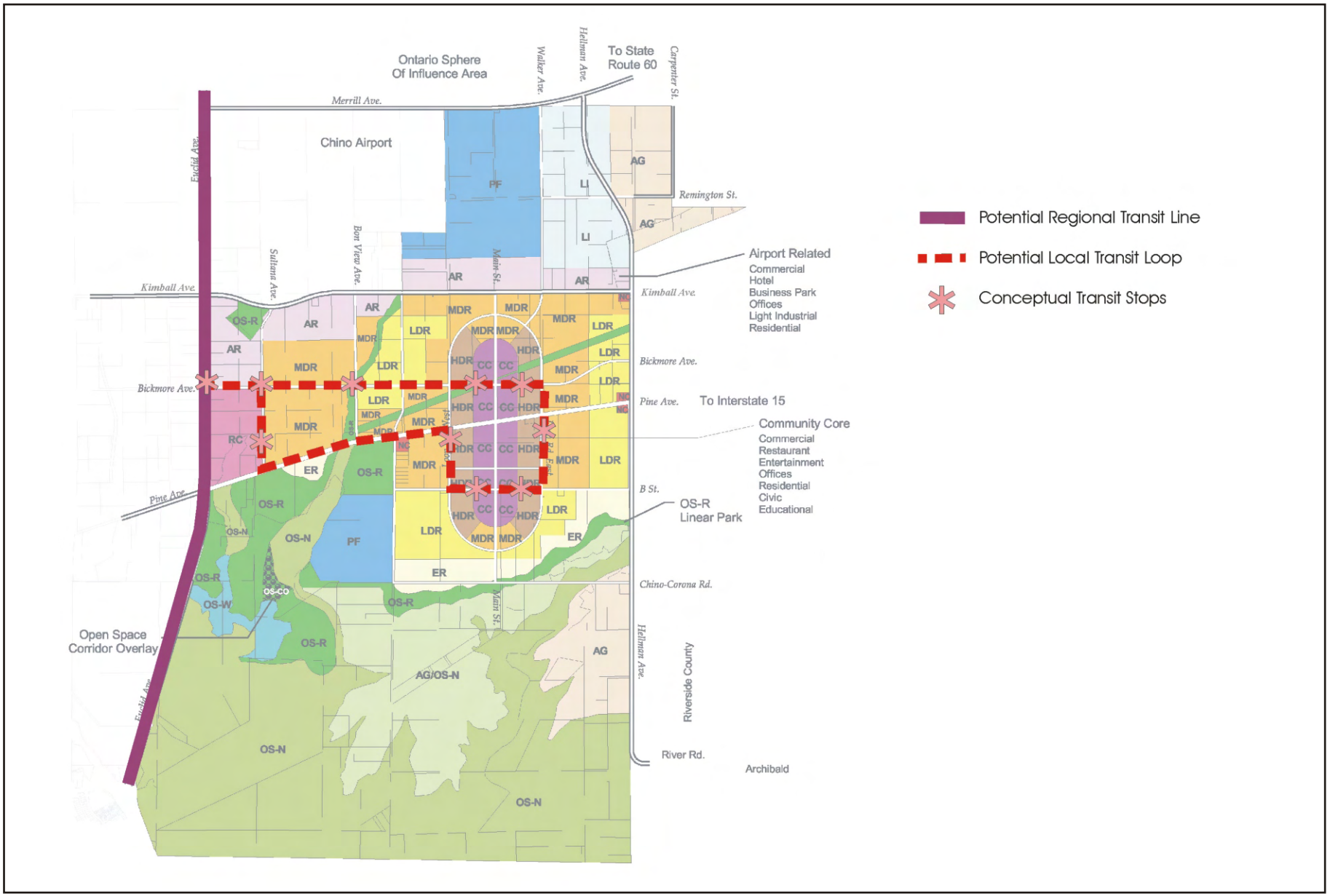
The transit system is intended to provide continuous service with approximately 10-minute headways. The transit stops are intended to serve major features, such as the Community Core, and areas of concentrated residential uses. The stops are spaced to serve an approximate walking distance of a quarter mile and help maintain the 10-minute headway. The transit stops are also intended to serve as connection points with regional transit systems and bus services. The specific locations of the transit stops will be determined in consultation with the City of Chino, pursuant to detailed transit plans. Until such time as the transit system is operational, the transit lanes depicted on the street sections in the Specific Plan may be used for vehicular traffic (additional lane or scramble lane), bicycle facilities, and/or open space.

Bicycle Mobility

The bicycle system is planned to connect major features of The Preserve, and to connect with the regional bicycle system. The bicycle system is composed of on-street (Class II) and off-street (Class I) pathways. In many instances, the Class I facilities are incorporated into the Community Paseo and Open Space System. The standards for the bikeway system in the plan area are in accord with the Circulation Element of City of Chino General Plan. Development of non-residential land uses may involve the provision of bicycle facilities in accordance with the City's Congestion Management and Trip Reduction Ordinance. These facilities may include bicycle racks, pedestrian walkways, and shower and locker room facilities.

Design Guidelines

The Preserve is envisioned as a family of unique neighborhoods and activity areas, and there is no overriding design theme or style for the entire plan area. The intent of the Design Guidelines is to ensure that these unique areas have a high level of quality and to provide a degree of unity. The Design Guidelines are general and illustrative in nature, providing flexibility in order to encourage creativity on the part of property owners and designers.



SOURCE: The Planning Center

NORTH

MAP NOT TO SCALE

Michael Brandman Associates

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Exhibit **3.2-3**

Potential Transit System

THE PRESERVE • CHINO SUBAREA 2

The Design Guidelines would act in concert with the Chino Zoning Ordinance to establish the design framework that the City would use to evaluate proposed developments. The intent of the Design Guidelines must be met in order for a project to be approved during the development review process.

Guidelines are established in the Specific Plan for the following categories: Community Design, Landscape and Streetscape, Grading, Landscape Planting, Non-Residential Design, Community Core, Walls and Fences, Signage and Lighting.

Administration and Phasing

The Specific Plan includes standards and requirements applicable to each of the land use designations in the land use plan. Permitted and conditionally permitted uses are established for each use designation. Future City review of concept plans, site plans, and subdivisions will assure these standards are met. The distribution of residential density and non-residential intensity in The Preserve is based upon an average (mean), rather than a maximum. This allows the flexibility to provide products at varying densities as long as the average density/intensity specified for each land use category is not exceeded. This flexibility is further enhanced by a provision in the Specific Plan for transfer of density/intensity within the same land use categories and between projects.

The opening year for occupation of the first phases of planned development in The Preserve is anticipated to be as early as 2003. Development phasing is anticipated to occur in generally a 'clockwise' pattern about the Pine Avenue/Main Street axis, starting with residential, commercial and business uses in the northwest part of the plan area near Kimball Avenue, followed by the northeast, southeast, and then southwest sectors.

The actual rate of development will be dependent on market conditions, although buildout of the community is anticipated to occur over 20-30 years.

<u>The Preserve Area Plan</u>

An Area Plan is a focused planning policy document that becomes part of the General Plan, and must be internally consistent with the General Plan of which it is a part. The Area Plan is a specialized plan that addresses a particular region or community within a jurisdiction's overall planning area. The City of Chino's General Plan Amendment for The Preserve is accomplished through preparation and adoption of The Preserve Area Plan.

The Preserve Area Plan acts as a 'bridge' or link between the City's General Plan and The Preserve Specific Plan.

The Preserve Area Plan is divided into the following seven main sections:

- Introduction – this section provides a description of what the area plan is, the authority to prepare one and the format of the area plan.

- Setting and Background – this section provides a general description of the location and physical characteristics of The Preserve.

- Opportunities and Constraints – this section contains a description of The Preserve's options for future use and development.

- Vision and Goals – this section provides guidance for the future use and development of The Preserve.

- The Development Plan – this section provides a description of the direction and intent of the land use plan. It is in essence the story of what The Preserve is.

- General Plan Amendment – this section describes any necessary amendments to the City's general plan after the specific plan preparation and includes a resolution to amend the City's General Plan.

- General Plan Consistency Analysis – this section demonstrates how The Preserve implements the goals and objectives of the City of Chino General Plan. (This is also included as Section 5.15 of this EIR.)

3.3 PROJECT OBJECTIVES

The goals and objectives that are critical to the development and future use of The Preserve are identified in a 'Critical Issues, Goals and Objectives Report' (3/2000), which builds upon an earlier 'vision' statement by the Chino City Council. The report is divided by the following major topics: Vision, Land Use, Circulation, Housing, Conservation and Open Space, Safety, Noise, Air Quality, Economic Development, Plan Administration and Implementation. Goals and objectives reflected in the General Plan Amendment (Area Plan), the policy-level Specific Plan, and this Program EIR include the following:

- To achieve a quality environment designed to fit into and incorporate regional surroundings by integrating local environmental features and existing land uses into a cohesive and logical pattern of land uses that provides a broad range of living, working, and recreational opportunities.

- Create an efficient and safe circulation and transportation system, which accommodates the community's traffic demands and promotes transit usage, provides local connections to public services, and facilitates regional movement.

- Offer a variety of housing opportunities and types within unique, livable neighborhoods.
- Provide a sufficient density of development to support needed infrastructure improvements.
- Phase circulation and infrastruction systems in accordance with related growth.
- Provide a network of habitat and recreational opportunities as well as provide separation between neighborhoods.
- Respect and accommodate natural hazards, such as flooding and seismic hazards.
- Account for and buffer noise-generating uses from noise sensitive uses.
- Integrate design patterns that would assist in reducing air quality impacts.
- Accommodate a broad range of uses that capitalize on adjacent land uses and enhance the City of Chino's fiscal outlook.
- Implement and administer the development and operation of The Preserve in a manner that is consistent with the Specific Plan.

3.4 INTENDED USES OF THIS EIR

Pursuant to California Environmental Quality Act (CEQA) Guidelines 15367, the City of Chino is the Lead Agency for the project and has principal discretionary authority over the project and project approvals. A number of other agencies will serve as Responsible or Trustee Agencies, pursuant to CEQA Guidelines 15381 and 15386, respectively. Agencies with discretionary approval and/or permit authority over some aspect of the project that may use information in the Program EIR include, but are not limited to, the following:

- City of Chino
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- California Department of Transportation
- Regional Water Quality Control Board
- California Department of Fish and Game
- South Coast Air Quality Management District
- San Bernardino County Health Department
- San Bernardino County Flood Control Department
- San Bernardino County Division of Airports
- San Bernardino County Association of Governments
- Local Agency Formation Commission (LAFCO)
- Chino Basin Water Master and other water agencies

- Chino Valley Unified School District
- California State Department of Education

This EIR is further intended to serve as the foundation environmental document for review of subsequent actions within The Preserve Planning Area, including all local discretionary approvals requested to implement the proposed Master Plan/General Plan Amendment, Specific Plan and Annexation. Future development projects subject to additional discretionary review (i.e., tentative maps, site plans, conditional use permits, etc.) may require subsequent environmental review in compliance with the State CEQA Guidelines, and will utilize this Program EIR as a foundation document for tiered-review under CEQA.

The principal actions to be taken in implementing the proposed project include, but are not limited to, the following:

Current actions and approvals:

- City of Chino General Plan Amendment
- Adoption of the Specific Plan and pre-zoning of the Plan Area (SP—Specific Plan)
- Annexation to the City of Chino
- Zoning Ordinance Amendment
- Disestablishment of Agricultural Preserve

Subsequent actions and approvals:

- Master Plan approvals
- Tentative Map approvals
- Site Plan approvals
- Conditional Use Permits
- Grading and Building Permits

Several of the key principal actions above also require the approval of the Local Agency Formation Commission. These include but are not limited to pre-zoning of the Plan Area (Govt. Code Section 56375(e)), annexation to the City of Chino, and disestablishment of the Agricultural Preserve.

3.5 MITIGATION MONITORING PROGRAM

Public Resources Code 21081.6 requires public agencies when making findings pursuant to a certified EIR to adopt a monitoring program for changes made to a project or conditions of project approval in order to mitigate or avoid significant environmental effects. A mitigation monitoring program, incorporating the mitigation measures set forth in this document, will be adopted at the time of certification of this EIR.

SECTION 4
ENVIRONMENTAL SETTING

4.1 OVERVIEW OF ENVIRONMENTAL SETTING

This section provides an overview of the regional setting and environmental conditions within the proposed project area and vicinity. Additional environmental setting information is provided within each environmental topic/issue area discussed in Section 5. The terms 'project area' and 'plan area' are both used to describe The Preserve, and are used interchangeably throughout this discussion and in Section 5.

REGIONAL CONTEXT

The Preserve plan area encompasses 5,435 acres 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. The SAR watershed, which covers over 2,650 square miles of widely-varying terrain, includes parts of San Bernardino, Riverside, Los Angeles and Orange Counties, and is home to more than 4.5 million people. The Preserve plan area is strategically located at a major Inland Empire 'gateway' to Orange County employment centers via SR 71 and SR 91.

The plan area is also part of the larger Chino Basin Dairy Area (CBDA), encompassing approximately 50 square miles roughly bound by SR 71, SR 60, I-15, and SR 90. The area includes approximately 23,000 acres in transition from dairy use to a variety of urban uses, and has been characterized as "one of the largest metropolitan in-fill sites in the nation."[1] As recently as 2000, the CBDA included approximately 300,000 dairy animals, and 2 million tons of stockpiled manure.

Approximately 2,197 acres of the plan area are within the potential highwater inundation area that will be created by the raising of the Prado Dam 28 feet and the spillway eight (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.

[1] Source: Santa Ana River Watershed Group (7/2000).

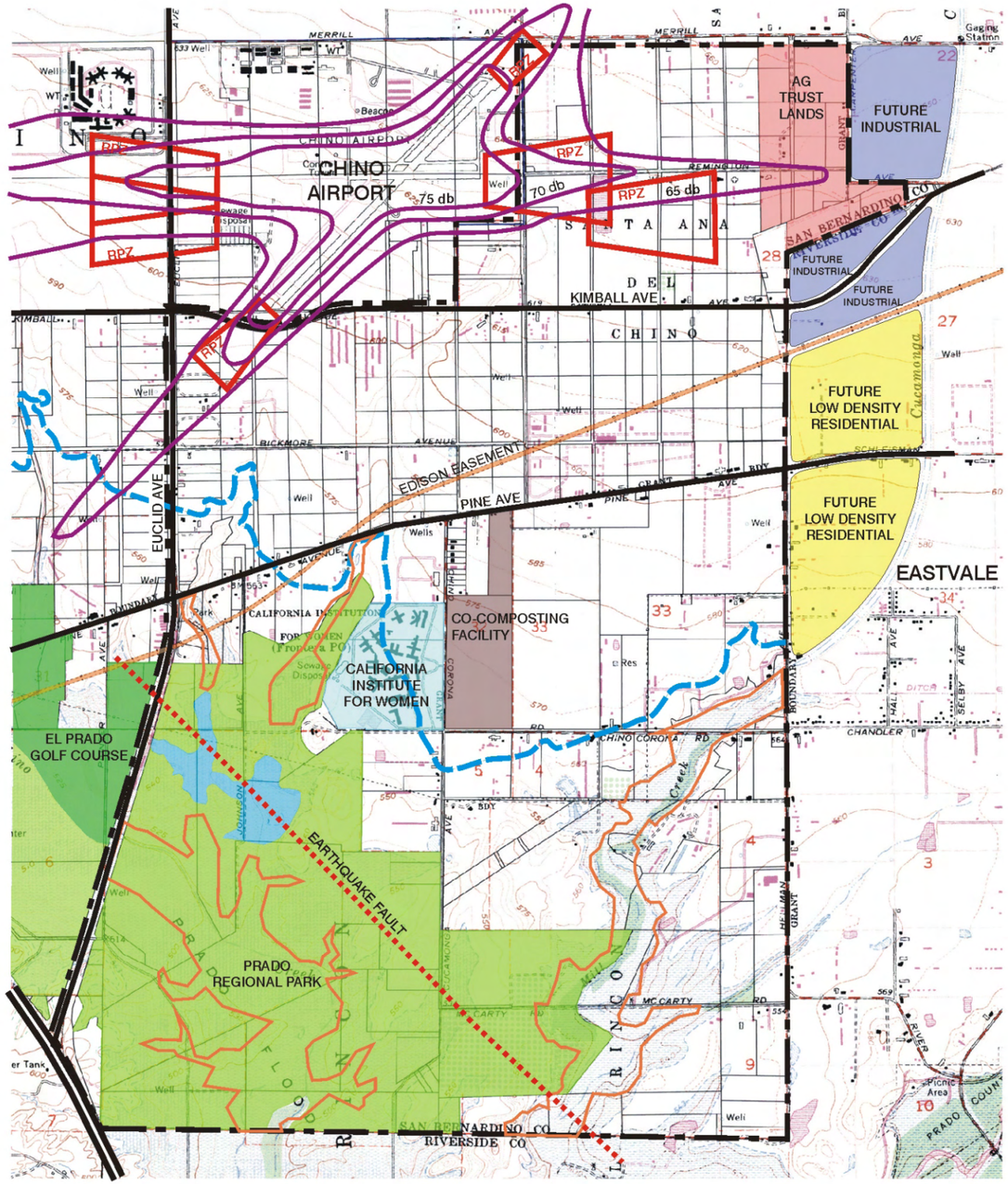
LOCAL SETTING

The Preserve plan area is approximately 2 miles in width and three miles in length, encompassing 5,435 acres. Elevations in the planning area range from about 500 to 600 feet above sea level. Adjacent to the planning area at the northwest corner of The Preserve 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). Brief synopses of selected environmental conditions are provided below and mapped in Exhibit 4.1-1, Opportunities and Constraints.

Geology/Soils. The potentially active Central Avenue fault traverses the project area open space south of Pine Avenue. The site is subject to peak horizontal ground accelerations for the Maximum Probable Earthquake of approximately 0.5 to 0.6g. The project area is susceptible to liquefaction due to the presence of poorly consolidated soils and ground water. Relatively shallow groundwater tables through the southern portions of the planning area contribute to potential development hazards. Many of the soils in the project area are susceptible to expansion and settlement, indicating the presence of clay in the soils. Although the history of subsidence is unknown within the planning area, the potential does appear to exist for subsidence induced ground fissures. *(see 5.5 Geology and Soils)*

Drainage. The plan area is characterized by a lack of drainage facilities. During major storm events, runoff is carried via sheet flow and gulleys through the plan 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 plan 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 plan 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. *(see 5.3 Water Resources).*

Flooding and Inundation. A significant portion of The Preserve, 2,197 acres, lies within the highwater inundation area created by the proposed raising of the El Prado Dam by 28 feet and the spillway by 8 feet. The raising of the El Prado Dam will increase the minimum area of the potential dam inundation ten feet from its current elevation at 556 feet above sea level to 566 feet above sea level. The raised dam is designed to accommodate a 200-year or greater flood event over the life of the project. *(see 5.3 Water Resources).*



- Airport RPZ Zone
- Airport Noise Contour
- 566' Dam Inundation Line
- Earthquake Fault
- Edison Power Easement
- Areas of High Biological Sensitivity
- Prado Regional Park (Master Plan)
- El Prado Golf Course
- Agricultural Trust Lands
- California Institute for Women
- Co-Composting Facility
- Proposed Industrial - Eastvale
- Proposed Residential - Eastvale

SOURCE: The Planning Center

NORTH

MAP NOT TO SCALE

Michael Brandman Associates

05760012 · 6/2001

Exhibit **4.1-1**

Opportunities and Constraints

THE PRESERVE • CHINO SUBAREA 2

Biological Resources. Sensitive habitats within The Preserve planning area include riparian woodlands along the major stream channels, various detention basins and open water areas, and freshwater marshes. Fallow agricultural fields and eucalyptus windrows have habitat value for raptor foraging and nesting, respectively. A variety of sensitive plant and animal species are known to occur in the vicinity of The Preserve and the Prado Basin. Federal or state-listed animal species include the least Bell's vireo, southwestern willow flycatcher, southwestern arroyo toad, California red-legged frog, Santa Ana sucker, and southwestern pond turtle. The burrowing owl is a species of concern. *(see 5.4 BiologicalResources)*

Land Use. The area in and around The Preserve contains a number of existing uses that will either remain or transition as new development occurs. The Preserve is a portion of the Chino Basin Dairy Preserve which is home to one of the largest dairy herd populations in the world, with an estimated population of 350,000 cows. A portion of these dairies, covering over a quarter of the project area, are located within The Preserve. An additional 40 percent of the project area is devoted to pasture land and agricultural 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. Chino Airport, north of Kimball Avenue, presents a significant influence on the plan area *(see 5.1 Land Use and 5.2 Agriculture)*

Circulation. The project area is surrounded by a number of major transportation facilities, including the Chino Valley Freeway (SR 71) to the west, the Pomona Freeway (SR 60) four miles to the north, the Riverside Freeway (SR 91) three miles to the south, and Interstate 15 four miles to the east. Ingress and egress to The Preserve plan area is generally constrained by existing facilities such as the Chino Airport, the men's and women's Correctional Facilities, and the Prado Basin open space system. The principal arterial roadways within the plan area are Euclid Avenue and Pine Avenue. There are currently no transit lines or facilities serving the plan area. *(see 5.7 Transportation and Circulation)*

Air Quality. Air quality levels near the project site are occasionally unhealthful, but there are some encouraging signs that the air is slowly improving. Throughout the last decade, there has been a marked trend in lower maximum concentrations and a significant reduction in the frequency of standard violations. Ozone, the primary ingredient in photochemical smog, is the biggest pollution problem in the area. About one-fifth of all days of the year the plan area experiences a violation of the State hourly ozone standard, with an average of 3 days reaching first-stage alert levels of 0.20 ppm for one hour. No second-stage alert levels of 0.35 ppm for one hour have been called in the last ten years near the project site. While the secondary pollution levels of ozone and to a certain extent particulates are high from transport of pollution into the area, the primary vehicular pollution levels of

such pollutants as carbon monoxide (CO) and nitrogen oxides (NO_x) are quite low. Standards for these species are violated only infrequently in the Chino Basin. *(see 5.9 Air Quality)*

Noise and Safety. Chino Airport, located along a portion of the northerly project boundary, is a significant influence on The Preserve planning area. There are currently over 200,000 annual aircraft operations and 940 aircraft based at the airport, making it the 30th busiest airport in the nation. Portions of the FAA restricted use, development and height zones, as well as the adopted 60 dB CNEL noise contour associated with airport operations, all extend into The Preserve. Other significant current sources of noise within the plan area are vehicular traffic along Euclid Avenue (SR 83) and Pine Avenue. *(see 5.8 Noise and 5.6 Hazards)*

4.2 REGIONAL AND AREAWIDE CONDITIONS—CONTEXT FOR CUMULATIVE IMPACT ANALYSES

Section 15130 of the CEQA Guidelines requires the consideration of cumulative impacts within an EIR. Cumulative impacts are described as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the project when added to other closely related future projects.

In identifying projects that may contribute to cumulative impacts, the CEQA Guidelines allow the use of either 1) a specific list of past, present, and probable future projects, or 2) a summary of projections contained in an adopted General Plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact.

The cumulative impact analyses in Sections 5.1 through 5.14 rely on a summary of projections from adopted local and regional plans and certified EIRs. The planning and environmental documents utilized to provide projections of regional and areawide conditions include the following documents, available at the City of Chino Community Development Department:

- City of Ontario Sphere of Influence General Plan.
- Market Analysis, Subarea 2, San Bernardino County, City of Chino, California.
- Southern California Association of Governments Regional Transportation Plan 2001 Growth Forecast.
- Chino Sphere of Influence Subarea 1, Chino Valley Dairy Preserve, General Plan Amendment.

RELATED PROJECTS

The area surrounding the proposed project includes land within the Cities of Chino, Chino Hills, Corona, Norco, and Ontario. In addition, land within the unincorporated area of the County of Riverside, referred to as the Eastvale area, has also been included. To better understand the potential cumulative growth that could occur within this area a listing of the projected growth rate of area jurisdictions is provided within Table 4.2-1 based upon projected growth rates from the Southern California Association of Governments Regional Transportation Plan, up to the year 2020.

Additional information is provided within Table 4.2-2, which summarizes land use totals from major plans and development projects within each jurisdiction. For many of the environmental impacts categories in Section 5.1 through 5.14, the area of cumulative impact generally conforms to the Chino Basin Dairy Area (CBDA), defined generally by the SR 60 Freeway on the north, SR 91 Freeway on the south, the I-15 Freeway on the east, and SR 71 on the west. However, for purposes of the traffic impact study, the cumulative study area extends beyond these boundaries (see Exhibit 5.7-1), including portions of Chino Hills,, and Riverside County east of I-15. For analysis of air quality cumulative impacts, the study area is regional in scope, including the entire South Coast Air Basin.

TABLE 4.2-1
SCAG GROWTH FORECAST—CHINO BASIN DAIRY AREA AND VICINITY

Jurisdiction	Population			Households			Employment		
	1997	2010	2020	1997	2010	2020	1997	2010	2020
Chino	63,906	72,070	79,473 (24 %)	16,582	19,326	21,391 (29%)	31,636	57,667	69,903 (121%)
Chino Hills	53,325	69,170	80,379 (51%)	16,330	21,533	24,104 (48%)	5,986	18,159	23,970 (300%)
Corona	107,922	138,997	150,049 (39%)	32,587	42,382	48,607 (49%)	36,126	56,751	65,475 (81%)
Norco	25,062	29,592	30,213 (21%)	5,861	7,137	7,429 (27%)	8,129	10,631	11,631 (43%)
Ontario	143,470	158,552	167,487 (17%)	41,988	45,571	47,741 (14%)	66,856	98,569	114,188 (71%)

Note: Data from SCAG Regional Transportation Plan 2001 Growth Forecast, obtained from SCAG web page. The percentage notations for the year 2020 indicate the percentage change from 1997 to 2020 for each of the three (3) categories.

The numerical growth rates delineated in Table 4.2-1 indicate significant growth within the CBDA and surrounding vicinity. This increased growth reflects the change in the area and the potential cumulative impact upon services and facilities.

In The City of Chino

A number of development projects have been approved or are under construction with the City of Chino. The most significant projects include Subarea 1, the East Chino Specific Plan, and a proposed Chino Institution for Men (CIM-Chino) project. The CIM-Chino project involves the development of surplus land from the California Institution for Men. The plan proposal encompasses 694 acres with 2,105 units, 24 acres of business park, and 15 acres of school/park land. Subarea 1, annexed in 1998, includes 1,810 acres of planned industrial, and existing agricultural and "greenspace" land. This breaks down to 562 acres of planned industrial land, and 320 acres of transitional agriculture/industrial land area within this area. The East Chino project includes 972.9 acres with 3,110 residential units, 93.4 acres of commercial land, and 105.6 acres of industrial land. The East Chino Specific Plan is substantially built out.

In The City of Ontario

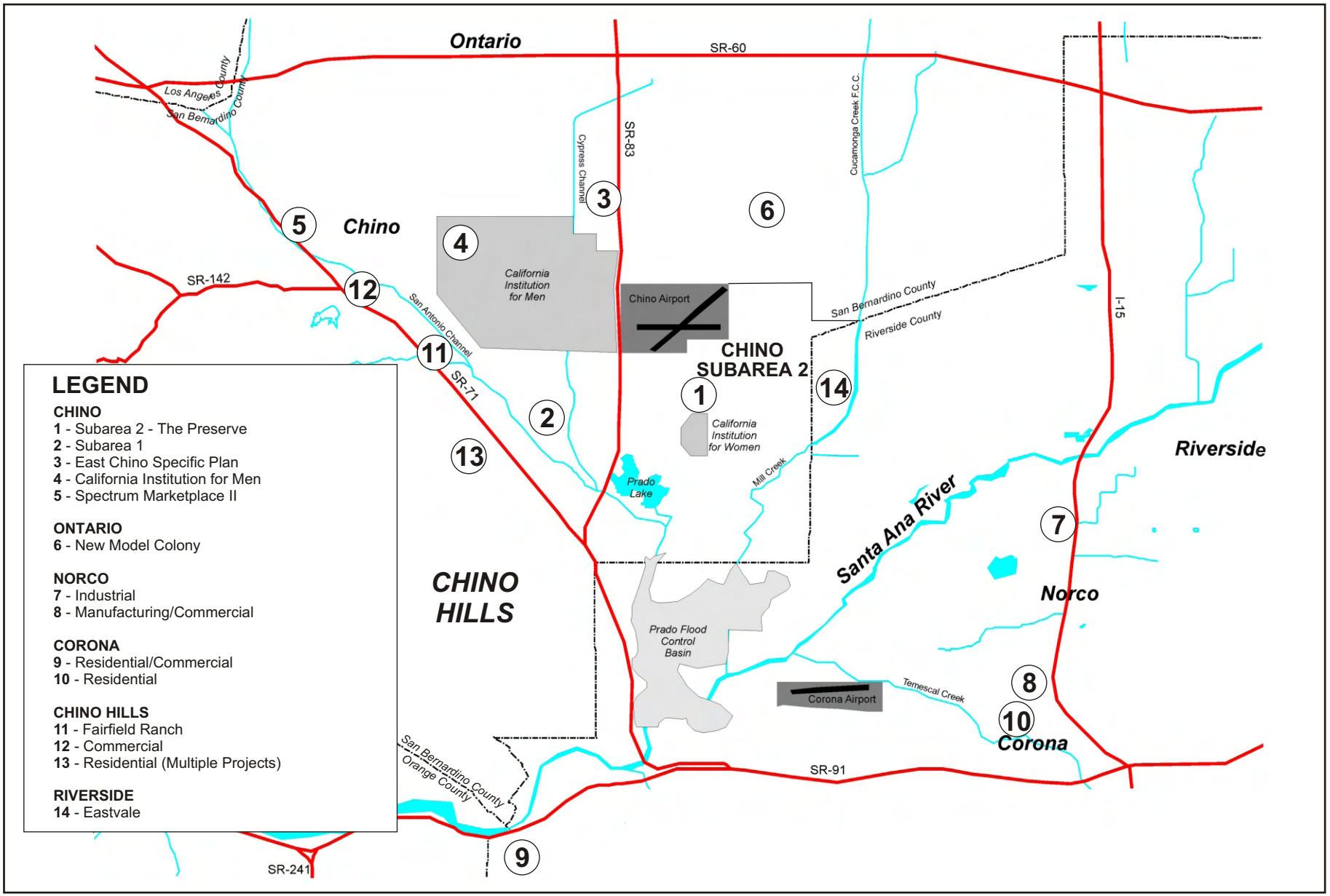
The most significant development activity occurring within the City of Ontario is associated with the annexation of the Ontario GPA Area (i.e. the "New Model/Colony") on 8,200 acres, on November 30, 1999. This land encompasses that portion of the Chino Basin Dairy Area (CBDA) north of the proposed plan area. The City's general plan for the area allows a variety of land uses, including 5,200 acres of housing that would allow for up to 31,200 housing units, 504 acres of commercial land with 5.5 million square feet of retail space, 338 acres of industrial land with 5.2 million square feet of industrial space, 500 acres of educational uses, 888 acres of open space and parks, and 775 acres of other public and infrastructure uses. These figures represent potential build-out activity from standard uses that might occur under proposed plan designations and does not represent an actual development proposal.

In the City of Norco

The most notable activity occurring within that portion of the study area falling with the City of Norco includes several industrial related developments covering 17 acres and totaling 297,855 square feet.

In the City of Corona

City of Corona development projects pending, include a 365 unit senior apartment project, and a mixed use development project that includes single family residences, general commercial, and a hotel site.



NORTH

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APPROXIMATE SCALE IN MILES

Michael Brandman Associates

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Exhibit **4.2-1**

Cumulative Projects

THE PRESERVE • CHINO SUBAREA 2

In the City of Chino Hills

A number of major development projects have been proposed, approved, or are under construction within the City of Chino Hills. Included within the list is Fairfield Ranch, which includes 787 single family units, 37.5 acres of business park land, 1.8 acres of village commercial, 30.9 acres of commercial recreation, and approximately 55 acres of open space. A number of residential subdivisions have also been approved, such as Tract 14551 with 466 units and Tracts 14426 and 14427 with 322 units.

Table 4.2-1 provides a summary of cumulative development activity by jurisdiction within the CBDA. Exhibit 4.2-1 locates the major plans and development projects that comprise the cumulative growth scenario for the CBDA. A further breakdown tabulation by jurisdiction is provided in Appendix H—Land Use/Agriculture ("Related Projects").

TABLE 4.2-2
CUMULATIVE DEVELOPMENT RELATED ACTIVITY

Jurisdiction	Residential	Commercial	Industrial
Norco	N/A	18 acres	17 acres
Corona	397 units	70 acres	N/A
Chino Hills	2,526 units	83 acres	38 acres
Ontario	31,389 units[1]	504 acres	338 acres
Chino	5,299 units[2]	93 acres	1,048 acres[4]
Riverside County	26,200 units[3]	263 acres	744 acres
Total	**65,811 units**	**1,031 acres**	**2,185 acres**

[1] Includes an estimated 31,200 units that could be developed within the New Model Colony recently annexed to the City.
[2] Includes an estimated 3,110 units from the East Chino Specific Plan and an estimated 2,105 units proposed on surplus property from the California Institution for Men; data excludes the proposed project (The Preserve—Subarea 2).
[3] This figure includes an estimated number of units based upon an analysis included in the Market Analysis, Subarea 2, San Bernardino County, City of Chino California, April 2000.
[4] Includes 320 acres of transitional industrial land within the Subarea 1 project area.

SECTION 5
ENVIRONMENTAL IMPACT ANALYSIS

5.1 LAND USE

5.1.1 INTRODUCTION

Land use information is derived from reconnaissance of the plan area, review of aerial photos and planning documents, and information provided in response to the Notice of Preparation (Appendix A). The plan area is largely comprised of dairies, recreational and open space uses, and public/institutional uses. A number of small industrial and commercial uses supporting the dairy and agricultural base are also found in the plan area.

5.1.2 EXISTING CONDITIONS

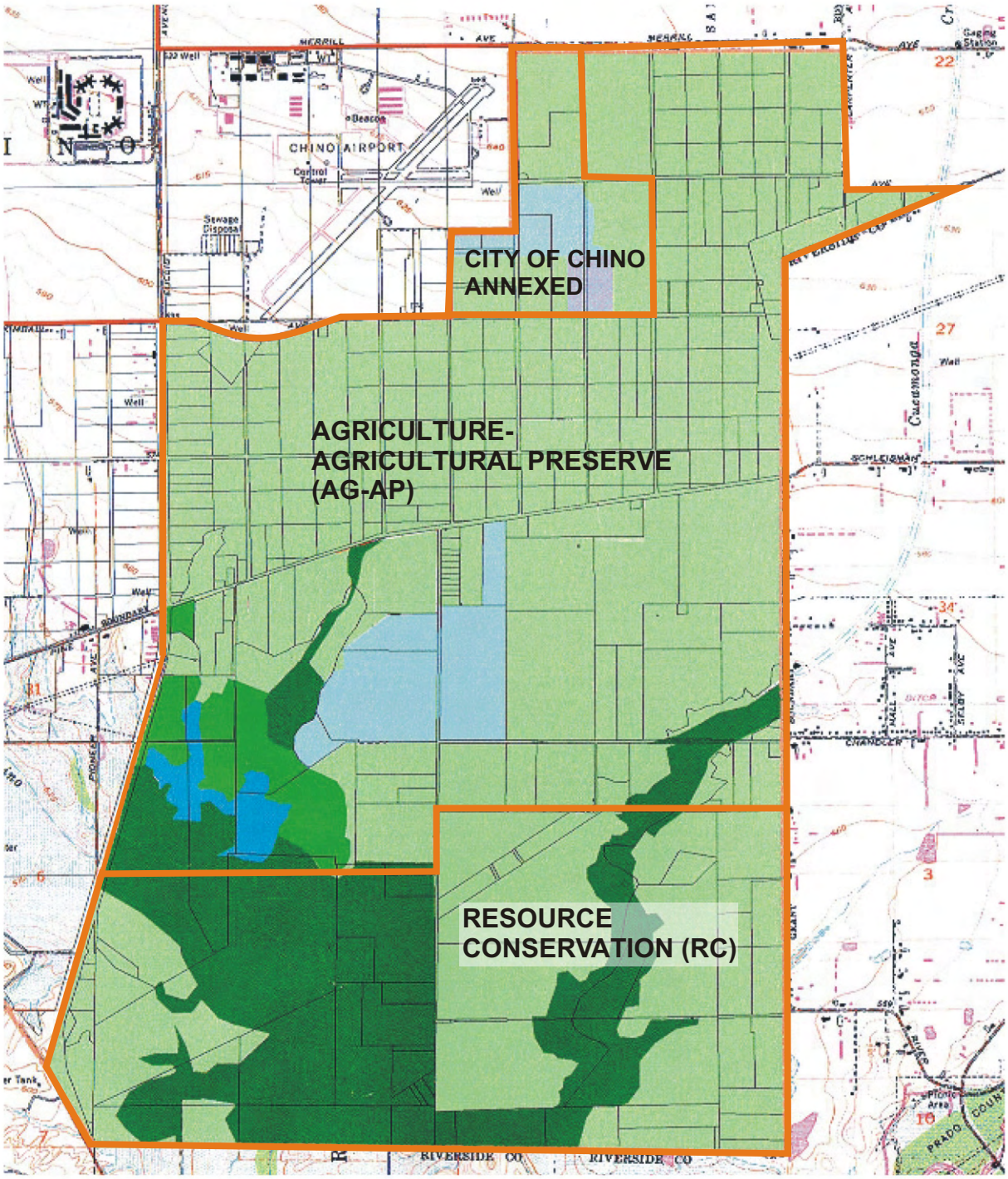
Existing Land Use

The primary land uses within the project area are agriculture and dairy-related uses that reflect the area's location and heritage within the Chino Valley Dairy Preserve (Exhibit 5.1-1). A variety of recreation and open space uses are included within the southern portion of the plan area, below the Prado Dam inundation line at elevation 566'(see Section 5.3). Institutional/public facility uses include the California Institution for Women (CIW-Chino) and the Inland Empire Utility Agency (IEUA) Co-Composting Facility (see prior Exhibit 4.1-1). A breakdown of existing land use is provided in Table 5.1-1.

TABLE 5.1-1
EXISTING LAND USE

Land Use	Acreage (Approx.)	Percentage of Project Area
Agriculture	4,190	77.1
Recreation and Open Space[1]	895	16.5
Public Facilities	307	5.6
Industrial	43	0.8
Total	**5,435**	**100.0**

[1] Includes 60-acre Prado Lake



Agriculture/Dairy
Industrial
Open Space
Public Facility
Recreation
Water

SOURCE: The Planning Center

NORTH

6000 3000 0 6000
SCALE IN FEET

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Exhibit **5.1-1**

Existing Land Use

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Agriculture

The plan area is located within the Chino Valley Dairy Preserve portion of the larger San Bernardino County Dairy Preserve. The area above the old El Prado Dam inundation line (roughly the upper 2/3 of the plan area) is designated Agriculture-Agriculture Preserve (AG-AP) on the San Bernardino County General Plan reflecting its dairy-related use. The areas below the old El Prado Dam inundation line have a land use designation of Resource Conservation under the County's existing general plan, allowing for various recreational and open space uses (Exhibit 5.1-1).

Approximately 4,190 acres, or 77 percent of The Preserve plan area contains agriculture uses, including dairies, crops, fallow land and pasture. Over 30 operating dairies are located in the area, including approximately 28,700 milk cows.[1] Many of these dairies have a single-family residence associated with them. According to recent data provided by the City of Chino[2], a total of 1,564 acres in the plan area are subject to Williamson Act contracts administered by the County of San Bernardino (see 5.2 Agriculture). Designed to protect agricultural land from premature conversion to other land uses, the Williamson Act allows owners of qualified land to contract with the applicable jurisdiction to continue agricultural uses for a period of at least ten years. The contract is automatically renewed each year unless a notice of non-renewal is filed. In return, the jurisdiction agrees to assess the property at its agricultural value rather than its market value. Of the total 1,564 acres currently under Williamson Act contracts within The Preserve plan area, parcels totaling 416 acres have filed non-renewals during the period 1992 through February 2001.

Approximately 168 acres in the extreme northeast portion of the plan area is maintained in agricultural use by the Southern California Agricultural Land Foundation (SoCALF). SoCALF is a land preservation trust. The County of San Bernardino owns these lands in fee title and the trust is responsible for maintaining the land and placing it back into the hands of farmers. These properties will be maintained for agricultural uses in perpetuity, regardless of future planning efforts.

Recreation and Open Space

Prado Regional Park. A substantial portion of the plan area south of Pine Avenue is devoted to recreational use within Prado Regional Park and its related concession areas. These uses fall entirely within the 566-foot Prado Dam inundation area, which encompasses approximately 53 percent of the total plan area. Both the regional park and adjacent concession areas are administered by the County of San Bernardino Regional Parks Division, pursuant to a master lease granted by the U.S. Army

[1] Source: City of Chino Dairy Information (2001).

[2] City of Chino; Williamson Act Parcels by Contract Number for Subarea 2, Chino, CA (2/2001).

Corps of Engineers. The total park lease area includes a total of 2,200 acres within the plan area and adjacent Chino Subarea 1, recently annexed.

Park facilities and concessions *within the plan area* include the following:

- Prado Regional Park: Facilities include Prado Lake--a 60-acre fishing lake, 75 camp sites, softball fields, and soccer fields.

- Prado Recreation Inc.: This 507-acre facility is used to train and board dogs. Only 269 acres are in active use.

- Prado Stables: This equestrian center consists of two arenas, an office/tack shop, a dressage court, horse rental area, group pasture area, lunging ring, hotwalker, round pen, caretaker trailer, and parking for trailers and visitors.

There is also a large portion of the master lease area that is undeveloped open space and/or held in agricultural lease by the Corps of Engineers.

Park master lease facilities and concessions *outside the plan area* within the City of Chino (Subarea 1) include El Prado Golf Course, Prado Olympic Shooting Park, Oranco Bowmen Archery Range, and Prado Air Park.

Institutional/Public Facilities

Public facilities located within the project area include the California Institution for Women (CIW-Chino), Inland Empire Utility Agency's Co-Composting Facility, and portions of the Chino Airport runway. Other facilities include a Southern California Edison (SCE) transmission line and Cucamonga Creek flood channel.

The California Institution for Women is a 120-acre prison that currently houses 1,732 females. The Institution also serves as a hub for the selection and physical fitness training of female firefighters. The 93-acre Co-Composting Facility has a capacity of 400,000 wet tons per year for sludge and 120,000 wet tons per year of manure. IEUA is undertaking a study to evaluate the feasibility of relocating the facility to a location outside the plan area. Chino Airport maintains a hangar/warehouse building on County-owned land east of Grove Avenue and north of Kimball Avenue within the plan area. A major SCE transmission line corridor (double 220kv and double 500kv) traverses the plan area in the vicinity of Pine Avenue. A portion of the concrete-lined Cucamonga Creek flood control channel enters the plan area at Hellman Avenue and Chino-Corona Road.

Industrial and Small Businesses

Industrial or manufacturing establishments are located in two locations within the plan area—1) airport hangars and warehouses along Kimball Avenue east of Grove Avenue, and 2) several small manufacturing businesses along the east side of Chino-Corona Road south of Pine Avenue. Other uses include a café, equipment sales and storage yards, mini-warehouse and truck yard. These uses comprise less than 1% of the total plan area.

Small recreation-commercial uses located on leased land west of the Hellman Avenue/River Road intersection include a paint-ball establishment and hunting concession.

Land Use Compatibility

The plan area reflects a predominantly rural setting that is largely free from typical urban/rural land use conflicts. In a more urban/suburban setting, a dairy or agricultural use would typically not be viewed as a compatible use adjacent to a residential area due to the noise, odor, vectors or use of pesticides that normally occur as part of their operations. However, within the plan area many dairies include a single-family residence for the dairy owner/operator within the same parcel. These residences adapt quite well to conditions that might be perceived by others as a nuisance. Even where a commercial use is adjacent to an agricultural use within the plan area, the small scale of the commercial use, its function and dependence on the surrounding agricultural community, and the agricultural uses' open space tend to minimize any potential conflict.

Typically, there is also the potential for land use conflicts to occur between an airport and surrounding uses. In this instance, conflicts are not apparent within the plan area due to the existence of agricultural uses around the Airport, and the restrictions imposed by the Airport Master Plan, including those related to the height of a structure and places of public assembly (see 5.6 Hazards and 5.7 Noise).

Land uses considered to be compatible with agricultural land under the Williamson Act are determined by the city or county administering the Williamson Act contracts. Currently, the County of San Bernardino administers the active contracts in the plan area. However, once the area is annexed to the City of Chino, the City will administer the contracts. The construction, alteration, and maintenance of flood control, gas, electric, water or communication utilities are generally considered to be compatible with the Williamson Act unless the governing body's land use regulations provide otherwise. Public works and improvements required for fish and wildlife enhancement and preservation and for the primary benefit of agricultural lands are also deemed compatible.

Adjacent Jurisdictions' Existing Land Uses and Land Use Compatibility

The plan area's existing agricultural, open space and recreational uses are compatible with surrounding land uses, as identified in Exhibit 5.1-2, and noted below.

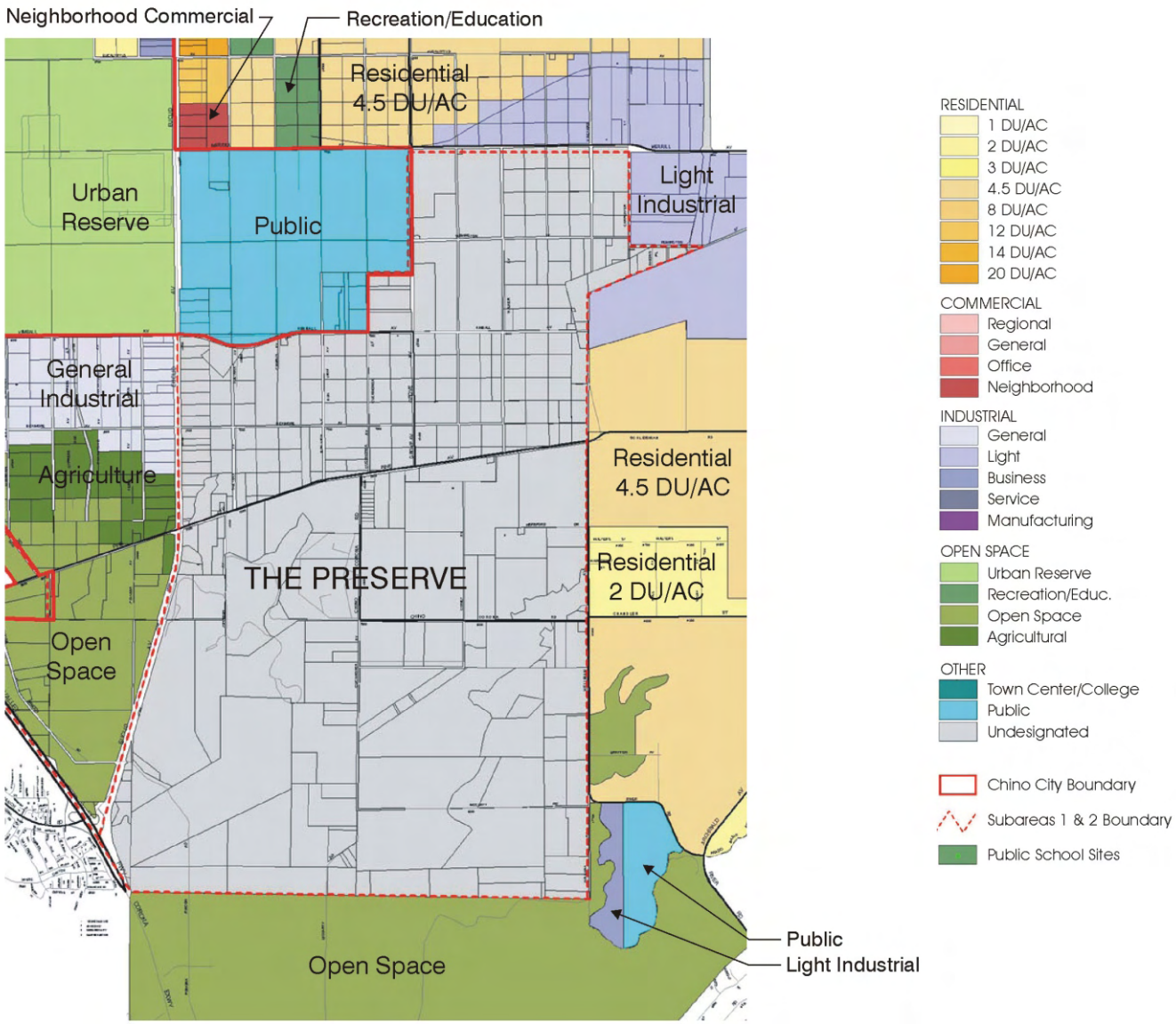
- North: Chino Airport, and agriculture/dairy uses in the City of Ontario
- East: Remaining agriculture and dairy uses in Riverside County (exclusive of Eastvale residential subdivisions)
- South: Prado Basin open space and leased recreational lands in Riverside County
- West: Recreation, dairy and institutional/public uses in the City of Chino

The open space and recreational uses within Prado Regional Park are also compatible with residential uses in the City of Chino Hills, across State Route 71 to the west. Institutional/public uses, such as the IEUA Co-Composting Facility and California Institution for Women, are centrally located within the plan area, and are separated by distance and open space from surrounding jurisdictions' land uses. These facilities are compatible with existing uses within and outside of the plan area.

The plan area's agricultural uses are similar to surrounding jurisdictions' agricultural uses, and are therefore compatible. Agricultural use within the plan area complies with Chino Airport's safety requirements limiting the type, number and height of building structures and limiting the type of human exposure within its safety zones (see 5.6 Hazards). Similarly, airport operations not constrained or bothered by some of the indirect impacts of agricultural use, such as vectors (e.g. flies), odors, and pesticide use.

While most of the existing land uses are compatible, development of residential subdivisions within the Eastvale community in Riverside County is placing homes in close proximity to plan area dairies and other agriculture along Hellman Avenue. These residential uses can be impacted by the flies, odors and pesticides associated with nearby agricultural use. Likewise, the agricultural uses can be impacted by urban runoff, pesticides associated with urban landscape maintenance, intrusion of domestic animals and trespassing. These potential impacts can increase with the planned buildout of Eastvale subdivisions.

Within the City of Ontario's recently annexed General Plan Amendment area (otherwise known as "New Model Colony'), industrial/business park uses are planned to the north and northeast of existing agricultural uses in the project plan area.



SOURCE: The Planning Center

NORTH

MAP NOT TO SCALE

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05760012 · 6/2001

Exhibit **5.1-2**

Adjacent Planned Land Use

THE PRESERVE • CHINO SUBAREA 2

To summarize, existing uses within and outside the plan area are largely compatible, but as development occurs in accordance with other jurisdictions' General Plan designations and master plans, the plan area's existing agricultural use *and designations under the San Bernardino Development Code,* will not be compatible with the surrounding residential, commercial and industrial designations.

General Plan Land Use

The project area is designated Agriculture-Agriculture Preserve (AG-AP) on the San Bernardino County General Plan. The County General Plan contains both countywide goals and policies related to smaller geographic regions referred to as Planning Areas. This particular area is referred to as the West Valley Subregional Planning Area, and encompasses the cities of Chino, Fontana, Montclair, Ontario, Rancho Cucamonga, and Upland.

The San Bernardino County General Plan contains 13 Countywide Goals that outline the "ideal future condition" for implementing planning projects. These goals address a variety of issues including quality of life, infrastructure, housing needs, economic structure, environmental sensitivity, land use mix and compatibility, communities aesthetics, open space and recreation, historic preservation, agency cooperation, agricultural soils and natural resources, waste generation, and compatible development standards in spheres of influence.

The policies related to the West Valley Planning Area include the following:

- *Open Space/Recreation/Trails*: Because special needs and opportunities exist in the Valley region, the County shall pursue the following actions:
  - Develop plan to obtain, develop and maintain hiking trails and pedestrian walkways between communities and neighborhoods in the Valley area.

- *Housing/Demographics*: The following methods of housing design and development are favored in the West Valley:
  - Single Family Dwelling Units
  - Mobile home parks
  - Multiple Family Residential apartment projects
  - Large lot and/or clustered residential lots adjacent to Chino Agricultural/Dairy Preserve

Airport Influence and Dam Inundation Area

The project area is within the noise and safety zones of the Chino Airport and the dam inundation area of the Prado Dam. Both of these facilities have and will continue to affect the use of land within the project area.

Chino Airport. The purposes of the Airport noise and safety zones are to limit incompatible uses and reduce the risk and likelihood of accidents. These purposes are addressed within the Chino Airport Comprehensive Land Use Plan (ACLUP), adopted in 1992, which delineates safety zones (or 'referral areas') surrounding the airport and defines special land use requirements and development limitations. These requirements and limitations are described in a Chino Airport Land Use Compatibility Matrix (see 5.6 Hazards). Within each zone, allowable land uses and other restrictions are delineated, such as building height and noise limitations, to assure compatibility with airport operations. Future development within the project plan area will be reviewed for compatibility with these requirements and limitations.

There are currently over 200,000 annual aircraft operations and 940 aircraft based at Chino Airport, the 30th busiest airport in the nation.[3] The County Division of Airports anticipates undertaking a Chino Airport Master Plan Update, beginning in 2001, and taking 18 months to complete. The Airport Master Plan Update will update the 1992 ACLUP, and likely result in updated noise contours to take into account recent and projected fleet mix changes and increased annual operations.[4]

Prado Dam Inundation Area. Approximately 2,197 acres of the plan area are included within the highwater inundation area created by the approved raising of the Prado Dam and spillway (see 5.3 Water Resources). The raising of the Prado Dam will increase the potential dam inundation area 10 feet from its current elevation of 556 feet above sea level to 566 feet above sea level. The U.S. Army Corps of Engineers determines appropriate land uses within the inundation area that will not adversely affect the area's flood capacity or facilities. Structures that support human habitation are not allowed. Property below the 556 foot line must be reserved in an open manner to provide for conveyance of the design flood. In addition, all development must meet Federal floodway regulations and be approved by the District Engineer. The Orange County Flood Control District (OCFCD) is responsible for acquiring flowage easements or purchasing properties in fee to allow flooding up to the 566-foot elevation.

[3] ibid; Ken Nebrig (3/00)

[4] Personal communication with Robert Olislagers, San Bernardino County Airports Division, (4/17/00).

U.S. Army Corps of Engineers Land Management within the Plan Area

The U.S. Army Corps of Engineers (ACOE) is responsible for management of lands within the Prado Dam Flood Control Basin (FCB) consistent with the Prado Dam project and its primary flood control mission, as well as its secondary purpose of recreation development. The 'Prado Flood Control Basin Project Master Plan' (1993) has served as a guide to land use and recreation within the basin, including federal lands and lands acquired by Orange County Flood Control District for inundation up to the 566' elevation within the plan area.

Approximately 6,500 acres within the FCB have been leased for recreational development by the City of Corona, Riverside County and San Bernardino County. The FCB Master Plan identifies Prado Regional Park as a recreation outgrant to San Bernardino County containing specific developed recreation uses and undeveloped areas with agriculture as interim use. San Bernardino County's recreational lease is due to expire in September 2025. The Prado Project Master Plan Land Classification Plan (Plate 6-3) identifies much of the remaining undeveloped land south of Chino-Corona Road within the project plan area as *proposed recreation development* (Exhibit 5.1-3). This includes lands already leased to the County and private ownerships subject to acquired flood easements. Areas of high biological sensitivity within the Chino Creek and Mill Creek floodways are included within an *extreme resource area.* These areas include critical habitat areas identified as suitable only for extremely low intensity use.

he ACOE has indicated it is in the process of updating the Prado Dam Flood Control Basin Master lan.[5] Anticipated long-term uses within the 566' elevation inundation area are expected to include ecreation, open space and agriculture.

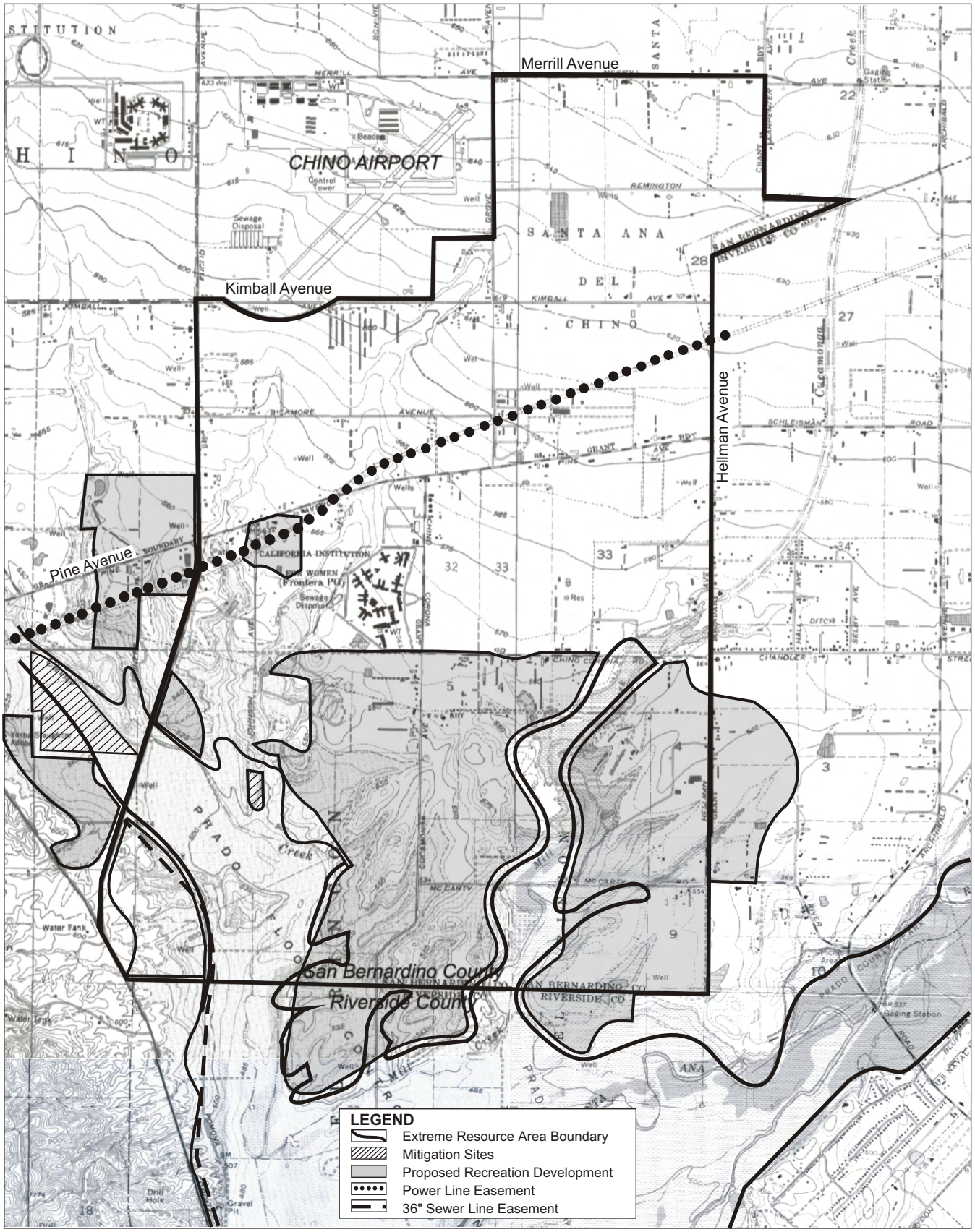
In its 'Draft Supplemental EIS and Project EIR for Prado Basin and Vicinity, Including Stabilization of the Bluff Toe at Norco Bluffs' (July 2000), the ACOE identifies a proposed flood protection dike along the western and southern boundary of the existing Corrections Institution for Women (CIW) as a specific development project within the project plan area. To provide soil material for the proposed dike and other flood control features within the FCB, the Corps has identified a proposed borrow site (Site No. 2) within an approximate 300 acre 'island' of pasture land above the 566' elevation, at the extreme southerly terminus of Cucamonga Avenue within the project plan area.

Parcelization and Ownership

The Preserve plan area's 5,435 acres is comprised of 330 parcels ranging in size from 0.1 acre to over 100 acres (Table 5.1-2). Most parcels have some access to either a constructed street or "paper"

[5] Correspondence from G.L. Beams, ACOE (12/13/00), in Appendix A.

street; however, there are a number of parcels, including federal and other publicly-owned parcels within the Prado inundation area, that are entirely landlocked.



SOURCE: U.S. Army Corps of Engineers

NORTH

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SCALE IN FEET

Michael Brandman Associates

Exhibit **5.1-3**

Land Classification Plan

05760012 · 6/2001

THE PRESERVE • CHINO SUBAREA 2

TABLE 5.1-2
PARCEL SIZE CHARACTERIZATION

Parcel Size (Acres)	Number of Parcels	Percentage of Total Parcels
0—1.0	42	12.7%
1.1—5.0	55	16.7%
5.1—10.0	134	40.6%
10.1—25.0	48	14.6%
25.1—100.0	44	13.3%
100.0+	7	2.1%
Total	**330**	**100%**

The 330 parcels are owned by 91 unique ownerships, including individuals, family trusts, corporations, or public agencies/utilities. Approximately 46 percent of the landowners own a single parcel, while 5.3 percent of the landowners own ten or more parcels (Table 5.1-3). The largest ownerships in the plan area are the United States of America (i.e. U.S. Army Corps of Engineers) with 1,493.7 acres, and the County of San Bernardino with 533.1 acres.

TABLE 5.1-3
OWNERSHIP BY PARCEL

	Number of Landowners	Percentage of All Plan Area Landowners
Own 1 Parcel	43	45.7%
Own 2 Parcels	16	17.0%
Own 3—5 Parcels	24	25.6%
Own 6—10 Parcels	6	6.4%
Own 10+ Parcels	5	5.3%
Total	**94**	**100%**

Improvements

The on and off-site improvements in the area's primarily agricultural setting are generally limited, with most of the parcels being dedicated to the active production of dairy or crops. A typical dairy would have a single residence; structures associated with a residence; milking barns and storage tanks; corrals and loafing sheds; paved and unpaved roads; wood or chain link fences; waste lagoons

and retention ponds; and limited water, septic, and other utilities/infrastructure. The crop-related agricultural uses may have a residence; paved and unpaved roads; fences; equipment storage structures; and irrigation and wastewater infrastructure. The public roadways are both paved (without curb, gutter and sidewalks) and unpaved. Utilities are above ground.

Institutional/public uses typically have improved facilities on-site, with offices, paved parking areas, water and wastewater facilities, utilities, and fencing.

5.1.3 THRESHOLDS OF SIGNIFICANCE

The following criteria are adapted from the California Environmental Quality Act (CEQA) Guidelines Appendix G for use in evaluating the significance of land use impacts resulting from the proposed project. A project would typically result in a significant adverse land use impact if it would:

- Conflict with applicable land use plans, policies or regulations of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
- Result in a substantial and irretrievable loss of open space.
- Result in a substantial change in the character of an established community, or otherwise physically divide an established community.
- Be substantially incompatible with existing land uses in the vicinity.

5.1.4 PROJECT IMPACTS

Community Character

The proposed project will result in the conversion of existing agricultural and dairy uses to a mix of residential, commercial, business park, industrial, airport-related uses, and public facilities. Approximately 85 percent of the project area is currently in agriculture and dairy use, with the remaining 15 percent largely in other open space, recreation and institutional uses.

TABLE 5.1-4
THE PRESERVE LAND USE PLAN

Land Use Designations	Acreage (Approx.)
Residential	1,168
Business	
▪ Neighborhood and Regional Commercial	95
▪ Airport Related	263
▪ Light Industrial	212
▪ Community Core	126
Open Space	
▪ Agriculture	345
▪ Open Space—Water	61
▪ Ag/Open Space—Natural	518
▪ Open Space Recreation	423
▪ Open Space—Natural	1,640
Other (public facilities and related uses)	584
Total	**5,435**

Implementation of The Preserve proposed plan would significantly change the existing function, type, and character of the area's land use from its current rural setting to an urban community with a mix and balance of land uses. The area will transition from an intensive dairy and agricultural area, normally associated with rural development, to an urbanized community with a mix of residential, recreational and employment-generating uses. This change in community character, while dramatic and profound, may occur gradually over time, and will be mitigated in part by the substantial reservation of open space within a manageable unit below the 566' elevation.

The Preserve plan would retain approximately 55 percent of the total plan area in various open space, agriculture, and recreational use designations, consistent with existing uses of lands below the Prado Dam 566' elevation inundation line.

The existing dairy uses in the plan area reflect an established community of dairy owners and operators dating back to the early 1950's, when dairies displaced by high land values and increasing urbanization in Los Angeles County and others parts of Southern California migrated to the Chino Valley. Over time, this earlier generation of dairy owners/operators has been replaced by successive generations, often within the same family, that maintain close ties and communication both within the plan area and within the dairy industry statewide. Many of the same forces that precipitated the earlier in-migration of the dairies to the plan area are now apparent in the Chino Valley, and are contributing to pressures to relocate dairies to other parts of California and western United States. These forces

include surrounding new urban development and resultant impacts on the dairies (e.g. nuisance complaints, increased urban runoff, ease of access/trespass, intrusion of domestic pets, and rising land values), and cost of compliance with environmental regulations and resource protection measures (e.g. water resources).

Implementation of The Preserve land use plan will result in a fundamental change in the rural character of the plan area to a more suburban or urban setting. This is considered a significant impact of the proposed project. However, this change is one that would likely occur, albeit at a somewhat slower pace and in a more piecemeal fashion, even without the proposed project, as a result of the economic and regulatory factors cited above.

The phasing for the proposed project is intended to minimize to the extent practical, the physical disruption of ongoing dairy activities during the transition to urban uses. Phasing of development is anticipated to originate in the north/northwest sector of the plan area near Kimball Avenue and Chino Airport, and then progress in a generally clockwise fashion to the northeast, southeast and finally the southwest sectors of the plan area (as defined by the axis of Main Street and Pine Avenue). This overall pattern or progression of development will be consistent with the logical extension of urban infrastructure from surrounding developed and developing areas to the north and west, and will facilitate an orderly process of dairy relocation and transition to urban development. Moreover, the Specific Plan includes Right-to-Farm provisions to assure that new development does not preclude or prevent ongoing dairy and other agricultural operations.

Land Use Compatibility

A project would typically be considered to have a significant land use impact if it results in a conflict due to the siting of dissimilar or potentially incompatible land uses in close proximity. Incompatibility often results when uses that may cause noise, vibration, air pollution, odor, lighting or visual impacts are located adjacent ‘sensitive receptors’, such as residential uses, schools, parks or hospitals.

Land use compatibility within the plan area is evaluated in terms of several key components, influences, or aspects of the land use plan, as follows:

- Urban Use Conflicts with Adjacent Agricultural/Dairy Operations
- Co-Composting Facility
- Correctional Institution for Women (CIW-Chino)
- SCE Transmission Line Easement
- Chino Airport Influence Area
- Prado Dam Inundation Influence Area

Urban Use Conflicts with Adjacent Dairy Operations

At buildout of the proposed project, agricultural uses would exist in two locations—1) agriculturally-designated lands (AG) owned by San Bernardino County and managed by SoCALF as agricultural preserve in the extreme northeast corner of the plan area (east of the future extension of Hellman Avenue); and 2) lands below the 566' inundation line designated by the plan as Agriculture (AG) and Agriculture/Open Space-Natural (AG/OS-N). A total of up to 862 acres are included within these designations. The remainder of the plan area other than these designations would be comprised of urban uses such as residential, business and commercial uses, public facilities and other open space.

The designation of non-agricultural uses, including residential, adjacent to existing or designated agricultural uses under the Preserve plan could result in impacts on both the new urban development and the existing agricultural uses, as various portions of the plan area transition from agricultural to urban use. The types of impacts commonly associated with adjacent agricultural and urban uses include, but are not limited to dust, harmful chemicals, noise, odor and flies, intrusion by pets, trespass and vandalism.

The proposed specific plan includes several mechanisms that will reduce urban use conflicts with agriculture, particularly during the transition period. These mechanisms include *Right-to-Farm provisions and development standards,* requirements for adjacent use *Compatibility Findings*, and *Density Transfer* provisions within common land use density/intensity categories. These mechanisms are briefly described below.

Right-to-Farm. In order to balance the rights of existing agricultural uses to continue lawful operations with the rights of new homeowners and businesses, the City of Chino Zoning Ordinance (Section 20.07.020) will be augmented by additional right-to-farm provisions in the specific plan. These provisions include, but are not limited to the following:

- Expanded notification requirements;
- Protection of agriculturally-zoned uses through the placement of special conditions on adjacent proposed urban uses;
- Cooperation with federal, state and local agencies in enforcement of laws and regulations designed to reduce environmental impacts of agricultural operations;
- Special requirements for "dual use" owners (i.e. owners of properties with both agricultural and non-agricultural uses) to minimize potential conflicts through increased setbacks or limiting hours of operations; and
- Minimum 100-foot setback requirement between residential and animal uses.

Compatibility Findings. Procedures and standards are established for all subsequent development projects within the plan area to assure coordinated planning with surrounding properties. Provisions to assure adequate access, grading and drainage, landscape and lighting, and buffering or other mitigation for potential noise, odor, smoke, dust, light, business operations and public safety impacts are included. Specific compatibility findings must be made by the City in review of future development applications.

Transfer of Density/Intensity. Special provisions are established in the specific plan to allow the transfer of excess density between projects within the same land use category. These provisions could be utilized to cluster development in certain instances and mitigate potential urban use conflicts with adjacent agricultural uses.

Despite the gradual development phasing and the application of the foregoing measures in the specific plan, potentially significant urban use conflicts with adjacent agriculture may occur during the implementation of The Preserve plan (i.e. during the transition phase). However, at buildout of The Preserve plan, land use compatibility impacts would be substantially reduced. Special attention should be focused on the remaining northeast corner agriculturally-designated lands (approx. 165 acres) that are retained in agricultural preserve status by the County, and surrounded by light industrial uses. Application of right-to-farm provisions and other protections built into the specific plan should assure that potential conflicts with this remnant area of the agricultural preserve are reduced to less than significant levels.

Agricultural uses that either remain in, or transition to the designated agricultural areas below the 566' elevation will be adequately buffered from urban uses by other surrounding permanent open space, including open space-recreation (OS-R) and open space-natural (OS-N) areas. No significant long-term urban use conflicts are anticipated in these areas.

<u>Co-Composting Facility</u>

The Preserve land use plan assumes this 93-acre facility will relocate outside the plan area, consistent with current relocation feasibility studies by IEUA. The facility site is designated Low Density Residential (5.5 du/acre) and Medium Density Residential (10 du/acre) on the proposed land use plan. The phasing progression suggests that the southwest sector of the proposed plan area is likely to be developed in the latter stages of the development program, after relocation of the facility. However, as the specific timetable for relocation is uncertain, the possibility exists that nearby properties could be developed pursuant to land use designations in the proposed land use plan prior to Co-Composting facility relocation. Planned land uses surrounding the facility site include High-, Medium-, and Low Density Residential, Estate Residential, Open Space-Recreation, and the existing Women's Correctional Institution. Until the facility is relocated, nearby properties may be adversely impacted by the noise, odors, dust, traffic and visual/aesthetic impacts associated with facility operations.

To mitigate these impacts, the specific plan includes a *Co-Composting Facility Overlay Zone.* The overlay zone is applied to the facility site and all properties within 300 feet. Any residential projects within this overlay must provide a 300-foot interim buffer until such time as the Co-Composting Facility relocates. This buffer may be used for temporary recreation, agricultural uses, community open space or some combination of these uses. Although this overlay would reduce land use conflicts associated with the facility, the potential would remain for dust, odor and visual impacts of the facility to extend beyond 300 feet. SCAQMD's Proposed Rule 1133 would require enclosure of the Co-Composition Facility and implementation of emission control equipment and compliance plans (see Section 5.9.4—Air Quality Impacts). The potential enclosure of this facility by IEUA would reduce these planned significant adverse impacts to residential uses and other sensitive receptors (e.g. schools), until such time as the facility relocated.

Correctional Institution for Women (CIW-Chino)

The proposed land use plan locates potentially incompatible Low Density Residential and Estate Residential uses in close proximity to CIW-Chino. These residential uses are separated from CIW-Chino only by Chino-Corona Road (Cucamonga Avenue) and a planned linear extension of the Community Paseo and Open Space System. Without careful design of the linear paseo to fully buffer and screen these potentially incompatible uses, significant land use conflicts could occur. Any buffer or screening concepts must also consider prison security issues.

The remainder of the lands surrounding the correctional facility perimeter are planned for open space and recreational uses. Access to and from the facility is guarded and highly controlled, and no significant conflicts are anticipated.

SCE Transmission Line Easement

The Southern California Edison transmission line easement crosses the plan area in a generally east-west direction. The proposed plan includes the easement in an Open Space-Recreation designation that allows compatible uses (e.g. trails, active/passive recreation, nurseries, enclosed storage, parking). This plan designation is further restricted by a Transmission Line Easement Overlay in the specific plan to assure adequate review of specific use proposals within and adjacent the easement. No significant land use compatibility impacts are anticipated.

Chino Airport Influence Area

Land use compatibility surrounding Chino Airport is determined by consistency review of plans and projects with the adopted Chino Airport Comprehensive Land Use Plan (ACLUP), including adopted Safety Zones (I, II, III) and airport noise contours. The ACLUP utilizes an Airport Compatibility Matrix (EIR Table 5.6-1) to identify land uses that are permitted, conditionally permitted or not

permitted within adopted safety zones. The proposed specific plan includes a Chino Airport Overlay Zone to assure subsequent project review for consistency with the ACLUP. However, this overlay zone is limited to the adopted safety zones and noise contours pursuant to the 1992 ACLUP, and does not account for potential future changes to safety zones and noise contours that may result from the County's pending Airport Master Plan update. Analysis of the proposed land use plan consistency with adopted airport safety zones and airport noise contours is included in EIR Sections 5.6 Hazards and 5.8 Noise, respectively.

No significant land use compatibility impacts with current Chino Airport operations and adopted safety zones and noise contours will result from plan implementation. However, potential future changes to the Airport Master Plan and airport operations could result in significant safety and/or noise impacts to proposed land uses depending on the type and magnitude of such changes.

Prado Dam Inundation Influence Area

Proposed plan land use designations below the 566' elevation consist almost entirely of Open Space-Recreation (OS-R), Open Space-Water (OS-W), Agriculture/Open Space-Natural (AG/OS-N) and Open Space-Natural (OS-N) uses. Table 5.1-5 Open Space Uses, identifies allowable uses under each of these designations.

The U.S. Army Corps of Engineers (ACOE) 'Prado Flood Control Basin Project Master Plan' (3/93) identifies a Land Classification Plan for the Prado Basin that includes portions of the proposed project area below the 566' elevation in several land categories—Extreme Resource Area, Mitigation Sites, and Proposed Recreation Development (Exhibit 5.1-3).

Areas of high biological sensitivity within the Chino Creek and Mill Creek floodways are included within an *extreme resource area.* These areas include critical habitat areas identified as suitable only for extremely low intensity use. The proposed land use plan OS-N designations within these areas are consistent with the Land Classification Plan and allowable uses under the County of San Bernardino lease agreement with the ACOE. The *mitigation site* designation south of Prado Lake is also consistent with the proposed land use plan OS-N designation.

The majority of the lands below the 566' elevation consist of existing recreation development (i.e. Prado Regional Park and concessions) or fall into the ACOE *proposed recreation development* classification. The proposed recreation development classification includes areas designated for future recreation development consistent with multiple resource management objectives. The proposed land use plan identifies portions of these areas in either the OS-W, OS-R, AG. AG/OS-N or OS-N use categories. These designations include uses that are potentially allowed by the Prado Flood Control Basin Master Plan, subject to ACOE review of specific development proposals.

The proposed specific plan includes a 566-Foot Dam Inundation Elevation Overlay (DIO) applied to all lands below 566' elevation inundation area. This overlay requires that all specific development proposals be submitted for ACOE review and approval, and that allowable land uses comply with provisions of any cooperative management plans that may apply to the Lower Chino Basin/Prado area. Finally, the ACOE has indicated that its master plan is being updated, and that anticipated long-term land uses at Prado FCB will include recreation, open space and agriculture[6]. As a result, no significant conflicts with the Prado FCB Master Plan or other ACOE plans within the Prado Dam inundation area are anticipated.

[6] Appendix A letter from G. L. Beams, P.E., U.S. Army Corps of Engineers (12/13/00).

TABLE 5.1-5
OPEN SPACE USES

Open Space Designations	Intended Character	Allowable Land Uses	Uses Subject to Conditional Use Permit	Administratively Permitted/ Incidental Uses	Prohibited Uses
Agricultural (AG)	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.	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.	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.	a. As allowed by the AG zone, Section 20.11.030 of the Zoning Ordinance.	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.

TABLE 5.1-5
OPEN SPACE USES (Cont.)

Open Space Designations	Intended Character	Allowable Land Uses	Uses Subject to Conditional Use Permit	Administratively Permitted/ Incidental Uses	Prohibited Uses
Agricultural/ Open Space–Natural (AG/ OS-N)	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.	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	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	a. As allowed by the OS Zone, Section 20.11.030 of the Zoning Ordinance	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.

TABLE 5.1-5
OPEN SPACE USES (Cont.)

Open Space Designations	Intended Character	Allowable Land Uses	Uses Subject to Conditional Use Permit	Administratively Permitted/ Incidental Uses	Prohibited Uses
		communications; facilities necessary to provide for public safety or health.	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.		
Open Space-Recreation (OS-R)	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.	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	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	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 &	a. Expansions or new dairies, calf nurseries, and other similar intense animal uses.

TABLE 5.1-5
OPEN SPACE USES (Cont.)

Open Space Designations	Intended Character	Allowable Land Uses	Uses Subject to Conditional Use Permit	Administratively Permitted/ Incidental Uses	Prohibited Uses
		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;	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	nursery crops produced on site.	

TABLE 5.1-5
OPEN SPACE USES (Cont.)

Open Space Designations	Intended Character	Allowable Land Uses	Uses Subject to Conditional Use Permit	Administratively Permitted/ Incidental Uses	Prohibited Uses
		controlling or reducing water runoff pollutants; public communications; facilities necessary to provide for public safety or health.	associated equipment buildings n. Apiaries o. Cemeteries.		
Open Space-Natural (OS-N)	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.	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	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	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.	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.

TABLE 5.1-5
OPEN SPACE USES (Cont.)

Open Space Designations	Intended Character	Allowable Land Uses	Uses Subject to Conditional Use Permit	Administratively Permitted/ Incidental Uses	Prohibited Uses
		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.	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.		

TABLE 5.1-5
OPEN SPACE USES (Cont.)

Open Space Designations	Intended Character	Allowable Land Uses	Uses Subject to Conditional Use Permit	Administratively Permitted/ Incidental Uses	Prohibited Uses
Open Space-Water (OS-W)	The Open Space-Water Land Use Designation is intended to preserve water resources, such as watercourses and lakes	a. Lakes and waterbodies b. Wildlife/habitat Conservation Areas c. Public parks d. Educational/ interpretive facilities e. Water related recreation	Any proposed development shall be evaluated by the City on a case-by-case basis. Projects shall be evaluated for the impacts to surrounding uses in terms of noise, odors, light penetration, aesthetics, traffic and parking. It is the discretion of the Community Development Director if a Conditional Use Permit is required based upon the scale of the project and potential impacts.		
Note: See The Preserve Draft Specific Plan for development guidelines for open space designations.					

Approximately 52 acres of the 566'elevation inundation area extends above Pine Avenue at its intersection with Euclid Avenue (northeast corner). The proposed plan includes this area within the Regional Commercial designation, which conflicts with ACOE use requirements within the Prado Basin inundation area. In order to avoid a loss of flood capacity within the basin, additional lands would need to be identified during plan implementation to offset the loss of flood capacity associated with development of this 52-acre area. This capacity could be obtained either from parcels already within the inundation area, or from parcels at or above the 566' elevation. The affected area falls within the proposed DIO Overlay Zone, requiring ACOE review and approval of specific development projects. As the ACOE would retain land use authority over this area, no significant land use conflict is likely to result.

Loss of Open Space

According to the California Government Code (§ 65560), "open-space land" is any parcel or area of land or water which is essentially unimproved and devoted to an open space use, and which is designated on a local, regional or state open-space plan as any of the following:

- Open space for the preservation of natural resources
- Open space for the managed production of resources
- Open space for outdoor recreation
- Open space for public health and safety

Section 65560 further indicates that rangeland and agricultural lands fall within the category of open space for the managed production of resources. The majority of the proposed plan area falls under this definition of open space land.

Implementation of the proposed plan will result in the conversion of approximately 2,055 acres of agricultural open space to urban uses. Although limited to approximately 38% of the total plan area, this loss of open space is irretrievable, and is considered a significant, unavoidable impact of the proposed project.

Conflict with Applicable Land Use Plans, Policies or Regulations

Implementation of the proposed plan will require pre-zoning of the site to classifications consistent with the proposed specific plan and City Zoning Ordinance, annexation to the City of Chino, adoption of a City General Plan amendment, and adoption of the proposed specific plan to provide detailed standards and guidelines for future development of the plan area. These actions follow inclusion of the project area within the City's sphere of influence in 1994 by the Local Agency Formation Commission (LAFCO). In effect, this action by LAFCO recognized the City of Chino as the

appropriate agency to undertake future master planning for the sphere of influence and to guide the transition from dairylands to sustainable urban uses.

Implementation of the proposed plan and related actions by the City of Chino would conflict with the existing County General Plan and Development Code Agriculture-Agriculture Preserve (AG-AP) designations for the site, and the site's agricultural status within the Chino Valley Dairy Preserve and West Valley Subregion Planning Area. However, master planning for the area and annexation to the City of Chino was specifically contemplated by LAFCO's inclusion of the area within the City's sphere. The pattern of cancellation or non-renewal of Williamson Act contracts within the plan area dates back to 1992-93, precipitating a transition to urban uses. Therefore, implementation of the proposed plan and related actions by the City do not represent a substantial adverse land use impact or conflict with applicable land use planning for the area.

Impacts associated with the conversion of existing agricultural lands are also addressed in EIR Section 5.2 Agriculture, which follows.

As discussed previously (see 'Chino Airport Influence Area'), implementation of the proposed plan would not conflict with the adopted Chino Airport Comprehensive Land Use Plan (ACLUP). Similarly, the proposed plan would not conflict with the U.S. Army Corps of Engineers' Prado Flood Control Basin Master Plan, or other ACOE planning prerogatives within the Prado Dam inundation area (see 'Prado Dam Inundation Influence Area').

5.1.5 CUMULATIVE IMPACTS

Implementation of the proposed plan, in combination with past, present and probable future projects in the vicinity of the Chino Valley Dairy Preserve, will result in a significant and irretrievable cumulative loss of open space. Within the Dairy Preserve, this loss includes lands that have been identified in County plans and regulated by zoning for the managed production of agricultural resources. Open space within the Chino, Ontario, Eastvale, and other Riverside County jurisdictional limits and/or spheres of influence, are included in this category.[7]

Though the proposed project phasing and specific plan provisions would reduce urban use conflicts with adjacent dairy uses during the transition period, the project will nonetheless contribute to cumulative land use conflicts and compatibility problems during the long-term transition of the greater Chino Valley dairylands to urban uses.

[7] See EIR Section 4.2 Related Projects.

The proposed project will accelerate the fundamental change in community character already occurring within the dairylands. This change involves the transition from an established community of dairy owners and operators, to new planned developments with a mix of urban uses and variety of housing types and lifestyle opportunities.

5.1.6 MITIGATION MEASURES

The proposed project is intended to meet local and regional needs through the development of attractive and vibrant neighborhoods, while providing an employment and commercial base that can respond to regional jobs-housing balance goals. The proposed land use plan includes design features that minimize potential land use impacts at plan buildout. These features include but are not limited to:

- A compact urban form and community core
- A gradation of land use intensity/density from the community core outward, and from northerly portions of the plan near Chino Airport south to the open space and sensitive resources below the 566' elevation
- Appropriate buffering and separation of potentially incompatible uses through application of linear open space (e.g. Community Paseo and Open Space System, linear park and other recreational open space)
- Retention and consolidation of the major open space resources within a vast, manageable open space unit below the 566' elevation
- Preserved opportunities for long-term agricultural use within agricultural units defined by the AG and AG/OS-N designations.

Implementation of policies in the General Plan Amendment through provisions of the proposed specific plan will mitigate land use impacts to the extent feasible. This includes the application of various specific plan overlay zones to reduce potential land use impacts.

The following measures are recommended to reduce remaining potentially significant land use compatibility impacts associated with plan implementation:

<u>LU-1. Chino Airport Influence Area</u>

The City of Chino shall provide notice of development applications within adopted airport noise and safety zones to the Airport Land Use Commission (ALUC), in compliance with the Chino Airport Comprehensive Land Use Plan (ACLUP). The City will coordinate with the ALUC to assure specific development projects' compatibility with Chino Airport operations.

LU-2. Correctional Institution for Women (CIW-Chino)

Special attention should be focused during subsequent review of specific development projects on providing an adequate buffer and separation between the existing CIW-Chino and planned residential uses immediately to the east. The planned linear Community Paseo along Chino-Corona Road separating these uses should include some combination of landscape screening, berms and/or walls, and setbacks to achieve an adequate physical and visual separation between these uses.

5.1.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The irretrievable loss of open space and conversion of land from rural to urban community character represent significant, unavoidable impacts of the proposed project. These impacts are also cumulatively significant.

The proposed specific plan includes Right-to-Farm provisions, Compatibility Findings requirements, and density transfer provisions that will reduce the potential for urban use conflicts with agricultural/dairy operations during the transition to urban use. However, some localized conflicts and compatibility problems are probably inevitable until buildout of the proposed land use plan is achieved. Potential odor and visual impacts of the Co-Composting Facility to surrounding new development would remain significant, until such time as the facility is enclosed or relocates outside the plan area.

All other land use impacts are less than significant.

5.2 AGRICULTURE

5.2.1 INTRODUCTION

Agricultural information used in this section is derived from field reconnaissance, review of aerial photographs and information provided by a variety of other sources including landowners/dairy operators, the City of Chino, State Department of Conservation, and other referenced sources. Issues addressed in this section include prime agricultural land, farmland classifications, Williamson Act contracts, agricultural productivity, and agricultural land conversion. Land use conflicts with agriculture/dairy uses are addressed in Section 5.1 Land Use.

5.2.2 EXISTING CONDITIONS

Agriculture

The predominant land use within the project area is agriculture, comprising approximately 4,190 acres or about 77 percent of the project area. The agricultural areas are divided into the following components and approximate acres and percentages.

TABLE 5.2-1
EXISTING AGRICULTURAL USES

Land Use	Acreage (Approx.)	Percentage of Project Area
Agricultural Uses		
▪ Fallow	645	11.9
▪ Agriculture (crops)	940	17.3
▪ Dairy and Pasture	2,604	47.9
Subtotal	4,190	77.1
Non-Agricultural Uses		
▪ Developed/Disturbed	496	9.1
▪ Other Open Spaces	749	13.8
Subtotal	1,245	22.9
Total	**5,435**	**100.0**

Agricultural uses occur as a mosaic within the site, with dairies, pasture, and croplands interspersed within the northerly 2/3 of the plan area, and fallow fields, crops and other open space within the southerly 1/3 (see Exhibit 5.1-1). Thirty-one (31) dairies are located within the plan area, with a

combined total of approximately 28,730 milk cows and total herd size of approximately 51,300 bovine animals.[1] Farmland for crop production totals approximately 940 acres, and is focused largely on producing silage to support the dairies. Crops include alfalfa, wheat, oat hay and corn.

Farmland Classifications

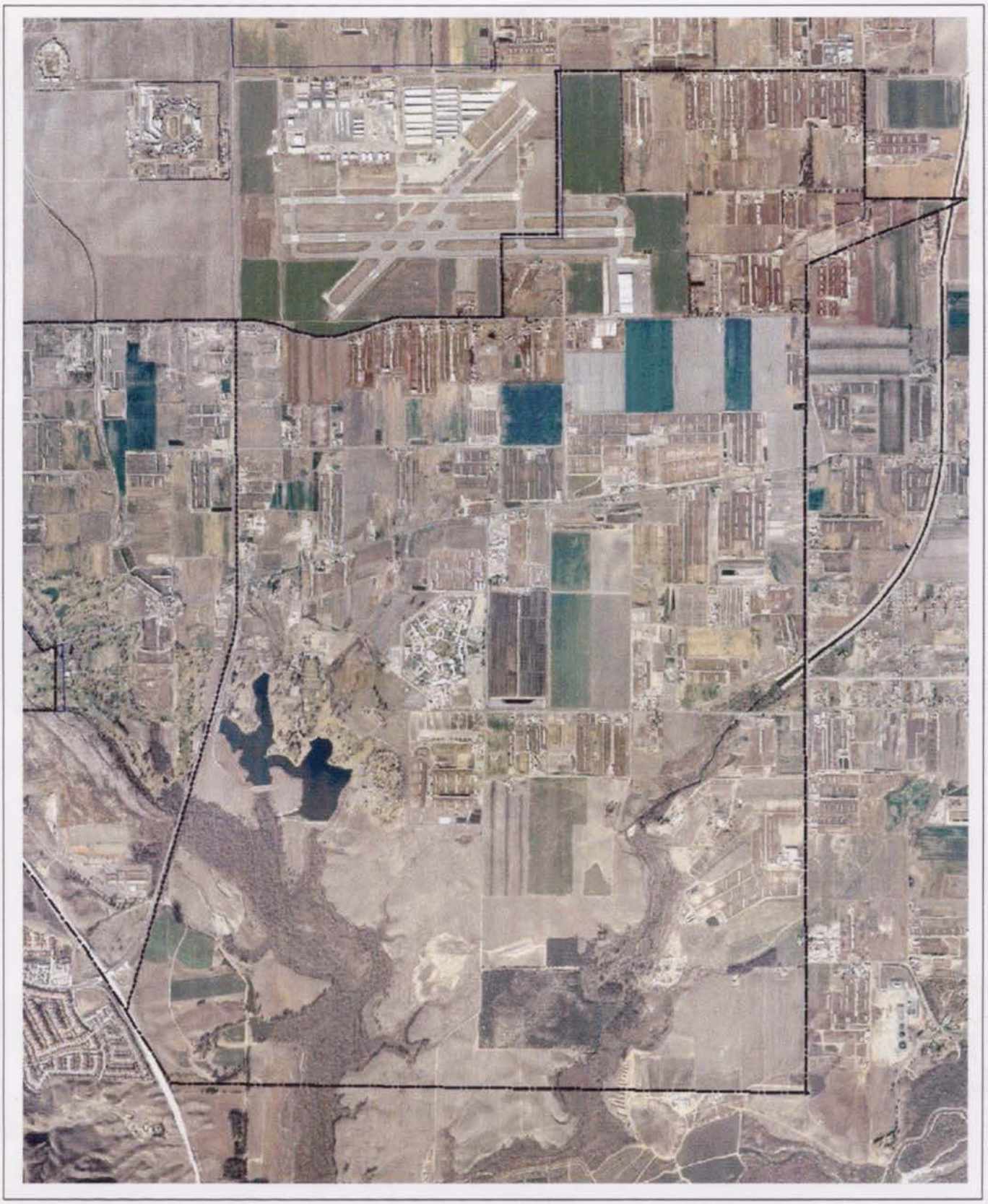
The Department of Conservation has identified six categories of farmland on the project site. These categories include Prime Farmland, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban and Built-Up Land, and Other Land. A breakdown of the farmland by acreage is provided in Table 5.2-2. Exhibit 5.2-1 illustrates agricultural use patterns on the site. Exhibit 5.2-2 depicts the farmland classifications on the site.

TABLE 5.2-2
FARMLAND BY ACREAGE

Farmland Categories	Acreage	Percentage
Prime Farmland[1]	2,268	41.7%
Farmland of Statewide Importance[2]	72	1.3%
Farmland of Local Importance[3]	136	2.5%
Grazing Land[4]	442	8.1%
Urban and Built-Up Land[5]	459	8.5%
Other Land[6]	2,058	37.9%
Total	**5,435**	**100%**

[1] Prime Farmland is land with the best combination of physical and chemical characteristics able to sustain long term production of agricultural crops.
[2] Farmland of Statewide Importance is land with a good combination of physical and chemical characteristics for agricultural production, having only minor shortcomings, such as less ability to store soil moisture, compared to prime farmland.
[3] Farmland of Local Importance is farmland that includes areas of soils that meet all the characteristics of prime, statewide, or unique and which are not irrigated. These are farmlands not covered by the prime, of statewide importance, or unique categories, but that are of high economic importance to the community. These farmlands include dryland grains of wheat, barley, oats and dryland pasture.
[4] Grazing Land is land on which the existing vegetation is suited to the grazing of livestock.
[5] Urban and Built-Up Land is residential land with a density of at least six units per ten-acre parcel, as well as land used for industrial and commercial purposes, golf courses, landfills, airports, sewage treatment and water control structures.
[6] Other Lands are those that do not meet the criteria of any other category.

[1] Source: City of Chino Community Development Department (3/12/01).



NORTH

3000 1500 0 3000

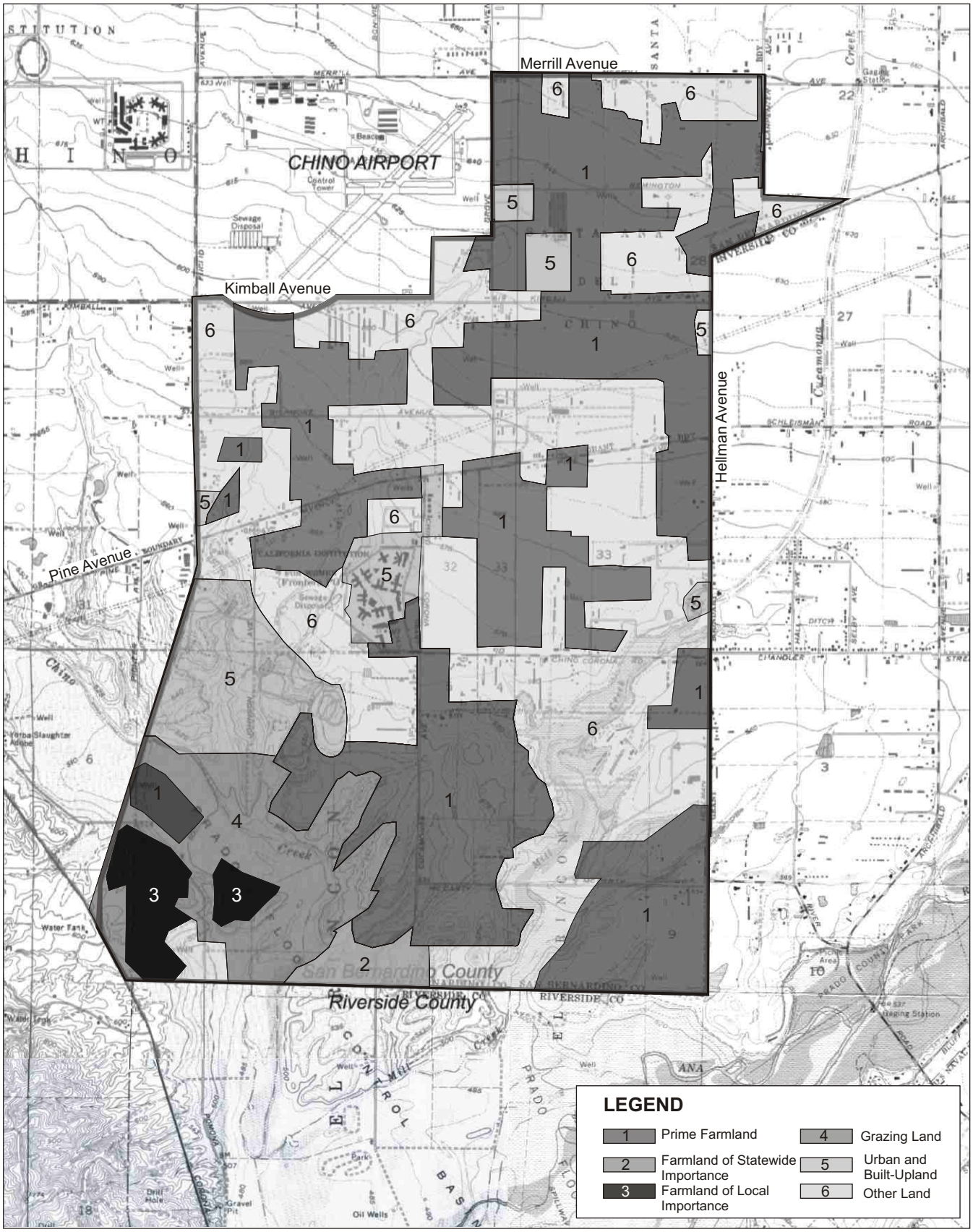
SCALE IN FEET

Michael Brandman Associates

Exhibit **5.2-1**
Aerial

05760012 • 5/2000

THE PRESERVE • CHINO SUBAREA 2



SOURCE: State Department of Conservation

NORTH

3500 1750 0 3500

SCALE IN FEET

Michael Brandman Associates

05760012 · 6/2001

Exhibit **5.2-2**

Important Farmland

THE PRESERVE • CHINO SUBAREA 2

Agricultural Soils

The U.S. Department of Agriculture, Natural Resources Conservation Service 'Soil Survey of San Bernardino County, Southwestern Part, California' (1/80) includes the project area within three soil associations that qualify as either prime farmland soils or farmland of statewide importance soils. These soil associations are:

- Hanford-Greenfield-San Emigdio association—Defined as nearly level to moderately sloping, well-drained, very deep soils on alluvial valley floors and fans. This association is found in the extreme north-northeast portion of the plan area, encompassing approximately 5% of the total area.

- Grangeville-Chino-Hilmar association—Described as nearly level, somewhat poorly drained, very deep soils in basins and on alluvial flood plains and fans. This association is found through most of the plan area, encompassing approximately 75% of the total area.

- Ramona-Chualar-Sorrento association—Described as nearly level to moderately sloping, well drained, very deep soils on alluvial fans and terraces. This association is found on the plateaus between Chino Creek and Mill Creek in the southerly portion of the plan area generally defined by the 556' contour elevation, and comprises approximately 20% of the total plan area.

Agricultural Preserve Contract Status

The proposed project is located within the County of San Bernardino Agricultural Preserve. Many of the properties in the project area are currently under the Williamson Act (Land Conservation Act of 1965) contracts with the County of San Bernardino. These contracts remain in effect for 10 years and are automatically renewed annually unless the property owner files for a notice of non-renewal with the County of San Bernardino. There is also a provision in the law that allows the local planning jurisdiction to initiate non-renewal by notifying the property owner.

The Williamson Act provisions are intended to assist the long-term preservation of prime agricultural land in the state by providing the property owner with a substantial property tax break for keeping land in agricultural use. When under contract, the landowner no longer pays property tax for an assessed valuation based upon the property's urban development potential. The Act stipulates that for properties under Williamson Act land conservation contracts "the highest and best use of such land during the life of the contract is for agricultural uses". Therefore, property under contract is assessed and taxed based upon its agricultural value.

In addition to the 10-year non-renewal process for taking properties out of Williamson act contracts, contracts can also be canceled upon the mutual agreement of the landowner and the local land use planning jurisdiction. Unlike non-renewals, cancellations can only be initiated by the landowner. Per

Government Code Section 51283(b), such cancellations require the land owner to pay the local jurisdiction a cancellation fee in an amount equal to 12½ percent of the assessed valuation of the property for its "highest and best use." Cancellation fees must be deposited in the State of California General Fund (Section 51283[d]). If it is found by the local jurisdiction to be in the public interest to do so, and it is approved by the California Secretary of the Resources Agency, a full or partial fee waiver or an extension of time for fee payment is permitted.

Cancellations require a hearing and formal approval by the local land use jurisdiction, in this case the County of San Bernardino, up until such time as the City of Chino formally annexes the project area. Upon annexation, the responsibility for administering the preserve shifts to the City of Chino, including the rights to enlarge, diminish, or disestablish that portion of the preserve in its jurisdiction

The Williamson Act specifies that contract cancellations can only be approved if specific findings are made that the cancellation is not inconsistent with the purposes of the Act, and that the cancellation is in the public interest.

Exhibit 5.2-3 depicts current Williamson Act contract properties for the plan area. As of January 2001, a total of 1,563.7 acres within the plan area were under Williamson Act contracts.[2] Of these contracts, notices of non-renewal had been filed on 415.7 acres. Of these 415.7 acres, approximately 358.5 acres have contracts that will expire by the year 2003.

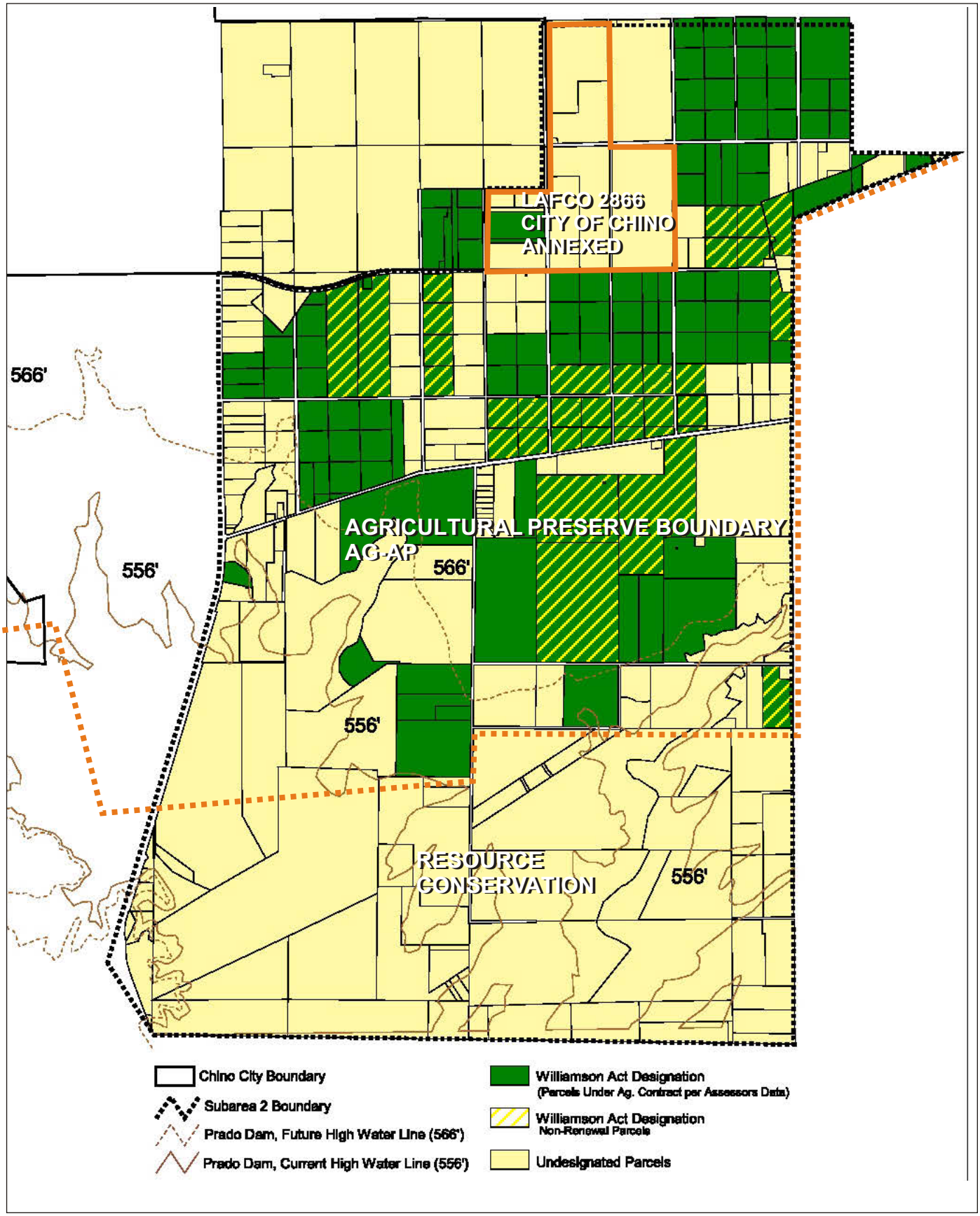
Southern California Agricultural Land Foundation (SoCalf) Properties

The Southern California Agricultural Land Foundation (SoCalf) manages approximately 167.5 acres of land within the northeast sector of the plan area as a permanent agricultural land trust. The majority of the SoCALF properties are prime agricultural land owned by the County of San Bernardino and leased to dairy and farming operators.

Agricultural Productivity

Economic reports and discussions with persons associated with agricultural operations in the plan area, including dairy owners/operators, the planning departments of the City of Chino and County of San Bernardino, and staff of the Milk Producers' Council, indicate the economic viability of agricultural operations in the plan area and Southern California has declined in recent years. For example, the study 'Dairy Farm Operating Trends' (Frazer and Torbet 1995) shows that Southern California dairies had the lowest net income based on average amounts per hundredweight of milk and average amounts on a per head basis of all the six study areas (Southern California, San Joaquin

[2] Source: City of Chino, Williamson Act Parcels by Contract Number; 2/14/01(Appendix H).



SOURCE: Psomas

NORTH

0.5 0 0.5 Miles

Michael Brandman Associates

Exhibit **5.2-3**

Williamson Act

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THE PRESERVE • CHINO SUBAREA 2

Valley, Arizona Holtsteins, Arizona Jerseys, Idaho, and New Mexico) for the first nine months of 1995. The study also shows that the average net income of Southern California area dairies has declined more than the other five study areas from 1993 to 1995.

This study attributes the lower net income for Southern California dairies to an increase in operating costs, particularly related to feed, without a corresponding increase in price. This trend is anticipated to continue as a result of tough competition from the Central Valley and other states, and increasing costs associated with dairy waste management and runoff controls. As there are approximately 270 dairies in the Chino Basin Dairy Area (CBDA), and approximately 30 of these are located within the proposed plan area, the plan area could account for approximately 11% of the gross agricultural economic productivity of the CBDA (if dairy herd sizes within the plan area are representative of those found within the CBDA as a whole).

According to the Milk Producers' Council[3], the estimated value of the dairy crop (milk and milk by-products) produced within the 40 square mile Chino Basin Dairy Area (CBDA) in 2000 was approximately $ 0.75 billion. The total economic value attributable to the dairy industry within the CBDA in 2000 was estimated at $1 billion.[4]

Actual year 2000 milk production values for dairies within the proposed project area are not readily available. However, using statewide factors an estimated milk value at the farm of approximately $88,000,000 is obtained.[5] Similarly, crop values are not readily obtained within the plan area, partly due to the varying crop patterns and prices. A typical annual cropping pattern might involve a single alfalfa crop on one-half of the farmable acreage, and a double crop of corn and wheat on the remainder. Utilizing this pattern for the principal farming operations in the area, an annual crop value in excess of $1 million is obtained.[6]

5.2.3 THRESHOLDS OF SIGNIFICANCE

Pursuant to Appendix G of the California Environmental Quality Act Guidelines (CEQA), a project would typically have a potentially significant impact on agricultural resources if it would result in one or more of the following:

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[3] Source: Milk Producers' Council (MPC); 6/2001.

[4] Ibid MPC; includes estimated direct plus indirect economic activity attributable to dairy industry.

[5] Source: California Department of Food and agriculture 1998 Dairy Information Fact Sheet; based on statewide milk production value per cow of $3,070 and 28,730 milk cows within the project area.

[6] Approximately 700 acres are farmed by the principal farm operations in the plan area (Durrington Farms, Steuve Bros./ Altadena, Rohrs, Barthelemy, Van Vliet, and Aphessetche properties). Assumes single cropping of alfalfa ($1,300/ac.) on half of the acreage, and double cropping of corn ($750/ac.) and wheat ($900/ac.) on the remainder.

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;

- Conflict with existing zoning for agricultural use or a Williamson Act contract;

- Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use (i.e. indirect impacts on Farmland).

Though not specifically addressed in CEQA Appendix G, for purposes of this analysis a project would also be expected to have a potentially adverse impact if it would:

- Impair the agricultural productivity of prime agricultural land

5.2.4 PROJECT IMPACTS

Prime Agricultural Land

Implementation of the proposed plan would result in the conversion of approximately 1,265 acres of prime farmland to non-agricultural use. This represents approximately 56% of the total 2,268 acres of prime farmland within the plan area, and is considered a significant impact.

The remaining prime farmland and all other important farmlands are located within planned open space in the Agricultural (AG), Agricultural and Open Space-Natural (AG/OS-N), and Open Space-Natural (OS-N) categories. These agricultural lands total approximately 1,653 acres and are not planned for conversion to urban uses.

The rate of conversion of prime farmland would be affected by the extent and timing of Williamson Act contract non-renewals and cancellations. This cannot be precisely predicted since the decision is up to the property owner and can involve a variety of factors. As described in Section 5.1 Land Use, approval of the proposed project and the introduction of residential and other urban uses within the plan area will accelerate the conversion of prime farmlands.

Conflict with Existing Zoning for Agricultural Use and Williamson Act Contracts

The proposed project would require annexation of the site by the City of Chino and rezoning consistent with the proposed Specific Plan and City Zoning Code. Existing County of San Bernardino Agriculture-Agriculture Preserve (AG-AP) zoning designations on the site would be removed. These actions were contemplated in LAFCO's 1994 inclusion of this portion of the dairy preserve within the City's sphere of influence, and do not in and of themselves represent a significant adverse impact.

The proposed plan includes 862 acres in Agricultural and Agricultural/Open Space-Natural designations that are otherwise consistent with County agricultural zoning. The proposed plan retains the existing regional park and public facilities (i.e. CIW-Chino, Chino Airport) in designations that are otherwise consistent with County zoning.

- Of the total 1,563.7 acres under Williamson Act contract, notices of non-renewal have been filed on 415.7 acres. The project would accelerate Williamson Act contract non-renewals and/or cancellation notices on the remaining 1,148 acres under contract within the plan area. This is considered a significant and unavoidable impact of the proposed project.

Lands owned/managed by SoCALF and the County of San Bernardino for permanent agricultural preservation in the northeast portion of the plan area presumably would remain under Williamson Act contracts to be administered by the City of Chino.

Indirect Impacts on Farmland

Buildout of the proposed plan will place the new local resident population near farmlands and agricultural uses that choose to locate within the AG and AG/OS-N designated areas within the plan area (i.e. northeast corner and below the 566' elevation). Without managed access, buffers and other measures to protect these remaining farmlands, conflicts may arise that would ultimately lead to their conversion to non-agricultural use. The proposed Specific Plan includes Right-to-Farm provisions and requirements for use compatibility findings that would promote continued agricultural use on areas specifically designated for long-term agricultural use. The application of these provisions and requirements would reduce these impacts to less than significant levels. (See Section 5.1-4, Land Use Project Impacts, for discussion of land use compatibility and transitional impacts.)

Agricultural Productivity

Among the factors leading to the relocation of dairies out of the Chino Basin Dairy Area are 1) competition from other milk-producing regions, and 2) recently adopted requirements from the Santa Ana Regional Water Quality Control Board that require both retention and control of drainage, and reductions in the amount of stockpiled manure allowed within the basin. Other factors include land use conflicts and rising land values associated with surrounding new urban development. Market forces resulting from the adoption of the proposed project may also result in an increase in the rate of conversion of agricultural uses to non-agricultural uses and a corresponding decline in long-term agricultural productivity.

Development of the project area will accelerate the relocation of dairies from the CBDA and plan area, resulting in an annual milk production value loss to the region of approximately $88 million. Approximately 700 acres of cultivated cropland will be converted, although some of these farming

operations may choose to relocate to AG and AG/OS-N designated areas within the plan area. New dairies and expansions of existing dairies within these designated areas are prohibited under the proposed Specific Plan. As such, the proposed project will result in a significant impact on agricultural productivity.

5.2.5 CUMULATIVE IMPACTS

The proposed project will contribute to significant cumulative losses of prime farmlands and other important farmlands within the Chino Basin Dairy Area. The project will accelerate the conversion of prime agricultural lands to urban uses within the plan area. Ultimately, with other approved annexations and master planned development within the CBDA (i.e. Ontario, other Chino, Eastvale/Riverside County, Corona), in excess of 23,000 acres may be removed from agricultural preserve status.

Agricultural productivity associated with dairies and milk production will be displaced to other parts of the state and nation. Although the project retains approximately 862 acres within the Agricultural (AG) and Agricultural/Open Space-Natural designations that will be available for farming activities, the project's contribution to the loss of croplands in the CBDA is still considered cumulatively significant. The project will contribute to the cumulative loss of agricultural productivity within the CBDA region.

5.2.6 MITIGATION MEASURES

Project design features that reduce significant impacts to agricultural resources include retention of approximately 862 acres in agricultural-related use designations, and Specific Plan right-to-farm provisions. The following measures are also recommended to reduce the significant agricultural and farmland conversion impacts of the proposed project.

AG-1 Agricultural Land Preservation

The City of Chino will propose to participate in the Williamson Act Easement Exchange Program (WAEEP) and any plan that may be adopted pursuant to SB 831.

AG-2 Agency Coordination and Planning for Agricultural Uses

The City of Chino shall participate in a coordinated multi-agency planning program for sustainable agricultural uses within the Lower Chino/Prado Basin. This program should involve the principal public landowners within the basin, including but not limited to the U.S. Army Corps of Engineers, Orange County Flood Control District, and County of San Bernardino. Components of this program

may include an agricultural feasibility study, acquisitions plan, and management plan for sustainable agricultural uses within the basin.

5.2.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed project will accelerate the conversion of prime agricultural land and prime farmland to urban uses. This is a significant and unavoidable impact of the proposed project. This impact is also cumulatively significant within the greater Chino Basin Dairy Area. The loss of agricultural productivity is cumulatively significant from a regional perspective.

5.3 HYDROLOGY AND WATER QUALITY

5.3.1 INTRODUCTION

This section describes regional and local hydrology, and evaluates the impacts of the proposed project on drainage, flood control, groundwater resources, and surface and groundwater quality.

5.3.2 EXISTING CONDITIONS

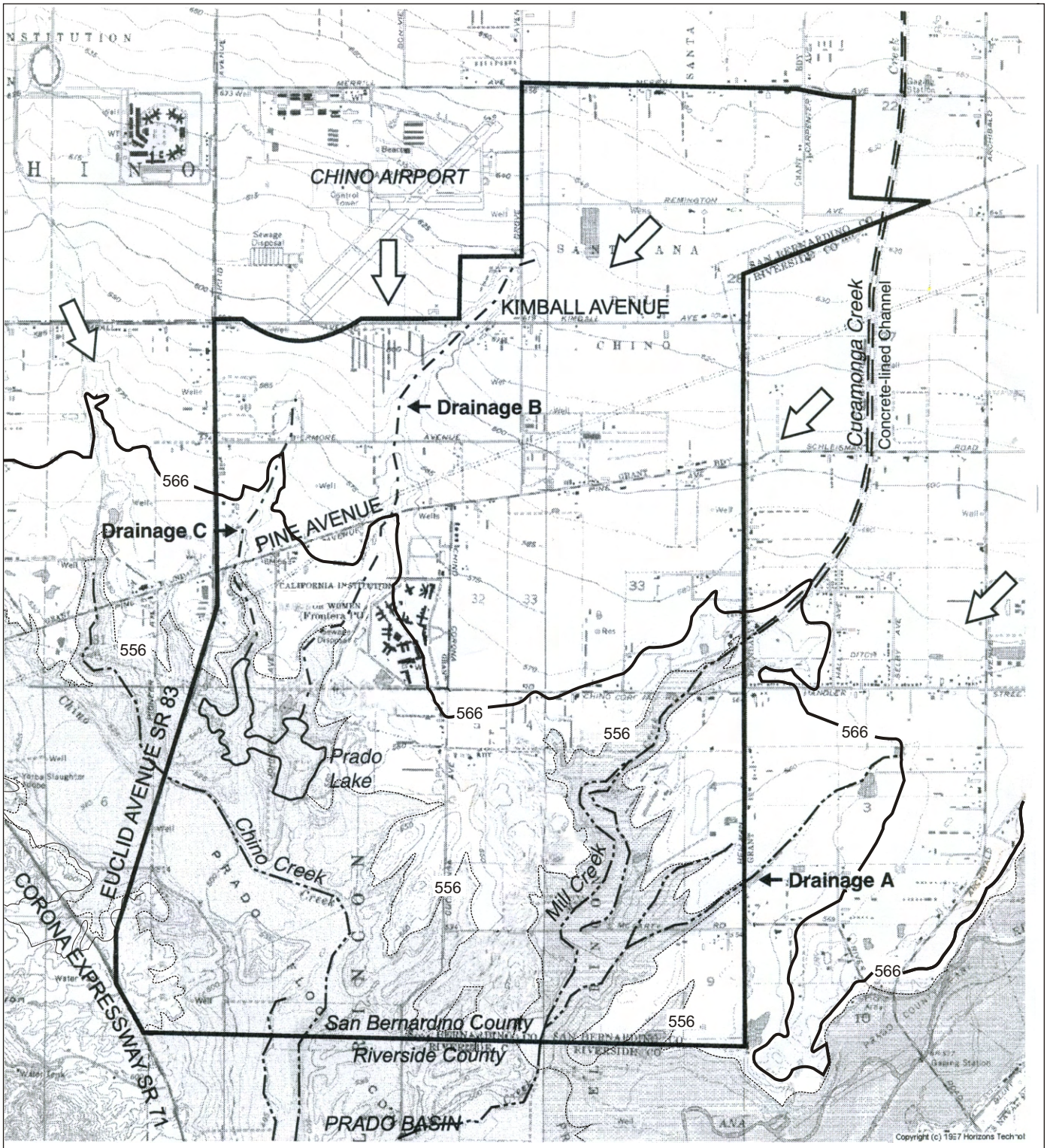
Flooding and Inundation

Surface Runoff and Drainage Characteristics

The proposed plan area is located on the broad, gentle sloping alluvial plain of the Chino Basin. The principal drainage course of the lower Chino Basin is the Santa Ana River (SAR), located south of the plan area within the Prado Flood Control Basin. The Santa Ana River watershed encompasses 2,650 square miles, within which the SAR extends some 69 miles from its headwaters in the San Bernardino Mountains to its outlet at the Pacific Ocean. The Santa Ana River enters the Chino Basin at the Riverside Narrows and flows along the southern boundary to the Prado Basin where it is eventually discharged through the outlet at Prado Dam. Two principal tributaries to the SAR flow through the plan area—Chino Creek and Mill Creek. The plan area is also traversed by several ephemeral and seasonal drainages, and is subject to extensive sheet flow during major storm events. These flows are ultimately conveyed via either Chino Creek or Mill Creek to the Santa Ana River at Prado Basin.

The plan area contains five distinct north/south concentrated drainage paths, three of which are indicated as blueline streams on the USGS map (Exhibit 5.3-1). The most easterly of the blueline streams (Drainage A) is an unnamed tributary to Mill Creek which receives sheet flow from dairy lands located south of Chandler Street and east of Hellman Avenue, and carries flows in a natural channel to a confluence with Mill Creek. The next system westward, Mill Creek, receives flow from Cucamonga Creek channel (49,000 CFS capacity), a concrete-lined trapezoidal channel which handles storm water flows from the City of Ontario and City of Ontario General Plan Amendment (GPA) area (i.e. 'New Model Colony') to the north. Mill Creek also receives sheet flow from immediately surrounding agricultural and dairy lands.

The third blueline stream is Chino Creek (26,400 CFS capacity) which flows along the western boundary of the plan area as a natural channel. Two minor unnamed tributaries to Chino Creek (Drainages B and C) provide surface flow to Prado Lake.



LEGEND

- Project Boundary
- Concrete-lined Channel
- Natural Channel (USGS blue line stream)
- Drainage Flow Path
- 566 Prado High Water Line
- 556 Existing USACE Easement Line

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Exhibit **5.3-1**

Surface Drainage Features

Sheet flows from the Ontario GPA area, the developing Eastvale community, and flows within the proposed plan area itself, all combine to cause significant localized flooding of earthen swales, curbed roadways and dairies within the plan area during moderate-to-severe storm events. The result is numerous road closures, dairy livestock loss, and overtopping or breaches of dairy water retention ponds.

Master Plans of Drainage (MPD) have been developed by San Bernardino County Flood Control District, and the cities of Chino and Ontario to address flooding problems within their respective jurisdictions.

Other collaborative agency initiatives are underway to address flood control and related water quality problems in the Chino Basin Dairy Area (CBDA) and proposed plan area.[1] Participating agencies include Inland Empire Utilities Agency (IEUA), the USDA-Natural Resources Conservation Service (NRCS), San Bernardino County Flood Control District, Orange County Water District and others.

Plans and projects include, but are not limited to the IEUA Organics Management Center (see Dairy Waste Management in Section 5.12), Emergency Watershed Protection (EWP) planning to clean up manure and provide flood control, a Storm Water Management Demonstration Project for Chino Creek, and a Debris Removal/Water Quality Restoration Project for Mill Creek. Implementation of these programs and projects will help to alleviate current flooding conditions and water quality problems within the proposed plan area.

Santa Ana River Mainstem Project - Prado Dam

Prado Dam is a compacted earth-filled embankment with a current spillway crest elevation of 543 feet above mean sea level (MSL). In 1988, pursuant to the Santa Ana River Mainstem and Prado Dam projects, the U.S. Army Corps of Engineers (USACE) approved structural revisions to raise the spillway crest elevation by 20 feet to 563 feet, and revisions to raise the dam structure 28.6 feet to a design water surface elevation of 566 feet. These improvements to the dam and the associated spillway are scheduled for completion in 2008. The raised dam is designed to accommodate a 200-year flood event.

Approximately 53% of the proposed plan area lies within the 566 foot elevation area subject to inundation from these planned Prado Dam improvements. Approximately 25% of the proposed plan area is within the 556 foot elevation, which is the current Corps of Engineers Easement and Fee Line (i.e. the 556 ft. 'take' line). This includes properties already owned or encumbered by the Corps of Engineers. Currently, the southwest portion of the plan area floods to an elevation of approximately

[1] Santa Ana River Watershed Group (6/01).

505 feet annually. Although the proposed Prado Dam improvements are principally designed for flood control purposes, the project also includes water conservation, recreation, and more recently, endangered species habitat conservation objectives.

History of the Prado Dam

The idea of a dam on the Santa Ana River was seriously considered following the major flood of 1916. Studies were considered on a number of occasions, but the concept of the Prado Dam took its ultimate form following the flood of 1927. The Orange County Flood Control District (OCFCD) in 1938, following another major flood that year, began acquiring the properties behind the dam site to an elevation of 556 feet above sea level, the ultimate maximum height of the flood control basin.

This extent of property acquisition involved controversy with the land owners, and at the end of 1939, the USACE took over the efforts to complete the remaining land acquisitions and condemnations necessary to secure all outstanding fee titles to land. The crest of the constructed dam had an elevation of 566 feet and the top of the spillway was at 543 feet. The flood control basin covered 9,741 acres, and this included the town of Rincon, the railroad tracks, and numerous local farmsteads of the region. Many of the existing wood-frame houses and barns were removed and publicly sold by the government. The construction contract for the earth-filled dam was awarded in September 1938, and the work was completed by May 1941. The dam and reservoir have been managed ever since its completion by the USACE. Under USACE management, tracts within the flood control basin have been leased for dairy agricultural operation, or for recreational activities (see Section 5.1 Land Use).

In the mid-1970's an agreement was made to increase the flood control capacity of Prado Dam by increasing the dam height by about thirty feet and raising the spillway outlet elevation 563 feet. A new property 'take' line agreement was established which increased the reservoir basin to cover the lands behind the dam to an elevation of 566 feet. . In the 1980's, cultural resource studies were begun to address Federal cultural resource planning requirements for all properties up to the 566-foot elevation take line.

In the late-1990's, agreements between the USACE, Orange County Water District (OCWD), and the United States Fish and Wildlife Service (USFWS) established criteria for Prado Dam operations that balance flood control, water conservation and endangered species protection objectives. The *Water Control Manual for the Prado Basin* (1994) defines how the dam is to be operated at various times of year to achieve flood control, water conservation and environmental protection functions. Currently, an annual backhold elevation of 505 feet is established for Prado Basin during the water conservation period (March 1st to September 30th), to meet endangered species objectives within the Basin. The release rate during this period is established at 200-600 CFS in order to provide year-round flow to OCWD's water recharge facilities located downstream. During the flood season (October 1st - February 28th), the Prado Dam release rate is controlled at 2,500 CFS up to the 520 elevation in order

to match the capacity of the downstream channel facility. However, when the backhold elevation rises above the 520 elevation, release rates can increase to 5,000 CFS to limit localized flooding within the Basin area.

OCWD has initiated a request to alter the water conservation program for Prado Basin[2] to further increase water available for downstream groundwater recharge. OCWD proposes extending the water conservation period to year-round and altering the current 505 backhold elevation criteria to increase dam outflow. The proposal is currently under evaluation by the USACE.

Prado Dam Real Property Acquisition Program

In 1989 the USACE, and three local sponsors – The Riverside County Flood Control and Water Conservation District (RCFCD), the San Bernardino County Flood Control District (SBCFD), and the OCFCD entered into a Local Cooperation Agreement (LCA) for the Santa Ana River Mainstem (SAR) Project. There are several components or features of the SAR project, including raising Prado Dam and spillway and constructing various dikes in the Prado Dam reservoir basin. Under the terms of the LCA, the OCFCD is to acquire property rights between the 556-foot and 566-foot elevations required for the Prado Dam improvements feature of the project. This acquisition program involves purchasing the right to flood property up to 566' in the Prado Dam reservoir basin.

The OCFCD may acquire parcels in fee or acquire a flowage easement, depending on the potential impact of the Prado Dam project on a parcel, and consideration of long-term operation of the dam and associated management of the reservoir basin. The USACE determines what land uses that are consistent with local zoning can occur on property purchased by the OCFCD. The primary criterion is that there can be no habitable structures or permanent human habitation below 566 feet. Determinations on which parcels are impacted, and the type of rights to be acquired, are subject to more specific engineering, surveying and related studies.

Current Status of Program

Approximately 280 ownerships are affected by the Orange County Flood Control District (OCFCD) acquisition program, representing 1,660 acres to be acquired.[3] At the present time, the acquisition program for the Prado Dam feature is focused on individually assessed hardship applications. Within the proposed plan area, six parcels totaling 57 acres have been acquired by OCFCD. Also within the plan area, 37 parcels totaling approximately 985 acres are classified as 'property most impacted', and are yet to be acquired. An additional 90 acres are classified as 'under study' for acquisition, and up to 100 additional acres located just below the 566-foot elevation are classified as 'lesser impacted

[2] Prado Dam Water Conservation and Supply Study, U.S. Army Corps of Engineers. 1999.

[3] Proposed Prado Dam Project; County of Orange Public Facilities & Resources Department (10/23/00)

property'. The USACE and OCFCD continue to study alternatives, design construction phasing and financial plans.

Offset Flood Volume Mitigation

The U.S. Army Corps of Engineers has authority to require offset volume mitigation for any project that would result in reduced flood capacity within the 566-foot elevation. Examples where this approach has occurred or is planned include IEUA's Regional Plant-5 within Chino Subarea 1, and USACE projects to provide stabilization of the Norco Bluffs and flood protection for existing facilities, uses and structures within the Prado Basin.[4]

USACE proposes stabilization of the toe of the Norco Bluffs by placing a soil cement structure between the toe and the riverbed. Compacted fill would be located between the soil cement structure and bluff slope up to the 100-year flood elevation. Fill would also be placed along several side canyon areas to ensure proper drainage within these areas. A variety of structural improvements are proposed by USACE within the Prado Flood Control Basin, including numerous dikes for protection of existing facilities and uses within the basin. Among these is a proposed dike along the western and southern boundary of the California Institution for Women, within the proposed plan area. To offset the flood capacity lost by placement of these features within the 566 foot inundation area, USACE has identified a borrow site of approximately 17 acres within the proposed plan area near its southerly boundary. Soil material is proposed for removal at this location, for potential use in creating a flood protection dike along the CIW-Chino westerly and southerly boundaries. See Section 5.1 Land Use for additional information on USACE plans within the Prado Flood Control Basin.

Special Flood Hazard Areas

Prado Dam currently retains floodwaters up to an inundation elevation of 505 feet on an annual basis. The 505-foot elevation is largely confined to the Chino Creek and Mill Creek channels within the plan area. Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRM) also identify portions of the plan area within the 500-year flood plain. In addition, the FIRM maps and the Prado Flood Control Basin Master Plan indicate that 100-year flood-prone areas occur within the plan area in the vicinity of Mills Creek and Chino Creek floodplain below the 550-foot elevation. This essentially encompasses the lower 30% of the plan area.

Groundwater Resources

Chino Basin is one of the largest groundwater basins in southern California with about 5,000,000 acre-ft of water in the underground basin and an unused storage capacity of about 1,000,000 acre-ft.

[4] Supplemental EIS and Project EIR for Prado Basin and Vicinity, Including Stabilization of the Bluff Toe at Norco Bluffs; U.S. Army Corps of Engineers (7/2000).

The basin is an integral part of the regional and statewide water supply system, and is identified as a critical component in solving state water needs and managing inter-state shortfalls of available water from the Colorado River and the Bay-Delta[5]. Various water agencies, including Chino Basin Water Master, Inland Empire Utility Agency (IEUA), and other water supply entities produce groundwater for municipal and industrial supplies within the basin, and about 300 to 400 agricultural users produce groundwater from the basin for local use. It is estimated that the 270 dairies within the Chino Basin Dairy Area pump approximately 40,000 acre-feet of water from the underground basin annually.[6]

Chino Basin groundwater contributes to surface flows in the Santa Ana River (SAR), as significant quantities of Chino Basin groundwater rise to the surface and enter the Santa Ana River within the Prado Basin south of the plan area. The SAR is the primary source of groundwater recharge for the Lower Santa Ana Basin, which supplies approximately 63% of Orange County's water needs.

The proposed project area (i.e. the 'plan area') overlies Sub-basin II of the Chino Groundwater Basin. Several municipal groundwater production wells are located along Kimball Avenue and Remington Avenue at the northern limits of the plan area. Numerous private wells associated with agricultural uses are also located within the plan area.

Water Quality and Dairy Wastes

The Chino Basin Dairy Area (CBDA) is considered to have the highest concentration of dairies in the world.[7] Dairies within the CBDA generate large amounts of manure, urine and other organic materials. These wastes contribute to excess salts and nutrient loading, specifically total dissolved solids (TDS) and nitrate, present in both the groundwater and surface water systems of the Lower Chino Basin. TDS are mineral salts dissolved in the water that concentrate as the water is reused. The deterioration of the water quality in the Chino Basin and the Santa Ana River has been attributed to this increase in TDS (primarily magnesium and calcium) and nitrate.

It has been estimated by the Santa Ana Regional Water Quality Control Board (SARWQCB) that over 13 million tons of manure have been applied to the Chino Basin since the mid 1950's when dairy farmers relocated to the basin. As a result of this 13 million tons of manure spread across the CBDA, 1.4 millions tons of salts have reached, or will reach groundwater. Salts may have an adverse effect upon human health, increase costs of urban infrastructure and facilities, and increase the cost and decrease the effectiveness of reclaiming wastewater.

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[5] Integrated Water Resources Plan; Metropolitan Water District.

[6] Chino Basin Watermaster (8/99)

[7] Dairies and Their Relationship to Water Quality Problems in the Chino Basin; California Regional Water Quality Control Board, Santa Ana Region (7/90).

It is estimated by the SARWQCB that the current application of manure and wash water to land in the Chino Basin is resulting in 34,000 tons of salt that will reach the groundwater each year[8]. Of that 34,000 tons per year, about 30,000 tons per year is from the application of manure and the remaining 4,200 tons per year is from the discharge of wash water. In addition, the Board staff has estimated that approximately an additional 3,800 tons of salt are discharged to groundwater through the percolation of rainfall runoff from corrals and drainage of manure stockpiles.

Regulatory Context

Federal Water Pollution Control Act

The Federal Water Pollution Control Act, or the 'Clean Water Act' (CWA), requires that discharges from both point and non-point sources into navigable waters meet the stringent standards of the National Pollution Discharge Elimination System (NPDES). In 1990, the U.S. Environmental Protection Agency established requirements for storm water permits for specified categories of industries, municipalities, and certain construction activities. The regulations require that discharges of storm water from construction activity of five acres or more must be regulated as an industrial activity and covered by an NPDES permit.

The Clean Water Act (CWA) states that all concentrated animal feeding operations (CAFOs) are point sources and are subject to NPDES permitting requirements. All dairies within the CBDA have been designated as CAFOs and therefore are required to comply with NPDES.

Porter Cologne Water Quality Act

Section 303 of the Federal Clean Water Act and the State's Porter Cologne Water Quality Act (Porter Cologne) establish water quality standards for ground and surface water in the state. Under the Porter-Cologne Act, the State Water Resources Control Board has the ultimate authority over State water rights and water quality policy. However, Porter-Cologne also establishes nine Regional Water Quality Control Boards (Regional Boards) to oversee water quality on a day-to-day basis at the local/regional level.

As required by the Porter Cologne Act and CWA, dairy operators must retain any on-site storm runoff generated within the dairy up to a 25-year, 24-hour storm event. For the CBDA the 24-hour, 25-year storm is a storm with the intensity of 4.5 inches per day. Historically, the SARWQCB has regulated compliance of both Porter Cologne and CWA through the issuance of a general area-wide permit.

[8] General Waste Discharge Requirements for Concentrated Animal Feeding Operations within the Santa Ana Region, Order 99-11, NPDES No. CAG018001; SARWQCB (8/99)

Water Quality Control Plan

The Santa Ana Region RWQCB administers the Water Quality Control Plan for the Santa Ana River Basin. The Plan, originally published in 1983 with subsequent revisions in 1989 and 1995, sets forth the water quality objectives and outlines the projects and programs for the Santa Ana Watershed. The Water Quality Control plan includes a water supply plan, a groundwater management plan, and a waste management plan. The Regional Board achieves the goals of the plan through the issuance of waste discharge permits, either in the form of waste discharge requirements or NPDES permits.

Water quality objectives for surface water within the Chino Basin are determined for a myriad of known substances and conditions, including: (1) organisms (i.e., algae and bacteria); (2) chemicals and their constituents (i.e., sulfate, sulfide, nitrate, fluoride, ammonia, chlorine, chloride, nitrogen, boron, and sodium); (3) metals (i.e., cadmium, copper, lead); (4) temperature; (5) pH; (6) taste and odor; (7) solids (i.e., suspended and settleable); (8) toxic substances; (9) turbidity; (10) oil and grease; (11) chemical oxygen demand; and (12) dissolved solids.

In 1998 the Regional Water Quality Control Board (RWQCB) listed both Chino Creek and Mill Creek within the plan area as impaired waters due to high nutrient, pathogen, salinity/TDS/chlorides and suspended solids concentrations. The RWQCB has also adopted requirements for dairy operators designed to prevent continued surface and groundwater contamination[9].

In August of 1999 the SARWQCB adopted additional manure handling regulations designed to impede manure waste from further degradation of the Santa Ana River. As adopted, these regulations include the following:

- All dairies, heifer ranches, and calf nurseries in the Region are designated Concentrated Animal Feeding Operations (CAFOs)[a]

- All dairies are required to develop Engineered Waste Management Plans acceptable to the Executive Officer in accordance with established guidelines and construct containment structures to contain the 24-hour, 25-year storm. The cease and desist order was modified in February 2000 by the State RWQCB to enact the schedule for the waste management plans.

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[9] RWQCB Santa Ana Region Order No. 99-11, NPDES No. CAG018001; RWQCB Santa Ana Region Cease and Desist Order No. 99-65 as amended by Order No 2000-01.

[a] The CWA defines a Concentrated Animal Feeding Operation (CAFO) as any AFO that has more than 1,000 animal units (i.e. dairy cattle are considered 1.4 animal units). Additionally, the CWA states that smaller facilities can be designated as CAFOs by a permitting authority (Regional Board) after considering certain criteria. These criteria include in part, the location of the AFO relative to surface waters, the slope, rainfall, and other factors that increase the likelihood of frequency of discharges and the impact of the aggregate amount of waste from any small operations in a watershed that exceed that of larger operations. The SARWQCB staff has determined that all dairies, heifer ranches, and calf nurseries in the Region meet one or more of these criteria, and therefore shall be designated a CAFO under the CWA.

- Disposal of manure to land is prohibited except the use of manure on land that is currently being farmed (not pasture). This disposal must be in agriculturally recognized amounts and is contingent upon the installation of a new groundwater desalter in the basin.

- Removal of the approximately 2 million tons of manure stockpiled in the CBDA by December 31, 2001.

- Ship manure out of the basin within 180 days of scraping the corrals.

Additional information on dairy waste management issues and practices within the CBDA and proposed plan area is contained in Dairy Waste Management, Section 5.12 of this EIR.

Other Water Quality Plans and Initiatives

The Chino Basin Watermaster has prepared the *Optimum Basin Management Program (OBMP)* for the Chino Groundwater Basin to ensure future water demands for the Chino Basin and Lower Santa Ana Basin are met.[10] The OBMP will implement comprehensive groundwater monitoring, recharge, salt management, storage, and conjunctive use programs for the Chino Basin by 2001.

The Santa Ana Watershed Project Authority (SAWPA) and Inland Empire Utilities Agency (IEUA) have cooperatively developed a desalting facility ('desalter') to treat contaminated groundwater within the Chino groundwater sub-basin. This 8 million gallon per day (mgd) facility, located at the intersection of Kimball Avenue and Euclid Avenue, extracts and treats approximately 9,200 acre feet of brackish groundwater annually. An additional desalter within the Chino Basin is in the advanced planning stages. Other desalting facilities and the feasibility of construction of a hydraulic barrier well field within the plan area are also being considered in conjunction with the OBMP.

5.3.3 THRESHOLDS OF SIGNIFICANCE

For purposes of this analysis, a project is considered to have a significant impact if it would:

- Substantially increase the rate or amount of surface runoff in a manner that would expose people or structures to onsite or offsite flooding, or result in peak runoff rates from the site that would exceed existing or planned capacities of downstream flood control systems.

- Substantially alter the existing drainage pattern of the site or area, including alteration of the course of a stream or river.

[10] Optimum Basin Management Program; Wildermuth Environmental for Chino Basin Watermaster (8/19/99).

- Violate water quality standards or waste discharge requirements for the receiving drainages.

5.3.4 PROJECT IMPACTS

The following impacts resulting from implementation of the proposed plan were evaluated and determined to be less than significant.

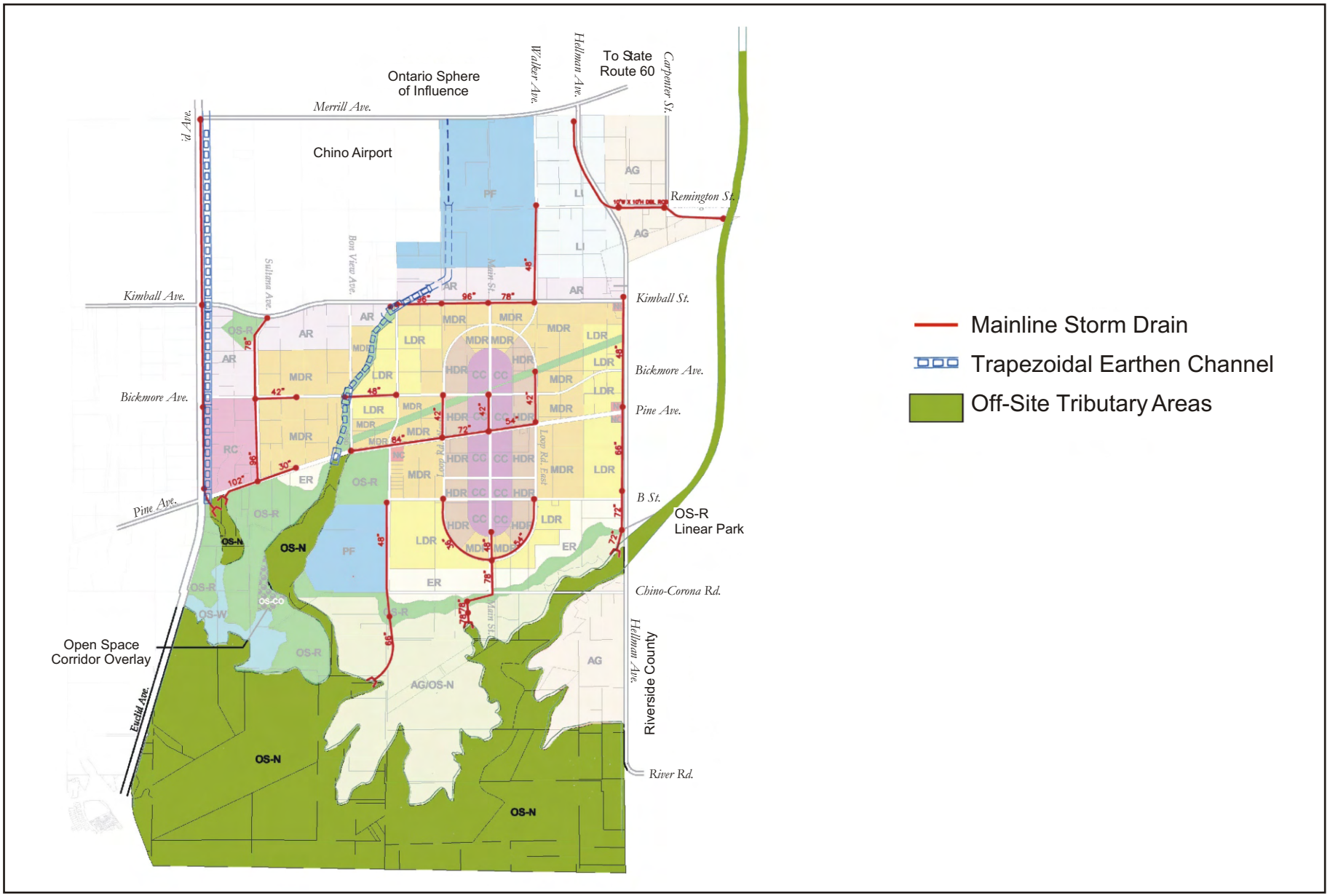
Flooding and Storm Water Management

Implementation of the proposed plan will encourage land use changes that lead to new development and an increase in impermeable surfaces within the project area. Such increases in impermeable surfaces would create additional storm water runoff, which could exacerbate existing flood hazards unless properly managed and controlled. Lower portions of the plan area within the planned open space system are included in the 100-year flood plain. No habitable structures or facilities that are not suitable to periodic flooding are planned within these areas.

The project site is currently subject to frequent flooding during moderate to severe storm events. Flooding will continue until 1) offsite flows into the plan area are controlled with master planned flood control improvements in the City of Ontario SOI/GPA area (i.e. Master Plan of Drainage for 'New Model Colony') and the Eastvale community in Riverside County, and 2) backbone drainage facilities are provided with implementation of the proposed plan for The Preserve.

Existing drainage patterns and flows through the site will be substantially altered with implementation of storm drain plans to support proposed development. Backbone drainage improvements required to reduce onsite flood hazards and support the proposed plan at buildout are identified in Exhibit 5.3-2.

The Storm Drainage Plan divides the plan area into ten drainage basins. Each basin is tributary to a proposed storm drain system identified as Lines A through J. The proposed lines range in size from 10" to 102", as shown in Table 5.3-1. Onsite drainage facilities will be designed to standards and criteria of the City of Chino and San Bernardino County Flood Control District. Pursuant to City requirements, the necessary facilities will be constructed either prior to or in phase with planned development.



SOURCE: The Planning Center

MAP NOT TO SCALE

Michael Brandman Associates

05760012 · 6/2001

Exhibit **5.3-2**

Storm Drainage Plan

THE PRESERVE • CHINO SUBAREA 2

TABLE 5.3-1
PROPOSED DRAINAGE BACKBONE FACILITIES

Line	Description	Size	Length (feet)
A	Double Barrel RCB	10' x 10'	6,000
B	RCP	48" – 72"	7,100
C	RCP	42" – 90"	9,850
D	RCP	48" - 96"	6,700
E	RCP	48"	1,450
F	RCP	36" - 78"	8,000
G	RCP	48" - 66"	5,100
H	RCP	30" - 102"	8,400
I	Trapezoidal Earthen Channel	20' W x 8' H	11,200
J	Earthen Channel	20' W x 8' H	6,000
		Total	**86,900**
Source: City of Chino, Master Plan of Drainage Subarea 2, Preliminary Report (2/01)			

Additional onsite private systems to address localized collection and distribution of runoff will also be provided, pursuant to specific plan requirements and as part of the development review process. Detailed drainage studies, including hydrology and hydraulic calculations will be required for all proposed developments. In conjunction with Design Review requirements of the Specific Plan, the City of Chino will be required to make specific findings that grading and drainage of specific projects is coordinated and compatible with surrounding properties. Such reviews will assure that runoff from new development is contained and controlled to prevent impacts on surrounding dairies during the phased transition to buildout under the proposed plan.

The Storm Drainage Plan includes trapezoidal earthen channels along Euclid Avenue and south from Chino Airport along an existing drainage channel to outlets within open space areas above Prado Lake. These channels provide opportunities for augmentation to provide water features that enhance filtration and percolation to the groundwater basin, and potential habitat for waterfowl. Storm drain outlets to the major open space system will be designed to reduce velocities and protect drainage channels from erosion and sedimentation during storm events. No significant scouring or erosion and sedimentation impacts to the receiving channels in the open space system are anticipated.

The proposed plan would not result in significant alteration of the principal streams and watercourses through the site. Existing natural channels within the open space system, including Chino Creek and Mill Creek, would remain unaltered.

At buildout of the proposed plan, existing problems associated with flooding of the dairies, lack of containment and related pollution of downstream receiving waters would be alleviated. With implementation of the Storm Drainage Plan and project-level detailed storm water management studies and measures specified in the specific plan, no significant storm water runoff impacts are anticipated from future development.

Prado Flood Control Basin

The proposed plan generally limits urban development to areas above the 566-foot Prado high water inundation line, consistent with the Prado Dam project and acquisition program. An exception to this is an approximate 55-acre area at the northeast corner of Euclid and Pine Avenues designated Regional Commercial in the proposed plan. This 55-acre area within the 566-foot elevation is part of the proposed 86-acre Regional Commercial center at this location. Thirteen (13) of the 55-acres are owned by the U.S. Army Corps of Engineers (USACE), and an additional acre is owned by Orange County Flood Control District (OCFCD). Any future development at this location would require use agreements and permits with the USACE to offset the loss of flood volume. As a result, no significant impact on Prado Dam inundation capacity is anticipated.

Water Quality

The following impacts resulting from implementation of the proposed plan were evaluated to be potentially significant.

Implementation of the proposed plan will result in a transition from dairies to urban development on approximately 2,100 acres of the site generally north of the 566-foot elevation. As a result, impacts to surface waters from polluted storm water runoff from the dairies will likely diminish over time. However, proposed urban uses would have the potential to degrade surface waters through discharges of urban runoff, containing a variety of pollutants including but not limited to oils, greases, solvents, pesticides and urban debris. These contaminants may enter the storm drain system in the form of street runoff, indiscriminate household use or other sources. Without proper management, potentially significant water quality impacts could occur.

With respect to street run-off and the introduction of other impervious surfaces within the specific plan area, it is unclear whether specific plan post-development runoff would be expected to contain more pollutants than under current conditions. Since storm waters will be collected and transported through the proposed storm drain facilities, those contaminants would be concentrated at each of the discharge points to Prado Lake, Chino Creek and Mill Creek. Urban development, such as that envisioned by the proposed specific plan, typically generates a variety of water contaminants, such as airborne particulates, tire-wear residues, petroleum products, oil and grease, fertilizers and pesticides,

litter and animal wastes. All of these contaminants are found in street runoff, representing the major source of pollution found in urban runoff.

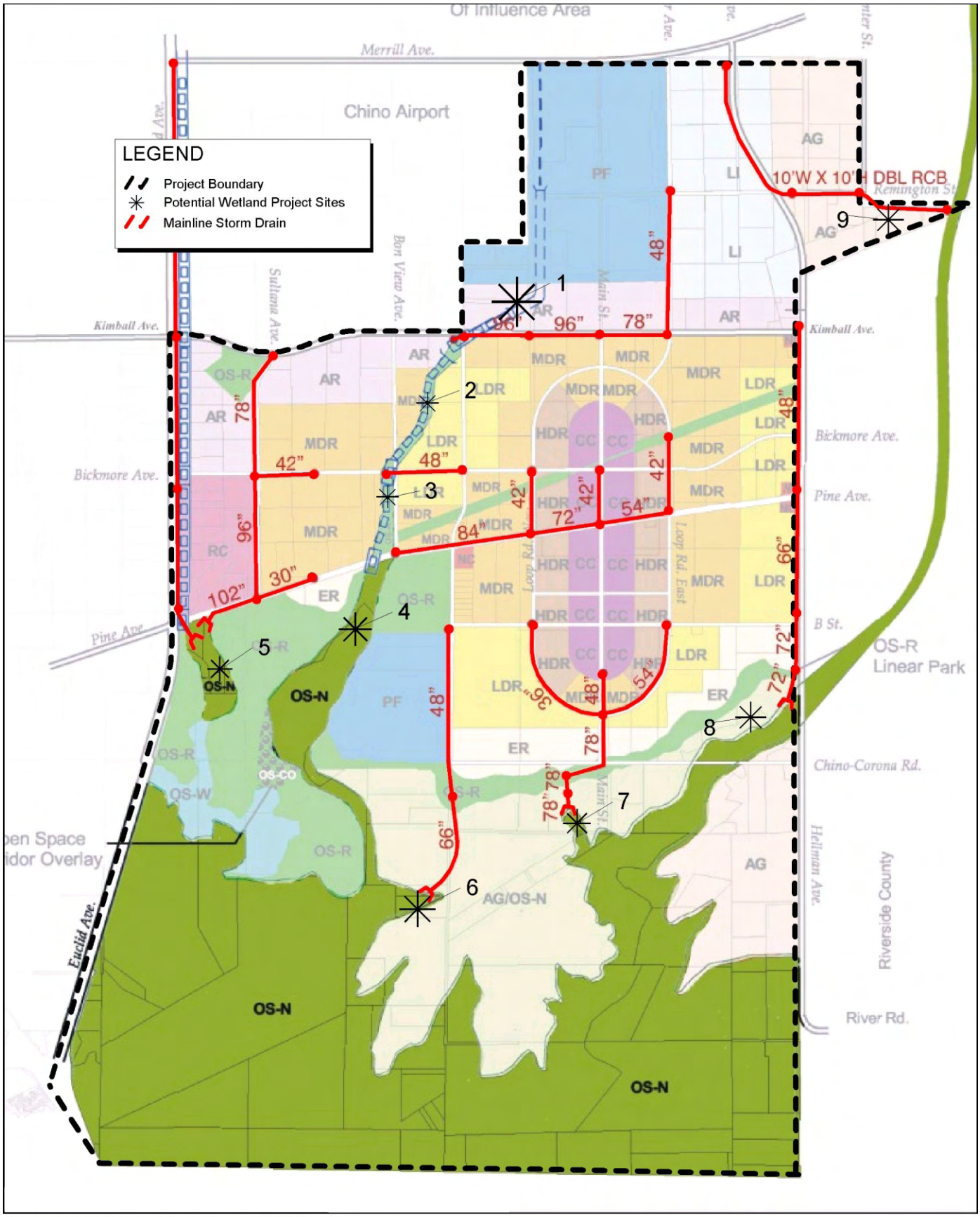
Unless measures to capture and filter the runoff to remove the bulk of contaminants are provided, storm drain discharges at creek outlets could contain contaminant levels that exceed the threshold limits established by the RWQCB. This concentration of contaminants, could jeopardize the beneficial uses identified in the Basin Plan that are dependent upon surface water supplies and the groundwater recharge of the storage units.

Proposed projects occurring upstream of or discharging into impaired waterbodies listed on the Clean Water Act Section 303(d) list may be subject to additional controls (e.g. Total Maximum Daily Loads or TMDLs) pursuant to federal regulations. Both Chino Creek and Mill Creek within the plan area have been listed as impaired waters due to high nutrient, pathogen, salinity/TDS/chlorides and suspended solids concentrations. As tributaries of the Santa Ana River and contributors to groundwater recharge within the Prado Basin, these drainages are of special water quality concern. Without proper management of runoff to protect water quality in Chino and Mill Creeks, potentially significant water quality impacts could occur.

Buildout of the plan area is anticipated to occur over 20 years. Throughout this buildout period, development of the project site will require compliance with the Clean Water Act (CWA), which protects receiving waters by assuring that discharges to "waters of the United States" from any point source to be in compliance with the National Pollutant Discharge Elimination System (NPDES) permit requirements. Section 402 (p) of the CWA establishes the framework for regulating municipal and industrial storm water discharges under the NPDES Program. The regulations provide that discharges of storm waters from construction projects are effectively prohibited, unless the discharge is conducted in compliance with a NPDES permit.

The NPDES program is administered by the State Water Resources Control Board (SWRCB) through the individual California Regional Water Quality Control Boards (RWQCB). General Construction Activity Storm Water NPDES permits are issued for storm water discharges by the RWQCB. Construction activities subject to this General Permit include clearing, grading, disturbances to the ground such as stockpiling, or excavation that results in soil disturbances. Stormwater pollution prevention plans (SWPPP) are required for issuance of a construction NPDES permit; these plans typically include both structural and non-structural Best Management Practices (BMPs) to reduce water quality impacts. Prior to issuance of a grading permit, individual projects will be required to demonstrate compliance with NPDES construction activity stormwater permit requirements.

A number of Best Management Practices (BMPs) are available for application by the City to subsequent development projects within the specific plan area in order to reduce water pollution sources on developed sites to the maximum extent feasible. The incorporation of these BMPs are



Source: Michael Brandman Associates and PBS&J

Michael Brandman Associates

NORTH

1000 0 1000 2000 Feet

05760012 · 4/2002

Exhibit **5.3-3**

Potential Wetland Project Sites

THE PRESERVE · CHINO SUBAREA 2

intended to reduce the level of contaminants present at the drainage system discharge points to acceptable levels. Source reduction techniques have proven to be the most cost-effective ways of avoiding or reducing water pollution from urban runoff. Among the source-reduction BMPs that may be applied by the City to individual development projects within the plan area are the following:

Animal Waste Collection. Collection of animal wastes to reduce the levels of bacteria and organic matter released to surface waters.

Exposure Reduction. Partial or total physical enclosure of stockpiled or stored material, loading and unloading areas, and processing operations and the capture of and filtration of drainage from these areas to remove metals, soils and grease, and other chemicals.

Recycling/Waste Disposal. Community hazardous waste and waste oil recycling centers to encourage careful and correct disposal of potentially hazardous chemicals and materials.

Parking Lot and Street Cleaning. Regular parking lot and street cleaning will be conducted and will help reduce accumulation of pollutants deposited on paved surfaces.

Infiltration (Exfiltration) Devices. This includes devices such as infiltration trenches , dry wells, and catch basins that can remove pollutants through adsorption onto soil particles, and biological and chemical conversion in the soil.

Oil and Grease Traps. This includes devices such as oil-water separators, oil and grease trap catch basins, simple skimmers, and control structures to separate oils and grease and other sediments from storm water.

Sand Filters. Sand filters achieve reduction of urban pollutants by passing storm water through beds of sand, allowing particles to settle out in the pre-treatment devices and by straining out particles in the filter.

Filter Strips. This involves placement of close-growing vegetation (e.g., turfgrass) to trap sediments between pollutant source areas and the receiving water.

Grass Swales. Grass-lined drainage swales remove pollutants from surface flow by the filtering action of the grass, sediment deposition, and through infiltration into the soil.

Regular/Routine Maintenance. Regular maintenance and cleaning of all pollution control devices to ensure that those devices are kept clean and unobstructed and are functioning correctly.

The storm drain system and the BMPs applied by the City to individual development projects must conform to non-point stormwater pollution control standards related to the County's Municipal Stormwater Permit, under the NPDES program (Water Quality Order Number 90-136, NPDES CAS000200), as amended by the SWRCB's Statewide General Permit (WQ Order No. 92-08 DWQ) and General Construction Activities Storm Water Permit (WQ Order No. 99-08-DWQ).

5.3.5 CUMULATIVE IMPACTS

Implementation of the proposed plan, along with other projects in the surrounding area Chino Basin Dairy Area (CBDA), will contribute to increases in impervious surfaces (which will increase runoff rates), and incrementally add to the amount of urban pollutants discharged into the drainage system. However, the proposed project's incremental impact would be substantially reduced with application of identified mitigation measures and compliance with state and federal regulations protecting receiving waters. Consequently, the project's contribution to cumulative water resources impacts is considered less than significant.

5.3.6 MITIGATION MEASURES

HWQ-1 All development shall comply with the National Pollutant Discharge Elimination System (NPDES) regulations. Prior to the issuance of a grading permit, applicants shall demonstrate compliance with NPDES Stormwater Permit requirements to the satisfaction of the City of Chino. Applicable BMP provisions shall be incorporated into the NPDES Permit.

HWQ-2 Individual projects within the specific plan area shall be reviewed by the City of Chino for the inclusion of appropriate structural and non-structural Best Management Practices (BMPs) to control stormwater discharges and protect water quality. Structural controls may include, but are not limited to filtration, common area efficient irrigation, common area runoff-minimizing landscape design, velocity dissipation devices, oil/grease separators, inlet trash racks, and catch basin stenciling. Non-structural BMPs can include education for property owners, tenants and occupants, activity restrictions, common area landscape management, litter control, and catch basin inspection, BMP maintenance; and street sweeping.

The following are examples of BMPs that may be included within NPDES permit requirements for individual projects:

- Use of sand bags and temporary desilting basins during project grading and construction during the rainy season (October through April) to prevent discharge of sediment-laden runoff into stormwater facilities.

- Installation of landscaping as soon as paracticable after completion of grading to reduce sediment transport during storms.

- Hydroseeding soil binders or other measures to retain soil on graded building pads if they are not built upon before the onset of the rainy season.

- Incorporation of structural BMPs (e.g., grease traps, debris screens, continuous deflection separators, oil/water separators, drain inlet inserts) into the project design to provide detention and filtering of contaminants in urban runoff from the developed site prior to discharge to stormwater facilities.

- Stenciling of catch basins and other publicly visible flood control facilities with the phrase "No Dumping-Drains to the Ocean."

HWQ-3 The City shall review subsequent development projects within the specific plan area for the application of Best Management Practices (BMPs) to reduce water pollution from urban runoff. Among the source-reduction BMPs that may be required by the City for application to such projects are the following:

- Animal waste reduction
- Exposure reduction
- Recycling/waste disposal
- Parking lot and street cleaning
- Infiltration (exfiltration) devices
- Oil and grease traps
- Sand traps
- Filter strips
- Regular/routine maintenance

The specific measures to be applied shall be determined in conjunction with review of required project hydrology and hydraulic studies, and shall conform to City standards and the standards of the County's Municipal Stormwater Permit, under the NPDES program.

HWQ-4 A water quality monitoring program should be implemented to regularly test the water quality at the project storm drainage outlets to Prado Lake, Chino Creek and Mill Creek. The program should be devised to differentiate the pollutant contributions of project development from dairies during the transitional period. If test results determine that the water quality standards established by the RWQCB are not being met, corrective actions acceptable to the RWQCB would be taken to improve the quality of surface runoff discharged from the outlets to a level in compliance with the adopted RWQCB standards.

HWQ-5 In implementing the Storm Drainage Plan, the City should review subsequent development projects within the plan area for opportunities to provide 'mini-basins' for purposes of detention, filtration and recharge to groundwater. Such basins may have the corollary benefit of providing habitat for waterfowl. Appropriate locations may include storm drain outlets to earthen channels, within or adjacent earthen channels, and at storm drain outlets to the natural open space system.

HWQ-6 The City of Chino shall assure that storm drain facilities and outlets to Prado Regional Park and the natural open space system are designed in a manner that minimizes disruption of park operations and protects park and open space resources. Specific

drainage facility designs at outlets to the major open space system below the 566' elevation shall be made available for review by the County of San Bernardino Flood Control District and U.S. Army Corps of Engineers, as appropriate.

HWQ-7 Prior to any development approvals, a plan for managing urban runoff to protect sensitive drainages within the open space system shall be approved by the City of Chino. This Urban Runoff Management Plan (URMP) will be integrated with the project Storm Drain Plan, and provide the framework and mechanism for:

1) Phased implementation of structural and non-structural best management practices (BMP's) to control stormwater discharges and protect water quality;

2) Review of subsequent projects for inclusion of 'mini-basins' for detention, filtration and recharge to groundwater;

3) The design and location of Natural Treatment Systems (NTS) for water quality purposes within drainages; and

4) Implementation of a water quality monitoring program at storm drain outlets to Prado Lake, Chino Creek and Mill Creek.

The URMP shall be made available for review and comment by the Flood Control Districts of the counties of San Bernardino and Orange, the U.S. Army Corps of Engineers, and Orange County Water District during the City of Chino's review and approval process. The URMP shall assure to the satisfaction of the City of Chino that project development that drains into Chino Creek and Mill Creek will not unacceptably contribute to flooding, scour and erosion, or water quality degradation of these environmentally sensitive drainages.

5.3.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With incorporation of project design features, project-level hydrology studies, NPDES permit program requirements, Best Management Practices (BMPs) for point and non-point source pollution control, and other mitigation measures identified above, the flooding, hydrology and water quality impacts of the proposed project would be reduced to a level that is considered less than significant.

5.4 BIOLOGICAL RESOURCES

5.4.1 INTRODUCTION

This section describes the existing biological resources within Subarea 2 and associated regulatory environment, and provides an assessment of potential impacts to those resources as they relate to proposed future development. The biological resources described are based on: 1) field observations conducted by Michael Brandman Associates (MBA) in February and March 2000, and again in March and April 2002; 2) several site visits by Dr. Tom McGill, MBA Regional Manager/Director of Resources Management, and Dr. Jack Bath of the Biological Services Department, California State Polytechnic University, Pomona, during January and February 2002 to identify potential conservation areas; and 3) review of existing documents and databases. Field surveys were conducted on foot and by vehicle to verify the information taken from aerial photos and maps, delineate vegetation associations (habitat types) and land cover types (associated with various land uses) and identify dominant plant species. *The Biological Resources Baseline Conditions Report for Subarea 2 of the Chino Valley Dairy Preserve* (MBA 2000) can be found in its entirety in the original Appendix B to the Draft EIR. The portion of Subarea 2 proposed for development contains 2,609 acres and is located above the 566-foot Prado Dam inundation area.

5.4.2 EXISTING CONDITIONS

The Chino Valley is influenced by the Santa Ana River drainage, which originates in the slopes of the San Bernardino Mountains to the northeast. The Santa Ana River drains through the narrow Santa Ana Canyon between Chino Hills and the Santa Ana Mountains and empties into the Pacific Ocean approximately 30 miles to the southwest. Elevations range from approximately 500 to 600 feet above sea level.

Major facilities either within or adjacent to the planning area include the Co-Composting Facility operated by the Inland Empire Utility Agency (IEUA), the California Institution for Women (CIW-Chino), and Prado Regional Park (including Prado Lake) located in the central and western portions of the site. Chino Airport is located along a portion of the northerly boundary of Subarea 2. Other dominant land use within Subarea 2 and vicinity primarily consists of dairy farming with associated residences and agricultural activities, such as cultivation of feed crops. Previous Exhibit 5.1-1 illustrates current land uses within the project site.

Two major creeks traverse Subarea 2: Chino Creek which drains southerly along the base of the Chino Hills, and the 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. These creeks reflect the general location of the flood hazard areas affecting Subarea 2 below the 566-foot dam inundation

area, as well as areas of moderate and high biological sensitivity. Previous Exhibit 5.3-1 illustrates the drainage characteristics of the site. Two other smaller drainages extend south from the Chino Airport through the western side of Subarea 2, before joining Prado Lake within Prado Regional Park (Drainage areas "B" and "C" shown on Exhibit 5.3-1). The drainage courses have been extensively altered from their natural conditions and no longer support natural vegetation or follow natural contours.

Sensitive habitat areas within Subarea 2 include riparian woodlands along the major stream channels, various dairy wastewater detention basins and open water areas, and freshwater marshes. Certain types of agricultural fields and eucalyptus windrows provide habitat of varying quality for raptor foraging and nesting, respectively. A variety of sensitive plant and animal species are known to occur in the vicinity of Subarea 2 and the Prado Basin.

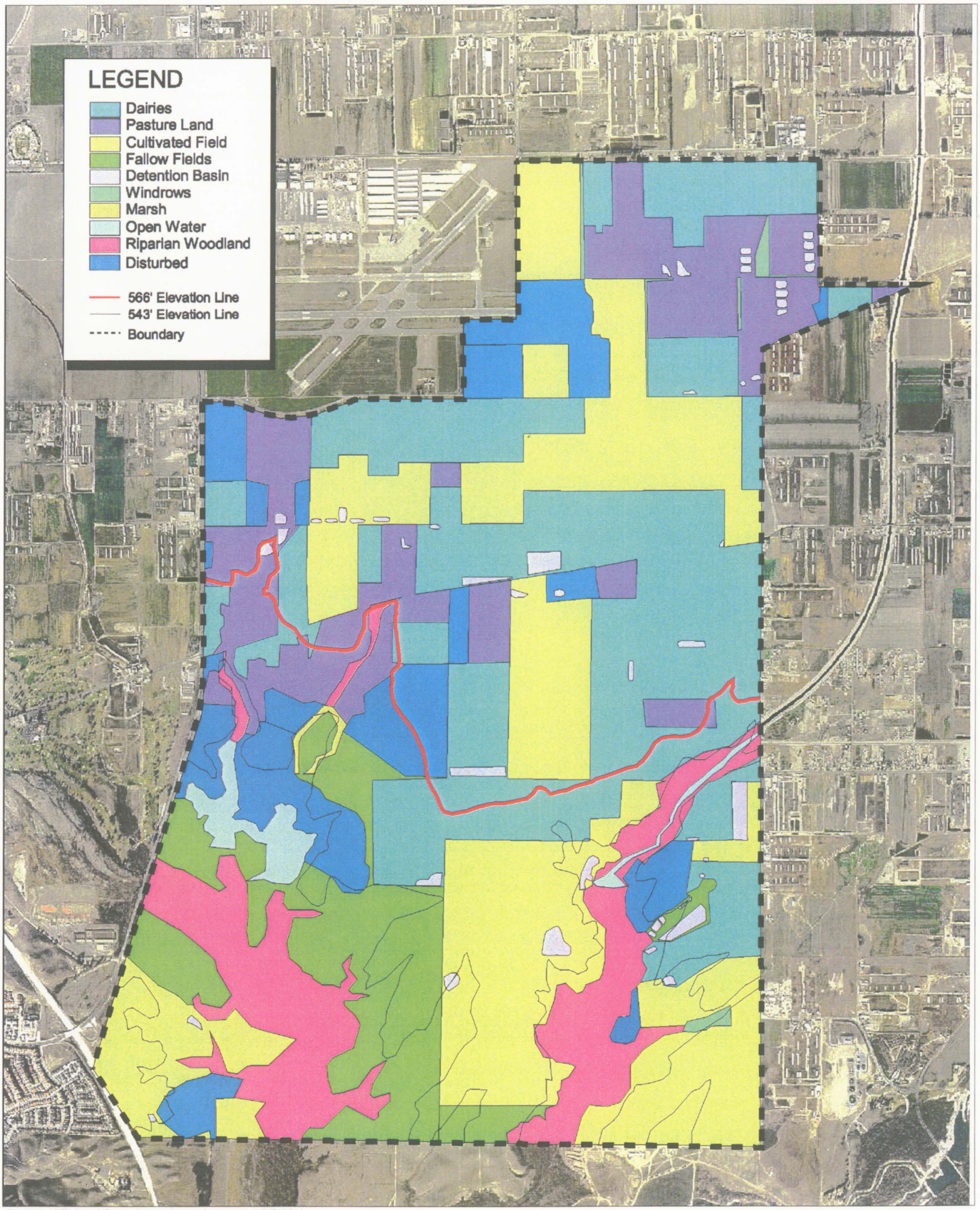
Vegetation Association and Land Cover Types

This section describes the vegetation associations that occur within Subarea 2. "vegetation association" is a general term that refers to an assemblage of plant species that form characteristic vegetation types. Vegetation associations vary by species composition, growth form or structure, and distribution that is characteristic of a particular habitat. A total of eight different vegetation associations or habitat types, discussed below, occur in areas with land cover types designated as surface water areas, agricultural land, windrows, riparian, and developed. Exhibit 5.4-1 illustrates the location of the land cover types within the boundaries of Subarea 2. Table 5.4-1 provides a summary of the land cover types, the acreage, and percentages found within Subarea 2.

Vegetation associations form the basis of the wildlife habitats. 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 vegetation associations to obtain all their life history needs. In general, more complex associations (with more layers of vegetation and more species) have more niches for wildlife and, thereby, provide higher value wildlife habitat than less complex vegetation communities.

Surface Water Areas

There are three types of surface water types within Subarea 2: Agricultural wastewater detention basin/drainages, marsh, and open water. The majority of the agricultural detention basins are created to control dairy activity wastewater run-off. These detention basins accumulate the surface flow from dairies after heavy rains. In some cases, these basins have been placed in what may have historically been drainages and areas potentially regulated by the U.S. Army Corps of Engineers (USACE) and California Department of Fish and Game (CDFG). While it might be possible for these



Source: Michael Brandman Associates and PBS&J

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Exhibit **5.4-1**

Land Cover Types and Biological Resources Map

THE PRESERVE · CHINO SUBAREA 2

detention basins to provide some marginal habitat for waterfowl and amphibian species, they are often heavily contaminated with manure from the dairy operations. Environmental groups seeking to stop contamination of the Project Area's water resources by the dairies have recently initiated a lawsuit against a number of the dairies in the Project Area.

TABLE 5.4-1
LAND COVER TYPES FOUND WITHIN THE PRESERVE-SUBAREA 2

Habitat	Below 566 Line (acres)	Above 566 Line (acres)	Totals (acres)
Surface Water Areas			
Detention Basin	36.3	38.3	74.6
Marsh	9.2	--	9.2
Open Water	77.1	--	77.1
Agricultural Land			
Dairy	352.0	1,084.4	1,436.4
Pasture	143.6	496.6	640.2
Active Fields	836.8	702.8	1,539.6
Fallow Fields	544.9	0.3	545.2
Windrows	6.8	17.2	24.0
Riparian	530.4	0.9	531.3
Developed Areas			
Developed	271.6	191.4	463.0
Disturbed	9.5	33.8	43.3
Equestrian	17.2	34.5	51.7
Totals	**2,835.4**	**2,609.2**	**5,435.6**

Below the 566-foot inundation line, marsh or riparian habitats occur adjacent to Chino and Mill creeks. These habitats potentially host a variety of special status species including migratory birds and waterfowl.

Open water bodies include Prado Lake and the upper portion of Mill Creek, which are also below the 566-foot inundation line. Open water bodies provide foraging habitat for raptors and other wildlife species and are used by migratory waterfowl.

Agricultural Land

Agricultural lands within Subarea 2 are characterized in four types: Active fields (croplands), fallow fields, dairies and pastures. Dairy lands are heavily impacted and provide little or no habitat value to wildlife. Active fields are largely covered with crops but may provide limited value to a few rodent species adapted to disturbance and urbanization. Raptor species may also forage over these fields. Fallow fields and pasture lands support mostly non-native ruderal vegetation but provide habitat for rodent species and foraging habitat for raptors.

The dominant vegetation within the cultivated agricultural fields is planted ornamental landscaping, cultivated crops, and fields of non-native grass and opportunistic weedy species. Bird activity is relatively high within these areas, but bird diversity is quite low. The following is a list of birds observed on the Preserve-Subarea 2.

- Great blue heron;
- Egrets;
- Turkey vulture;
- Red-tailed hawk;
- White-tailed kite;
- California horned lark;
- Killdeer; Mourning dove;
- Black phoebe;
- Western kingbird;
- American crow;
- Northern mockingbird; and
- Western meadowlark.

All but 1 acre of fallow fields occurs below the 566-foot inundation line. Some of these fields appear to undergo mechanical disking activities, most likely for fire prevention. Weedy species found throughout the fallow 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*). The majority of these fields follow a cycle of being used as cultivated fields, which are then grazed by dairy cows after harvest, and are then subsequently left fallow.

Fallow fields also develop characteristic ruderal vegetation, composed of a number of weedy species as described above. These habitats are used as foraging habitat by local raptor species. As noted above, less than one acre of fallow fields exists above the 566-foot elevation line, with the remaining 545 acres all being located below it.

There is an aggregate total of 496 acres of pastureland above the 566-foot elevation line. These pasture areas have similar characteristics to some of the cultivated and fallow fields, but are generally smaller areas and more immediately adjacent to the intensive dairy operations. Consequently, the pasture land may have limited biological value as native habitat, but can provide foraging habitat for the various raptor species within the vicinity.

The dairy lands are largely devoid of vegetation and are characterized by numerous fenced areas for holding high concentrations of dairy cows, manure stockpile areas, large buildings devoted to the dairy operations, residences for the dairy operators and farm workers, and associated equipment buildings. As noted above, the dairies also include agricultural detention basins to contain the manure-contaminated wastewater from the dairy operations. Approximately 1,093 acres of dairy lands occur above the 566-foot elevation line. The dairy lands do not provide valuable wildlife habitat.

Windrows

Windrows are typically a result of historic agricultural activities. The windrows are dominated by blue gum (*Eucalyptus globoratum*), although other species exist, including olive (*Fraxinus* sp.) pine (*Pinus* spp.), and cypress (*Cypressus* spp.). Eucalyptus windrows are primarily found in the Preserve associated with the pasture areas above the 566-foot inundation line. These windrows also provide nesting and foraging perches for bird species.

Riparian Woodlands

The riparian woodlands are found below the 566-foot inundation line in the Project Area and 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. The willow tree species typically forms thickets in riparian zones along creek channels, adjacent sandy or gravelly floodplains, and low stream terraces. The riparian woodland in the Project Area is an early seral phase of southern cottonwood-willow riparian forest and occurs primarily below the 566-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 the black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), and mule fat (*Bacharis salicifolia*).

Existing Developed Areas

Existing developed areas within the Project Area are characterized by ornamental vegetation, barren ground, and asphalt/concrete. These areas include commercial buildings, infrastructure, residential homes, and roads. They support a very limited amount of vegetation, which, if present, typically comprise non-native species planted for their aesthetic and utilitarian values. Within Subarea 2, these uses include the California Institution for Women, portions of Prado Regional Park, Prado Recreational Dog Training Facility, an industrial parcel southeast of Chino Airport, commercial nurseries, the IEUA manure composting facility, and equestrian facilities.

Wildlife

The vegetation associations discussed above provide varying degrees of useful wildlife habitat. While a few wildlife species are entirely dependent on a single vegetation association, the entire mosaic of all the vegetation associations within Subarea 2 and adjoining areas constitutes a functional ecosystem for a variety of wildlife species, both within Subarea 2 and as part of the regional ecosystem. Presented below is a discussion of wildlife populations observed or expected to occur within Subarea 2.

Subarea 2 has been greatly altered from natural conditions due to intensive agriculture and dairy operations. Nevertheless, this area continues to support a limited diversity of wildlife, specifically, a variety of bird species. The relatively level topography of Subarea 2 results in the accumulation of standing water that attracts numerous migratory birds. In addition, the absence of dense urbanization has allowed certain native animal and raptor species to persist within the area.

Surface Water and Riparian Areas

There are three types of surface water types within the Project Area: agricultural wastewater detention basin/drainages, marsh, and open water. Agricultural detention basins were created to control dairy activity run-off. These basins also serve to accumulate the surface flow from the dairy after heavy rains and are not regulated by USACE as a jurisdictional water of the United States. In a few cases, a wastewater detention basin may have been placed in what could have historically been drainages. Creeks and stream areas are regulated by both the USACE and CDFG.

The Project Area above the 566-foot elevation line contains approximately 38 acres of agricultural detention basins that hold runoff from dairy operations. These contain water with fairly high levels of animal waste and other pollutants from the dairies, and typically support very little vegetation. Some of these detention basins provide some foraging habitat for shorebirds (e.g., stilts, killdeer, etc.) and some wading birds (e.g., herons and egrets), especially during spring and fall migration periods, and to some extent in the winter.

The agricultural drainage courses through the portions of the Project Area above the 566-foot elevation line are quite dry in most locations. In many areas, these courses are essentially narrow roadside drainage ditches that are sparsely vegetated with weeds. One of the larger drainage courses (Drainage Area B, see previous Exhibit 5.3-1) runs from the airport area southwesterly to the lake at Prado Regional Park. Between Kimball Avenue and Bickmore Street, this drainage is primarily confined to an earthen, weedy ditch. Between Bickmore Street and Pine Avenue, this ditch is somewhat wider, and thickly grown with thistles and other weeds in most locations. These watercourses provide little biological value in their present condition. Less than 1 acre of quality riparian habitat exists above the 566-foot elevation line.

The number and diversity of amphibian species are expected to be minimal due to the lack of vegetation around most open water, frequent disturbance, and the often poor quality of surface water contaminated from agricultural practices. Expected amphibian species in wet areas include black-bellied slender salamander (*Batrachoseps nigriventris*), California toad (*Bufo boreas halophilus*), Pacific chorus frog [tree frog] (*Pseudacris regilla*), and introduced bullfrog (*Rana catesbeiana*).

Although the number of reptile species expected to be present is also likely to be low, the southwestern pond turtle (*Clemmys marmorata pallida*) may occur within open water areas below the 566-foot inundation line. The detention basins, stock watering ponds, drainages, and low areas subject to flooding are the focus of migratory bird activity in the area. Many of the species observed and likely to occur are attracted to open water at Prado Lake below the 566-foot elevation line and stock pond shorelines for food, cover from predators, and shelter from the elements.

Other migratory birds also expected to occur at the site are listed in *The Biological Resources Baseline Conditions Report for Subarea 2 of the Chino Valley Dairy Preserve* located in Appendix B. The diversity of these migratory birds includes waterfowl, wading birds, and shorebirds.

None of the mammals observed, or expected to occur, would be considered dependent upon open water areas, although most would occasionally use these resources.

Agricultural Lands

This type of habitat includes any open field, whether planted with crops, grazed, fallow or disked. Most of the animal species (other than birds) in Subarea 2 are likely to occur in these areas, especially in the southern parts of the plan, below the 566-foot dam inundation line and away from human disturbance.

There are four types of agricultural lands within the Project Area: dairy land, pastures, cultivated agriculture croplands, and fallow fields. Remnants of native vegetation are typically very minimal or absent within all of these areas.

The dominant vegetation within the agricultural croplands is planted ornamental landscaping, cultivated crops, and fields of non-native grass and opportunistic weedy species. Bird activity is relatively high within these areas, but bird diversity is quite low.

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. Some of these fields undergo mechanical disking activities, most likely for fire prevention. The majority of these fields follow a cycle of being used as cultivated fields, which are then grazed by dairy cows after harvest, and subsequently are then left fallow. Fallow fields usually develop characteristic ruderal vegetation, composed of a number of weedy species as described above.

Amphibians are expected to be uncommon in these areas. However, among the reptiles expected to occur, are western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), southern alligator lizard (*Elgaria multicarinatusi*), and gopher snake (*Pituophis melanoleucus*). These are ubiquitous reptile species in California, readily seen in most parts of the State under most conditions, due to their tolerance of a wide range of habitat types and human activity.

Portions of agricultural fields are used by burrowing owls and other raptors as foraging habitat, where small rodents or birds are most likely to be visible. Notably, ferruginous hawks (a sensitive species) often roost on the ground in open fields in the area, especially where vegetation is low. Other raptors, including migrants and winter visitors, may perch in trees or on power transmission structures, or soar over fields while searching for prey.

Because drainage patterns of the area allow water to accumulate, the resulting wet fields also attract wading birds that forage on small animals that concentrate in the wet areas. Species known to occur in wet fields include great egret (*Ardea alba*), Canadian goose (*Branta canadensis*), common crow (*Corvus brachyrhynchos*), western meadowlark (*Sturnella neglecta*), red-winged blackbird (*Agelaius phoeniceus*), brown-headed cowbird (*Molothrus ater*), and house sparrow (*Passer domestiucs*).

Windrows

The windrows represent the tallest vegetation in the area. The trees comprise primarily blue gum (eucalyptus), although other non-native species are used near residences and structures. Windrows are typically a result of historic agricultural activities. The existing windrows in the Project Area are dominated by blue gum (*Eucalyptus globoratum*), although other species exist, including olive (*Fraxinus* sp.) pine (*Pinus* spp.), and cypress (*Cypressus* spp.). The eucalyptus windrows are primarily found in the Preserve in association with pasturelands and agricultural fields above the 566-foot inundation line. These windrow habitats also provide nesting and foraging perches for bird species.

Among other biological functions, the trees are important as perching and nesting sites for raptors (birds of prey). Subarea 2 attracts numerous raptors, especially when resident species, such as red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*) are joined in late summer by migratory or wintering species from breeding grounds outside Subarea 2, with these migrants

remaining until spring. Raptors observed during field surveys and/or known to occur include turkey vulture (*Cathartes aura*), red-tailed hawk, American kestrel, and white-tailed kite (*Elanus leucurus*).

Some mammals may also use the trees in the windrows. Those mammals likely to use the windrows include raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginianus*) and several common bat species. Mammals known to occur in agricultural fields (wet or otherwise), also include house mouse (*Mus musculus*), California ground squirrel (*Spermophilus beecheyi*), coyote (*Canis latrans*), domestic dog (*Canis familiaris*), striped skunk (*Mephitis mephitis*), desert cottontail (*Sylvilaus audubonii*) and house cat (*Felis catus*).

Developed Areas

Currently existing developed areas within the Project Area are characterized by ornamental vegetation, barren or disturbed ground, and asphalt/concrete areas. These urbanized areas include commercial buildings, infrastructure, residential homes, prisons and roads. They support a very limited amount of vegetation, which, if present, typically comprise non-native species planted for their aesthetic and utilitarian values. Within the Project Area, these uses include the California Institution for Women, portions of Prado Regional Park, the Prado Recreational Dog Training Facility, industrial parcels southeast of Chino Airport, commercial nurseries, the IEUA manure composting facility, and equestrian facilities.

The concentration of human and livestock activity around structures in the developed areas displaces many of the wildlife species that are found elsewhere in Subarea 2. The wildlife likely to be observed in such developed areas is usually non-native, or more common native species that are tolerant of human activity. Common species known to occur within developed areas include western fence lizard, Norway rat (*Rattus norvegicus*), and house mouse (*Mus musculus*).

Sensitive Biological Resources

This section describes those species of plants and wildlife known to occur, or have the potential to occur, on or within the vicinity of the project site that have been afforded special recognition by federal, state, or local resource conservation agencies and organizations. 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) (1996), the California Department of Fish and Game Natural Diversity Data Base (CNDDB) Version 2.1.2, 2002, *Federal Register* listing package; and California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California.

The relative sensitivity of vegetation associations within Subarea 2 is mapped on Exhibit 5.4-2.

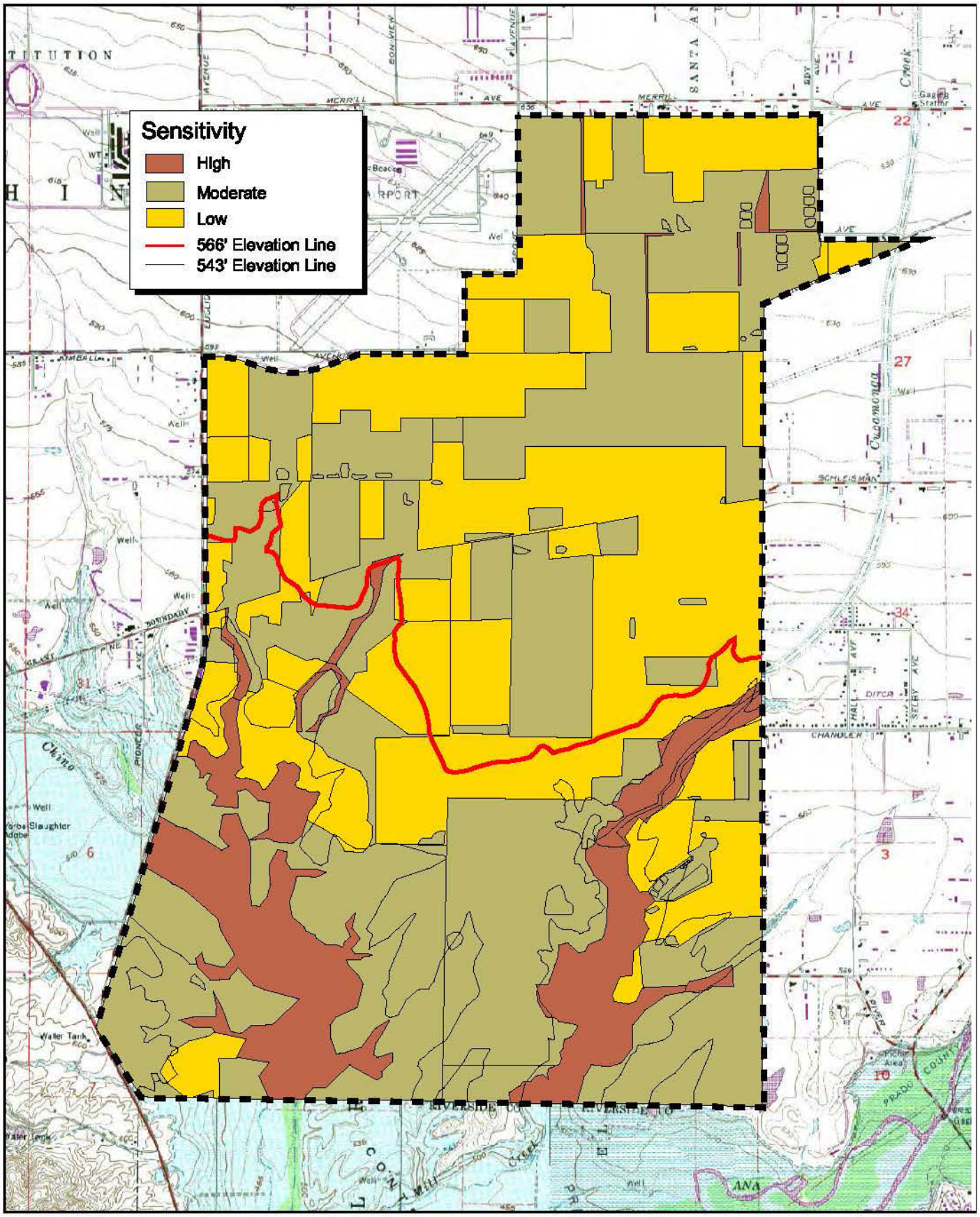

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Exhibit **5.4-2**

Biological Resource Sensitivity

THE PRESERVE · CHINO SUBAREA 2

Federal Recognition

Endangered and Threatened Species

A federal Endangered Species **(FE)** is a species formally listed by the USFWS as facing extinction throughout all or a significant portion of its geographic range. A federal Threatened Species **(FT)** is one formally listed by the USFWS as likely to become endangered within the foreseeable future throughout all or a significant portion of its range. "Take" of such a species or its habitat is prohibited by federal law without a special permit. Term "take", under the Endangered Species Act (ESA), means to harass, harm pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. Harm is defined by the USFWS to encompass "an act which actually kills or injures wildlife. Such acts may include significant habitat modification or degradation where it actually kills or injures listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 CFR §17.3).

Proposed Threatened or Endangered Species

A proposed Threatened **(FPT)** or Endangered Species **(FPE)** is one officially proposed by the USFWS for addition to the federal Threatened or Endangered Species lists.

Species of Concern

A federal Species of Concern **(FSC)** is a species within an informal designation by the USFWS for some declining species that are not federal candidates for listing at this time. This designation does not provide legal protection but signifies that these species are recognized as special status by the USFWS.

Critical Habitat

The federal government defines critical habitat as the minimum amount of suitable breeding and foraging habitat occupied or potentially occupied by Threatened or Endangered Species that is deemed necessary to maintain present populations and to recover populations of the species to the point at which the species is no longer Threatened or Endangered. It does not necessarily include all suitable habitat (such as highly fragmented or isolated patches); however, it may contain highly degraded or altered habitat that can be restored, and it may include buffer zones of other habitats. Defined critical habitat for a species differs significantly from one species to another.

State of California Recognition

Endangered and Threatened Species

The State of California considers an Endangered Species **(SE)** one whose prospects of survival and reproduction are in immediate jeopardy. A Threatened Species **(ST)** is one present in such small numbers throughout its range that it is considered likely to become an Endangered Species in the near future in the absence of special protection or management. A Rare Species is one present in such small numbers throughout its range that it may become endangered if its present environment worsens. The designation "Rare Species" applies only to California native plants. State Threatened and Endangered Species include both plants and wildlife, but do not include invertebrates, and are legally protected against "take", as this term is defined in the California Endangered Species Act (California Fish and Game Code Section 2050 et seq.).

Species of Special Concern

Species of Special Concern **(SSC)** is an informal designation used by the CDFG for some declining wildlife species that are not officially listed as Endangered, Threatened, or Rare. This designation does not provide legal protection, but signifies that these species are recognized as sensitive by CDFG.

Fully Protected Species

Species that are California fully protected **(SFP)** include those protected by special legislation for various reasons, such as the golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*).

Sensitive Plant Species

The California Native Plant Society **(CNPS)** is a statewide resource conservation organization that has developed an inventory of California's sensitive plant species (Skinner and Pavlik 1994). This inventory is a summary of information on the distribution, rarity, and endangerment of California's vascular plants. This rare plant inventory consists of four lists. CNPS presumes that List 1A plant species are extinct in California because they have not been seen in the wild for many years. CNPS considers List 1B plants as Rare, Threatened, or Endangered throughout their range. List 2 plant species are considered Rare, Threatened, or Endangered in California, but more common in other states. Plant species on lists 1A, 1B, and 2 meet CDFG criteria for Endangered, Threatened, or Rare listing. Plant species for which CNPS requires additional information in order to properly evaluate their status are included on List 3. List 4 plant species are those of limited distribution in California whose susceptibility to threat is considered low at this time.

County of San Bernardino Recognition

Riparian Plant Conservation

The San Bernardino County Development Code, Chapter 5, Riparian Plant Conservation (1989), provides protection to riparian habitats growing on private land within the unincorporated areas of San Bernardino County. The removal of any vegetation within two hundred feet of the bank of a stream or in an area indicated as a protected riparian area on an overlay map or County Specific Plan, requires a tree or plant removal permit and is subject to environmental review. Streams include those shown on United States Geological Survey Quadrangle topographic maps as perennial or intermittent, blue or brown lines, and river wash areas. Pre-construction inspections shall include the verification of the presence of any riparian vegetation. Any necessary conditions of approval for removal of riparian vegetation may be imposed.

The following discussion provides a summary of the sensitive biological resources potentially occurring at the Project Area. The potential for a species to occur onsite is first based upon their known geographic ranges, elevational distributions, and preferred habitats. The actual potential for their occurrence ranking in the Project Area is based upon the presence of suitable habitat as determined by field surveys, and by habitat requirements documented in the literature.

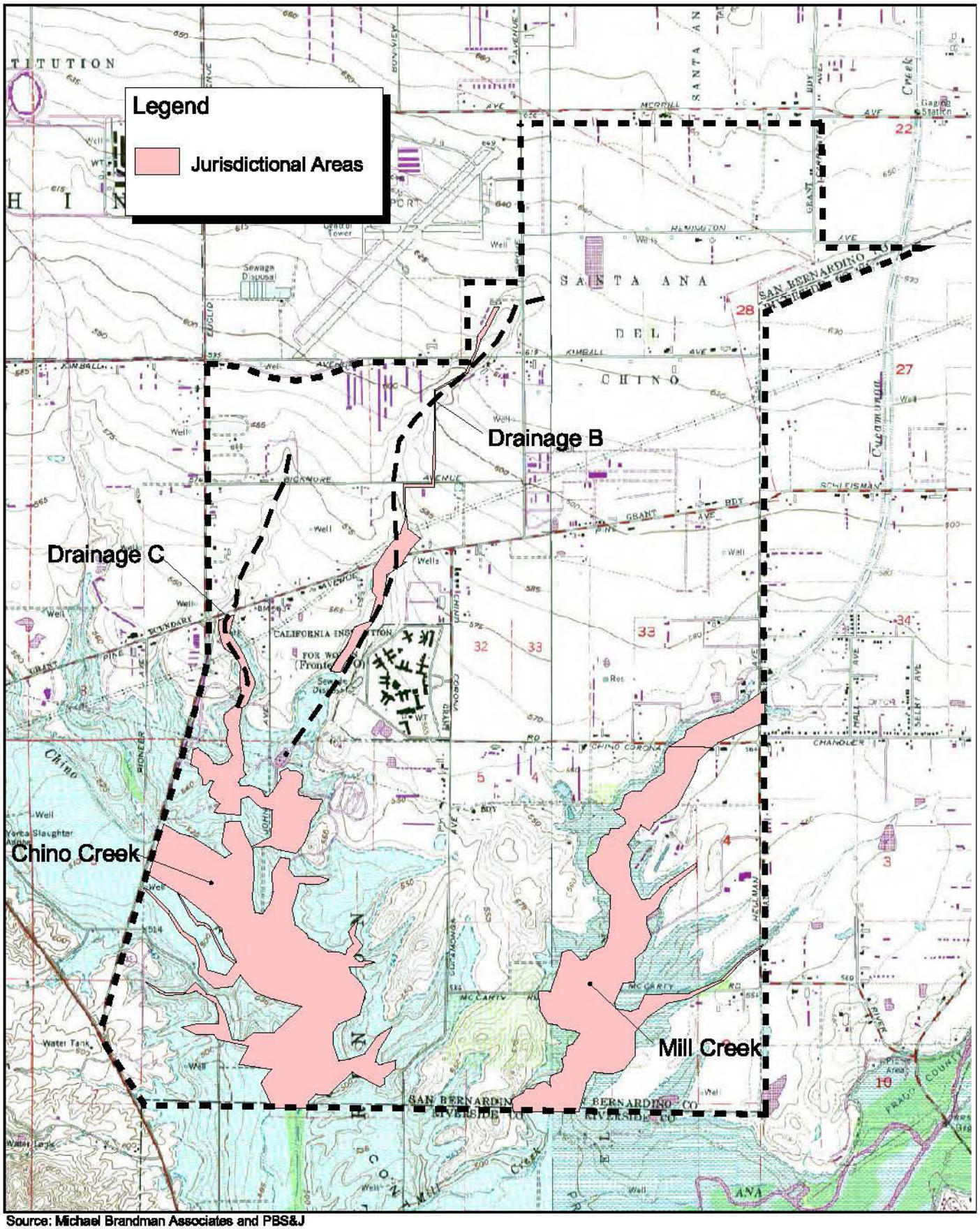
Sensitive Biological Resources Potentially Occurring in Subarea 2

The sensitive biological resources described below are based on field observations and review of existing documents and databases described above and listed in Section 10, References, of this EIR.

Sensitive Natural Community and Other Habitats

One sensitive natural community, southern cottonwood riparian forest, was observed below the 566-foot inundation line and is described below.

Southern Cottonwood Riparian Forest. This natural community is a tall, open, broadleaved winter deciduous riparian forest dominated by Fremont's cottonwood (*Populus fremontii*), black cottonwood (*P. trichocarpa*), and several tree willows. In the Prado Basin area, this community is dominated by Fremont's cottonwood and black willow (*Salix goodingii*) with an understory of mulefat (*Baccharis salicifolia*). This community, like other riparian communities, has become increasingly rare in Southern California due to pressures from flood control operations, land clearing and water diversion for human consumption. Southern cottonwood riparian forest is predominantly found within the riparian woodland areas along Chino Creek and Mills Creek in the southern portion of Subarea 2, as depicted in Exhibit 5.4-3, below the 566-foot inundation line.



Source: Michael Brandman Associates and PBS&J

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Exhibit **5.4-3**

Jurisdictional Areas

THE PRESERVE · CHINO SUBAREA 2

Raptor Foraging

Pastures and other agricultural open spaces (excluding dairies) within the Preserve provide habitat for burrowing owls, foraging raptors and migratory birds/waterfowl. Associated with these agricultural fields and open spaces are windrows and agricultural wastewater detention basins. Windrows are remnants of past agricultural use and provide roosting and nesting habitat for raptors. The agricultural detention basins hold dairy wastewater but also may afford some marginal and highly degraded habitat for various bird species, including raptors.

Sensitive Plant Species

Data sources reviewed for the Project Area revealed that a total of four special status plant species are known to occur within the region and potentially occur on the project site. Field surveys confirmed that the potential for the four sensitive plant species to occur onsite ranged from low to very low. Sensitive plant species potentially occurring onsite are addressed below and summarized in Table 5.4-2.

TABLE 5.4-2
SENSITIVE PLANT SPECIES POTENTIALLY OCCURRING ON THE PRESERVE- SUBAREA 2

Species	Status	Habitat	Potential For Occurrence*
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 (*Hemizonia pungens* ssp. l*aevis*)	SSC CNPS List 1B	Grassland, ruderal and alkali meadows	Very Low

Notes: *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.
Source: CNDDB 2001

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. Subarea 2 provides marginally suitable habitat for the Santa Ana River woolly-star and, therefore, is expected to have a low potential for occurrence within Subarea 2 below the 566-foot elevation line.

Braunton's milk vetch (*Astragalus brauntonii*) FE, CNPS List 1B. This species is known to occur in carbonate soils in coniferous forest, chaparral, coastal sage scrub, and valley and foothill grasslands. It is known to occur in the northernmost Santa Ana Mountains (Coal and Gypsum Canyons) Orange County, just west of the Riverside County boundary. Due to the history of land alteration and consequent lack of habitat, this species has a very low potential to occur anywhere within Subarea 2.

Many-stemmed dudleya (*Dudleya multicaulis*) FSC, CNPS List 1B. This species is found within scrub, grassland, and rock outcrop habitats. Due to the history of land alteration and consequent lack of habitat, this species has a very low potential to occur anywhere within Subarea 2.

Smooth tarplant (*Hemizonia pungens* ssp. *laevis*) SSC, CNPS List 1B. This species is found within grasslands, and ruderal and alkaline meadows. Due to the history of land alteration and consequent lack of habitat, this species has a very low potential to occur anywhere within Subarea 2.

Sensitive Wildlife Species

Data sources reviewed for the Project Area revealed that a total of 36 special-status wildlife species are known to occur within the region and potentially occur on the project site. Field surveys confirmed that the potential for the 36 sensitive wildlife species to occur onsite ranged from low to present. Sensitive wildlife species potentially occurring onsite are addressed below and summarized in Table 5.4-3.

TABLE 5.4-3
SENSITIVE WILDLIFE SPECIES POTENTIALLY OCCURRING AT THE PRESERVE—SUBAREA 2

Species	Status	Habitat	Potential For Occurrence*
Federal Threatened and Endangered Species			
Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*)	FE	Colton dunes (Delhi soils series) open sand	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
California red-legged frog (*Rana aurora draytonii*)	FE SSC	Streams with slow moving water and deep pools; dense shrubby riparian vegetation at pool edges	Very Low
Santa Ana sucker (*Catostomus santaanae*)	FT SSC	Small to medium-sized streams	Very Low
Southern bald eagle (*Haliaeetus leucocephalus*)	SE	Winters locally at deep lakes and reservoirs (mainly at Lake Mathews or Big Bear Lake)	Very Low
State Threatened and Endangered Species			
Western yellow-billed cuckoo (*Coccyzus Americanus occidentalis)*	SE	Riparian communities	Low
Swainson's hawk (*Buteo swainsoni)*	SE	Grasslands and other open terrain	Low
Peregrine falcon (*Falco peregrinus*)	SE FSC	Estuaries, wetlands, and coastal bluffs	Low
Federal and State Sensitive Species			
Golden eagle (*Aquila chrysaetos*)	SFP SSC	Grasslands and other open terrain	Present
White-tailed kite (*Elanus leucurus*)	SFP	Open woodlands and grasslands	Present
San Diego horned lizard (*Phrynosoma coronatum blainvilleri*)	FSC SSC	Open areas of sandy soil with coastal sage scrub, chaparral, grassland, riparian, and washes and watercourses	Low
Tricolored blackbird (*Agelaius tricolor*)	FSC SSC	Marshes and grassland communities	Moderate
Loggerhead shrike (*Lanius ludovicianus*)	FSC SSC	Grassland and open scrub	Present
Ferruginous hawk (*Buteo regalis*)	FSC SSC	Grasslands and other open terrain	High

TABLE 5.4-3 (Cont.)
SENSITIVE WILDLIFE SPECIES POTENTIALLY OCCURRING AT THE PRESERVE—SUBAREA 2

Species	Status	Habitat	Potential For Occurrence*
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
Southern California arroyo chub (*Gila orcutti*)	SSC	Warm streams with highly variable seasonal stream flows	Very Low
Silvery legless lizard (*Anniella pulchra pulchra*)	SSC	Sandy or loose organic soils or with abundant leaf litter	Low
Southwestern pond turtle (*Clemmys moromata pallida*)	SSC	Lakes and ponds, also pools in rivers and streams	Low
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	High
Northern harrier *Circus cyaneus*)	SSC	Grasslands and other open terrain	Present
Prairie falcon (*Falco mexicanus*)	SSC	Grasslands, coastal sage scrub, and estuaries	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
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
Western least bittern (*Ixobrychus exilis hesperis*)	SSC	Densely vegetated brackish and freshwater marshes	Low
California horned lark (*Eremophila alpestris actia*)	SSC	Open fields and grasslands	Present

TABLE 5.4-3 (Cont.)
SENSITIVE WILDLIFE SPECIES POTENTIALLY OCCURRING AT THE PRESERVE—SUBAREA 2

Species	Status	Habitat	Potential For Occurrence*
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
Orange-throated whiptail (*Cnemidophorus hyperythrus*)	SSC	Open sage scrub or chaparral with loose soils	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
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	Low

Notes: *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.
Source: CNDDB 2000

Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) FE. The Delhi Sands flower-loving fly (DSF) 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 loss and modification of most, if not all, of this species' potential habitat within The Preserve.

The former range of the species (coinciding with the Delhi sands soils formation) has been divided into three Recovery Units (RUs): Jurupa, Colton, and Ontario. Subarea 2 is entirely within the

Ontario RU for the Delhi sands flower-loving fly. The Final Recovery Plan for DSF (USFWS, 1997) makes the following statements about the Ontario RU:

> *"This area historically contained the largest block of the Colton Dunes (the Delhi sands formation); however, the majority of the area has been converted to agriculture, or developed for commercial and residential projects."*
>
> *"Based upon museum specimens, one of the populations containing the highest densities of Delhi sands flower-loving fly was located at Mira Loma in the Ontario RU."*
>
> *"The majority of Delhi sands flower-loving fly habitat in the Ontario RU has been eliminated by long-standing agricultural land uses. Recent actions that have eliminated the animal and its habitat include commercial and residential development, dumping of cow manure, and invasive exotic vegetation."*

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*). The second largest population in the U.S. occurs at the Prado Dam flood control basin and along Chino Creek (CNDDB, 2001). Portions of the Project Area below the 566-foot inundation line lies within the boundaries of critical habitat for the least Bell's vireo riparian habitat below the 543-foot elevation line. This species was observed there in 1999 surveys conducted for USACE within the Chino Creek and Mill Creek drainages within Subarea 2 (see Exhibit 5.4-1)[1]. USACE and Orange County Water District (OCWD), in compensation for the potential loss of 30 acres of least Bell's vireo habitat from the implementation of their Santa Ana River Mainstem Flood Control Project, is restoring 133 acres of degraded habitat above the 510-foot elevation line to willow woodland with understory. USACE is also making cash contributions to the Santa Ana River Conservation Trust Fund for cowbird trapping and arundo removal and willow riparian revegetation.

Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, SE. 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. 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.

[1] Supplemental EIS and Project EIR for Prado Basin and Vicinity, Including Stabilization of the Bluff Toe at Norco Bluffs; U.S. Army Corps of Engineers (7/2000).

The Prado Basin is one of seven areas designated as southwestern willow flycatcher critical habitat in California. 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. This species has a moderate potential to occur in Subarea 2 below the 566-foot elevation line.

California red-legged frog (*Rana aurora draytonii*) FE, SSC. 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). It prefers dense, shrubby riparian vegetation, usually arroyo willow, cattails, and bulrushes. This species is known to occur in very few locations in southern California. Its relatively rapid decline is poorly understood, although loss of habitat and competition with non-native frogs and fish are thought to be important factors. This species has a very low potential to occur anywhere in Subarea 2 due to the history of land alteration and consequent lack of habitat.

Santa Ana sucker (*Catostomus santaanae*) FT, SSC. The Santa Ana sucker inhabits small to medium-sized streams, usually less than 7.6m (25 ft.) in width, with depths ranging from a few centimeters to over a meter. The original range included only the Los Angeles, Santa Ana and San Gabriel river systems and it is 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. This species was not observed during 1999 surveys of the Chino Creek and Mill Creek drainages for the USACE.[2] This species has a very low potential to occur anywhere in Subarea 2 due to the history of land alteration and consequent lack of habitat.

Southern bald eagle (*Haliaeetus leucocephalus*) SE. This species occurs near large bodies of water, including reservoirs and lakes where it forages primarily on fish and carrion. It occurs in southern California as an uncommon winter visitor, primarily at Big Bear Lake and Lake Mathews. Bald eagles are expected to have a very low potential to occur anywhere in Subarea 2.

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 was recorded in the Prado Dam basin and along the Santa Ana River (CNDDB 2001). From one to several territorial cuckoos have been present in the Basin in most years since 1983. Pairs are occasionally observed, but breeding has not been confirmed. This species has a moderate potential to occur in Subarea 2 below the 566-foot elevation line.

Swainson's hawk (*Buteo swainsoni)* SE. Although this species formerly nested in the region, it has now been extirpated as a breeding species from the coast of southern California. It now occurs in the region as a rare spring and fall migrant. Open habitats, such as grasslands, provide suitable foraging

[2] Ibid. USACE (7/2000).

habitat for the Swainson's hawk. This raptor primarily eats small rodents, reptiles, and some insects. This species has a low potential to occur anywhere in Subarea 2 due to the history of land alteration and consequent lack of habitat.

Peregrine falcon (*Falco peregrinus*) SE, FSC. The peregrine falcon was recently removed from the federal list of threatened and endangered Species, but is still state listed as endangered. The peregrine falcon breeds mostly in woodland, forest, and coastal habitats. Riparian areas, and coastal and inland wetlands are important as habitats throughout the year, especially in non-breeding seasons. Its decline is associated mostly with dichlordiphenyltrichloroethane (DDT) contamination and poor reproduction. This species is known to occur as a rare transient and irregular winter visitor to the Prado Basin. This species has a low potential to occur anywhere in Subarea 2 due to the history of land alteration and consequent lack of habitat.

Golden eagle (*Aquila chrysaetos*) SFP, SSC. The golden eagle is a year-round resident of southern California and prefers open habitats of the deserts, mountains, foothills, and plains. Golden eagle nests are most often located in isolated areas either on cliff ledges or in large solitary trees. It may occur as a rare winter migrant, but would not be expected to breed within the vicinity of Subarea 2. This species is also protected by amendment to the Federal Bald Eagle Act. Subarea 2 provides suitable and abundant habitat for this species, and this species has been reported as observed in Subarea 2 both above and below the 566' elevation.

White-tailed kite (*Elanus leucurus*) SFP. White-tailed kites, while readily observable in undeveloped portions of San Bernardino County, have begun to decline sharply in the region within the last decade. Reasons for this decline have been identified as loss of foraging habitat, roost sites and nesting habitat. This species requires open habitats such as grasslands, croplands and marshes. Kites nest primarily in riparian areas with oaks, willows, cottonwoods and sycamores and forage in adjacent open spaces. The Prado Basin is known to support a relatively large breeding population of white-tailed kites. This species was observed in Subarea 2 below the 566-foot elevation line.

San Diego horned lizard (*Phrynosoma coronatum blainvilleri*) FSC, SSC. This species generally occurs in grassland, sage scrub, and chaparral, but can also be found in coniferous forest and broadleaf woodland. It is usually found in open sandy areas such as ridge tops and washes, especially where harvester ants (*Pogonomyrmex* spp.) are found. This species was formerly common throughout southern California west of the deserts, but has declined substantially as suitable habitat has been destroyed for other land uses, and as a result of over-collecting for the pet trade. Recent evidence also indicates that its preferred food, the harvester ant, has declined dramatically in areas near human habitation with the introduction and spread of the non-native Argentine ant (*Iridiomyrmex humilis*), which out competes the native species. This species has a low potential to occur anywhere in Subarea 2 due to the history of land alteration and consequent lack of habitat.

Tricolored blackbird (*Agelaius tricolor*) FSC, SSC. This species prefers to breed in marsh vegetation of bulrushes and cattails and also known to nest in willows, blackberries, and mustard. During winter months, they are often found foraging in wet pasture, agricultural fields, and seasonal wetland. Tricolored blackbirds are nomadic, wandering during the nonbreeding season and occupying colony sites intermittently. This species has a moderate potential to occur in Subarea 2 below the 566-foot elevation line.

Loggerhead shrike (*Lanius ludovicianus*) FSC, SSC. This species is a fairly common resident of lowlands and foothills in Southern California. Shrikes inhabit grasslands and other dry, open habitats. They can often be found perched on fences and posts from which prey, such as large insects, small mammals, lizards, can be seen. The loggerhead shrike has been observed in the vicinity of Subarea 2, but not in Subarea 2.

Ferruginous hawk (*Buteo regalis*) FSC, SSC. Ferruginous hawks are known to occur in the vicinity of Subarea 2 from mid-fall through early spring and forage over grasslands and the ecotone between coastal sage scrub and grasslands. The distribution of the ferruginous hawk has become reduced as a result of the loss of wintering habitat. This species has a high potential to occur in Subarea 2 below the 566-foot elevation line.

Townsend's big-eared bat (*Corynorhinus townsendii*) FSC, SSC. The Townsend's big-eared bat occurs throughout California. In the southern portion of the state, the subspecies *C.t. pallescens* occupies a variety of communities, including oak woodlands, arid deserts, grasslands, and high-elevation forests and meadows. Known roosting sites in California include mines, caves, and buildings. Subarea 2 supports suitable foraging and potential roosting habitat for this species. Townsend's big-eared bat has a moderate potential to occur on the project site below the 566-foot elevation line.

California mastiff bat (*Eumops perotis californicus*) FSC, SSC. This species is the largest bat in the United States. It is a very wide-ranging and high-flying insectivore that typically forages in open areas with high cliffs. It roosts in crevices in small colonies. This species has a moderate potential to occur in Subarea 2 below the 566-foot elevation line.

Small-footed myotis (*Myotis ciliolabrum*) FSC. The small-footed myotis occurs throughout much of the western United States occupying a variety of habitats. This species feeds among trees or over brush, and roosts in cavities of cliffs, trees, or rocks and within caves or mineshafts. The project site provides potentially suitable foraging opportunities for the small-footed myotis, it is considered to have a moderate potential to occur in Subarea 2 below the 566-foot elevation line.

Yuma myotis (*Myotis yumanensis*) FSC, SSC. This species is a relatively small bat that occurs statewide. This species is closely associated with water and wooded canyon bottoms throughout its

range. Caves and old buildings are preferred roosting habitats, with roosts numbering up to 2,000 individuals. The project site provides a limited amount of potentially suitable habitat for this species where it may occur; it has a moderate potential to occur in Subarea 2 below the 566-foot elevation line.

Southern California arroyo chub (*Gila orcutti*) SSC. This small fish occurs in the Santa Ana River and its tributaries in Orange, Riverside and San Bernardino counties. It favors small to moderate sized streams with some flow. This species has become scarce due to competition and predation by introduced species, controlled flow by Prado Dam and impacts caused by urbanization and pollution. This species has a very low potential to occur in Subarea 2 due to lack of suitable habitat.

Silvery legless lizard (*Anniella pulchra pulchra*) SSC. The silvery legless lizard is a small, secretive snake-like lizard that lives and forages beneath leaf litter, under debris or within sandy soil. It occurs in a variety of habitats including washes and woodlands, and has been previously recorded in upper alluvial fans in alluvial scrub habitat. This species has a low potential to occur anywhere in Subarea 2 due to lack of suitable habitat.

Southwestern pond turtle (*Clemmys moromata pallida*) SSC. This species is confined to quiet waters such as lakes and ponds, although also found in quiet pools in rivers and streams. Basking sites such as partially submerged logs, vegetation mats or open mud banks are required. Southwestern pond turtles hibernate under water in mud. It has declined in numbers as a result of habitat destruction, indiscriminate collecting for the pet trade, and introduction of bullfrogs and predatory exotic fishes such as bass, sunfish and catfish. This species has a low potential to occur anywhere in Subarea 2.

Burrowing owl (*Athene cunicularia hypugea*) SSC. Formerly common throughout California, this species' decline was noticeable as early as the 1940s. The burrowing owl is a gregarious owl that occupies open habitats such as grasslands, savannahs, and sparse brushlands. 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 and early evening hours, perched on fence posts or at the entrance to burrows. Their diet is predominantly large insects and small rodents, but they will also take small birds, reptiles, amphibians, fish, scorpions, and other available prey.

Breeding occurs between early March and late August. Pairs may stay together during an entire year. Clutches average about five young. After the breeding season, secondary burrows may be used for cover and roost sites. During winter, attachment to a particular burrow is reduced even more. Typically, burrowing owls form small colonies, fly low to the ground, and seldom reach heights above 25 feet. They typically live 8 years or more. Subarea 2 provides suitable habitat for this species. The burrowing owl is known to occur in Subarea 2 and the vicinity.

Cooper's hawk (*Acipiter cooperii*) SSC. Both resident and migratory populations of this species exist in the vicinity of Subarea 2, but not within it. Wintering Cooper's hawks are often seen in wooded urban areas and native woodland communities. Preferred nesting habitats are oak and riparian woodlands dominated by sycamores and willows. Cooper's hawks prey on small birds and rodents that live in woodland and occasionally scrub and chaparral communities.

Sharp-shinned hawk (*Accipiter striatus*) SSC. The sharp-shinned hawk prefers woodland communities. Some individuals of this species potentially winter in the vicinity of Subarea 2, while others continue their migration to northern South America. This species is known only as a winter migrant and does not breed in the area. The sharp-shinned hawk has a high potential to occur in Subarea 2 as a winter migrant below the 566-foot elevation line.

Northern harrier (*Circus cyaneus*) SSC. The northern harrier is a regular winter migrant and occasionally breeds in San Bernardino County. It can be expected to forage in grassland, scrub, and riparian communities. Once a relatively common species during winter, fall and spring in undeveloped areas of San Bernardino County, the northern harrier population is now greatly reduced and localized in distribution. The northern harrier is known to occur in Subarea 2 as a winter migrant below the 566-foot elevation line.

Merlin (*Falco columbarius*) SSC. In California, merlins prefer vast open space areas near water such as estuaries and grasslands where they hunt small flocking birds such as sandpipers, larks, sparrows, and pipits. In San Bernardino County, merlins are uncommon winter migrants but are known to occur within the project vicinity in winter. As merlin breeding populations in the northern latitudes rebound from previous contaminant-related reproductive problems, the species will likely be observed more frequently during winter below the 566-foot elevation line where appropriate habitat remains.

Prairie falcon (*Falco mexicanus*) SSC. This falcon prefers open habitats from the deserts to the mountains and interior valleys of southern California, where it hunts small birds and mammals. The prairie falcon is an uncommon year-round resident in southern California, but now is a rare visitor to the coastal slope of the peninsular and transverse mountain ranges in winter. The project site provides suitable foraging habitat, but no breeding habitat. This species has a moderate potential to forage onsite below the 566-foot elevation line as a rare winter migrant, but has no potential to breed onsite.

San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC. This species prefers open areas, typically occurring in alluvial sage scrub and open Riversidean sage scrub. It is known to occur in coastal southern California from approximately Santa Barbara County south into Baja California. It is a common resident in the Prado Basin including Subarea 2 below the 566-foot elevation line.

Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) SSC. The northwestern San Diego pocket mouse prefers sage scrub habitat. It is known to occur in Southern California and Baja California. There are no recorded occurrences on the project site and has a low potential to occur anywhere in Subarea 2.

Southern grasshopper mouse (*Onychomys torridus ramona*) SSC. The southern grasshopper mouse prefers open coastal sage scrub, mixed chaparral, and riparian areas. It is known to occur throughout southern California except coastal areas north of Orange County. There are no recorded occurrences in Subarea 2 and it has a low potential to occur anywhere in Subarea 2.

San Diego desert woodrat (*Neotoma lepida intermediai)* SSC. The San Diego desert woodrat is found in a variety of habitats from sea level to 8,500 feet in elevation. It occurs along the coast from northwest Baja California to San Luis Obispo County. The San Diego desert woodrat has a high potential to occur in Subarea 2 below the 566-foot elevation line.

Western least bittern (*Ixobrychus exilis hesperis*) SSC. This secretive species prefers densely vegetated brackish and freshwater marshes. It is generally considered a rare transient and summer visitor in southern California, with the exception of the Salton Sea where it is fairly common. A few local breeding records have been documented in recent years, and the species is known to have bred at San Jacinto Lake (Garrett and Dunn, 1981). Within Subarea 2, the least bittern has a low potential to occur, it would only occur as a rare and irregular visitor.

California horned lark (*Eremophila alpestris actia*) SSC. This species requires open fields and grasslands. It is a year-round resident that generally occurs in the coastal region of California, from Sonoma County south to Baja California (Grinnell and Miller, 1944). On the project site, it is a common resident in winter in agricultural fields. It may breed in or adjacent to the Prado Basin.

Yellow warbler (*Dendroica petechia*) SSC. This species generally inhabits mature riparian woodland for breeding, especially where dominated by willows or alders. It is an uncommon summer resident along the coastal slope of southern California; however, in some localities it can be fairly common (Garrett and Dunn, 1981). It is a common breeder throughout most of Subarea 2.

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) SSC. This species typically inhabits rocky slopes with relatively open shrub cover that is intermixed with grassy areas. It occurs west of the deserts from Ventura County south into Baja California. It is a local and uncommon resident in the vicinity of Subarea 2, where scrub habitats, especially coastal sage scrub, remain. It has a low potential to occur anywhere in Subarea 2.

Orange-throated whiptail (*Cnemidophorus hyperythrus*) SSC. The orange-throated whiptail occurs in open sage scrub or chaparral where loose soils and occasional rocky areas are found. The principal

threat to this species is the continued loss of habitat throughout its limited range. It is known to occur in Orange, western Riverside, and extreme southwestern San Bernardino counties. It has a low potential to occur anywhere on the project site due to lack of suitable habitat.

Coast patch-nosed snake (*Salvadora hexalepis virgultea*) SSC. The coast patch-nosed snake inhabits a variety of habitats, including chaparral and sage scrub. It is known to occur in coastal southern California from approximately Santa Barbara County south into Baja California. It was observed along Temescal Wash in 1983 and 1984 (Zembal *et al.*, 1985). It has a low potential to occur anywhere in Subarea 2 due to lack of suitable habitat.

Two-striped garter snake (*Thamnophis hammondii*) SSC. The two-striped garter snake prefers perennial and intermittent streams having rocky beds and bordered by willow thickets or other dense vegetation. It may also inhabit shallow rivers and stock ponds bordered by thick riparian vegetation. Its known range is coastal slope from County to northern Baja California and up to 4,500 feet elevation. Subarea 2 provides habitat for this species below the 566-foot elevation line. It is known to occur in the project site and vicinity.

Northern red diamond rattlesnake (*Crotalus ruber ruber*) SSC. The northern red diamond rattlesnake inhabits a variety of open scrub habitats grasslands, dry washes, and woodlands. Its known distribution is primarily along the coastal slope of the transverse and peninsular ranges from southern San Bernardino County south to Baja California, and from sea level to around 1,500 meters (5,000 feet) (Stebbins, 1966). It has a low potential to occur anywhere on the project site due to lack of suitable habitat.

Western spadefoot toad (*Scaphiopus hammondii*) SSC. The western spadefoot toad inhabits arid and semi-arid regions in the lowlands and foothills (below 4,500 feet) in washes, river floodplains, alluvial fans, playas, and alkali flats. It is known to occur primarily in the Central Valley and adjacent foothills, and in the Coast Ranges from Redding to northwestern Baja California. It is now believed to be extirpated from the Santa Ana River watershed (Jennings and Hayes, 1994). It has a low potential to occur anywhere on the project site due to lack of suitable habitat.

Wildlife Corridors

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. Corridors effectively act as links between different populations of a species. The smaller the

population, the more important immigration becomes, because prolonged inbreeding with the same individuals can reduce genetic variability. An increase in a population's genetic variability is generally associated with an increase in a population's health.

The Chino Expressway (SR-71) and Euclid Avenue (SR-83), along with other arterial roadways (e.g., Pine and Kimball Avenue), present significant existing barriers to wildlife dispersion. Physical barriers along with noise, motion, light and startle impacts are associated with traffic on these roadways. In general terms, wildlife movement into the more developed or disturbed portions located in the northern half of Subarea 2 is difficult and unlikely. However, the southern half below the 566-foot inundation line may host a network of wildlife movement, connecting the Chino Hills with the Santa Ana River Watershed and interior regions of Riverside and San Bernardino counties. Many wildlife species travel to Prado Basin and surrounding areas supporting year-round water sources to breed and forage.

Below the 566-foot Inundation Line. The Santa Ana River is a major drainage that connects coastal regions of Orange County with interior regions of Riverside and San Bernardino counties. Mill Creek and the Santa Ana River are regional corridors that link riparian ecosystems from the immediate coastal plain with the interior plains and valleys of the region. The Prado Basin, with its extensive riparian woodland, provides significant bio-diversity and serves as a major link within this regional corridor. Within the Prado Regional Park, wildlife species can move relatively unimpeded, but dispersion becomes further restricted to the north due to urban development.

Above the 566-foot Inundation Line. Within the developed and agricultural areas above the 566-foot inundation line, there are no wildlife movement corridors. Wildlife movement is predominantly limited to opportunistic species. Opportunistic wildlife species include coyote (*Canis latrans*), raccoon (*Procyon lotor*), skunk (*Mephitis mephitis*), opossum (*Didelphis virginiana*) and bobcat (*Lynx rufus*). Wildlife movement within these areas is currently fairly low due to the presence of domestic dogs, which tend to be more aggressive, and habitat fragmentation of the open areas due to fencing and roads.

Wetlands And Drainage Areas

This section describes the regulatory environment for wetlands and drainage areas in the Project Area. Any proposed urban development extending across and within existing jurisdictional drainages will require an assessment and delineation for jurisdictional waters of the United States. This assessment includes an evaluation of USACE jurisdiction, pursuant to Section 404 of the Clean Water Act; the Regional Water Quality Control Board, pursuant to Section 401 of the Clean Water Act; and a determination of CDFG jurisdiction, pursuant to Section 1600 of the Fish and Game Code for any activities proposed in the bed, bank, or channel of any creek or stream. Formal delineation of

jurisdictional boundaries will be conducted prior to any individual development projects with the potential to impact any of these jurisdictional areas.

Although formal jurisdictional determinations were not conducted during the survey for this EIR, preliminary notations were made of areas potentially regulated by the USACE and CDFG. Seven water bodies or natural features were recognized as possibly falling under the jurisdiction of the USACE and/or CDFG.

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. Three small ponds are used by the Prado Recreation Dog Training Facility, and are likely jurisdictional. Prado Lake also is a jurisdictional water and is heavily utilized by waterfowl and foraging raptors. Continuing northeast of Prado Lake along the western boundary of the Preserve 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 contaminated by dairy waste. This drainage is also the spillway outlet for Prado Lake and converges with Chino Creek.

The predominant surface water features above the 566-foot inundation line are agricultural detention basins associated with agricultural activities and primarily contain contaminated dairy wastewater. These manmade detention basins are excluded under USACE and CDFG jurisdictions.

USACE Jurisdiction

The discharge of dredged or fill material (temporarily or permanently) into areas delineated, as "waters of the United States" requires prior authorization from the USACE, pursuant to Section 404 of the Clean Water Act. Within Subarea 2, potential USACE jurisdiction encompasses waters of the United States, including adjacent wetlands.

<u>Waters of the United States</u>

Waters of the United States, as defined in the Code of Federal Regulations (CFR) 328.3 include all waters or tributaries to waters such as lakes, rivers, intermittent and perennial streams, mudflats, sandflats, natural ponds, wetlands, wet meadows, and other aquatic habitats. Frequently, a water of the United States (with at least intermittently flowing water or tidal influences) is demarcated by the ordinary high water mark (OHWM), defined in CFR 328.3(e) as the line on the shore established by the fluctuations 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 this area, the OHWM is indicated by the presence of an incised streambed with defined bank shelving.

Wetlands

According to the Federal Manual for Identifying and Delineating Jurisdictional Wetlands (1987), three criteria must be satisfied to classify an area as a jurisdictional wetland. These are: 1) a predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation); 2) soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils); and 3) permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology).

Regulated Activities

Activities that usually involve a regulated discharge of dredged or fill material include, but are not limited to, grading, placing of rip-rap for erosion control, pouring concrete, laying sod, and stockpiling excavated material. Activities that generally do not involve a regulated discharge (if performed specifically in a manner to avoid discharges) include driving pilings, drainage ditch maintenance, temporary mining and farm/forest roads, and excavating without stockpiling.

CDFG Jurisdiction

The Fish and Game Code of California mandates that "it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity." CDFG jurisdiction includes ephemeral, intermittent and perennial watercourses (including dry washes) characterized by (1) the presence of hydrophytic vegetation; (2) the location of definable bed and banks; and (3) the presence of existing fish or wildlife resources. Furthermore, CDFG jurisdiction is often extended to habitats adjacent to watercourses, such as oak woodlands in canyon bottoms or willow woodlands that function as part of the riparian system.

Wetlands and Drainage Areas in Subarea 2. Although formal jurisdictional determinations have not been conducted, general notations were made of areas potentially regulated by the USACE and CDFG. Seven water bodies were recognized as most likely falling under the jurisdiction of the USACE and CDFG, in addition to hosting a variety of waterfowl. 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 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 dairy waste. This drainage is also the spillway outlet for Prado

Lake and converges with Chino Creek. Detention basins associated with dairy activities are excluded under USACE and CDFG jurisdictions.

5.4.3 THRESHOLDS OF SIGNIFICANCE

The following criteria for establishing the significance of potential impacts on biological resources were derived from the CEQA Guidelines (Section 15064). The level of significance is based upon published information on the responses of plant and wildlife communities to development, and to knowledge regarding the distribution and habitat requirements of plants and wildlife of the region. A significant impact would, therefore, occur if the proposed project would:

- 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.

- 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.

- Have a substantial adverse effect on federally protected wetlands as defined by Section 401 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

- 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.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

An evaluation of whether an impact on biological resources would be substantial must consider the resource and how that resource fits into a regional or ecological context.

The definition of "substantial" depends on the resource in question. Substantial impacts would be those that would diminish or result in the loss of an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant because, although they would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the

permanent loss of an important resource on a population-wide or region-wide (including the Prado Basin and the Chino Hills) basis.

5.4.4 PROJECT IMPACTS

The proposed project includes the development of a portion of approximately 5,435 acres currently within Subarea 2 and allows up to 9,779 dwelling units on 1,236 acres; 627 acres of business uses; 584 acres of Public Facilities and Rights-of-ways; and approximately 2,988 acres of Open Space (Recreation, Agriculture and Natural Open Space). Proposed development would be concentrated in the northern portion of Subarea 2, comprising approximately 2,609 acres, primarily above the Prado Basin high water inundation line (elevation 566 feet). Lands generally south of the 566-foot elevation containing 2,835 acres are planned for various agricultural and open space uses, which are generally protective of biological resources. Exhibit 3.2-1 depicts the proposed land uses.

Summary of Impacts to Biological Resources Above the 566 ft. Elevation

Biological resources and other agricultural open space with habitat value located above the 566-foot inundation line will be impacted by project implementation. Table 5.4-4 provides the acreage of each land cover type affected by the proposed Specific Plan development. The table does not include an acreage breakout for developed land or land cover types below the 566-foot elevation.

TABLE 5.4-4
LAND COVER TYPE AFFECTED BY PROPOSED DEVELOPMENT ABOVE THE 566-FOOT ELEVATION LINE AND WITHIN SUBAREA 2

Land Cover Type	Acres Lost Above 566 ft Line	Acres within Subarea 2	Percent (%) Lost
Detention Basins	38	74	51%
Marsh	0	9	0%
Open Water	0	77	0%
Dairy	1,084	1,436	76%
Pasture	496	640	77%
Fallow Fields	1	545	<1%
Windrows	17	24	71%
Riparian	1	531	<1%
Cropland	702	1,539	46%
Totals	**2,349**	**4,877**	**48%**

Summary of Impacts to Biological Resources Below the 566-foot Elevation

The Specific Plan's land use designations below the 566-foot elevation consist almost entirely of Open Space-Recreation (OS-R), Open Space-Water (OS-W), Agriculture/Open Space-Natural (AG/OS-N) and Open Space-Natural (OS-N) uses. Table 5.1-5, Open Space Uses, identifies allowable uses under each of these designations.

The USACE *Prado Flood Control Basin Project Master Plan* (3/93) identifies a Land Classification Plan for the Prado Basin that includes portions of the proposed project area below the 566-foot elevation in several land categories—Extreme Resource Area, Mitigation Sites, and Proposed Recreation Development (see Exhibit 5.1-3 provided in Appendix A).

Areas of high biological sensitivity within the Chino Creek and Mill Creek floodways below the 566-foot elevation line are included within an *extreme resource area.* These areas include critical habitat areas identified as suitable only for extremely low intensity use. The majority of the lands below the 566-foot elevation consist of existing recreation development (i.e., Prado Regional Park and concessions) or fall into the USACE's *proposed recreation development* classification. USACE's proposed recreation development classification includes areas designated for future recreation development consistent with multiple resource management objectives. These federal land use designations include uses that are potentially allowed by the Prado Flood Control Basin Master Plan.

The proposed Specific Plan includes a 566-Foot Dam Inundation Elevation Overlay (DIO) applied to all lands below 566-foot elevation inundation area. This overlay requires that 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. Finally, USACE has indicated that its master plan is being updated and will soon be released for land uses at Prado FCB. 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 to avoid or minimize risks.

Impacts to Subarea 2 Vegetation

Proposed development will result in the loss of most of the remaining ruderal plant species within the northern portion of Subarea 2 above the 566-foot elevation line. Due to years of intense agricultural activities, the habitat and plant communities have deteriorated through the introduction of non-native species and fragmentation by roads and cultivated land. Development is not proposed below the 566-foot inundation line and, therefore, existing habitat and plant communities will not be impacted.

No significant impacts to naturally occurring vegetation and plant communities are expected to occur.

Four sensitive plant species were identified as having a low or very low potential to occur within the boundaries of Subarea 2 below the 566-foot elevation line (see Table 5.4-2 above). Additionally, one sensitive natural community, the Southern Cottonwood Riparian Forest, occurs below the 566-foot inundation line and along the southern boundary of Subarea 2 along Mill Creek. This community is included within the Open Space Natural (OS-N) designation and no urban development is allowed in this area by the Specific Plan.

No significant impacts to sensitive plant species and/or sensitive plant communities, including Southern Cottonwood Riparian Forest, are expected to occur.

Impacts to Subarea 2 Wildlife

Potential impacts to wildlife is presented by habitat type occurring within Subarea 2.

Surface Water and Riparian Habitat

Surface water and riparian areas within Subarea 2 provide important foraging habitat for bird and other wildlife species. These areas are, therefore, considered an important resource for wildlife in the area. Loss of surface water and riparian habitat may create interference with the movement of migratory species and elimination of foraging, roosting and nesting habitat. However, surface water above the 566-foot elevation line is limited to agricultural detention basins. The loss of the agricultural detention basins above the 566-foot elevation line which are contaminated with dairy wastewater is not considered a significant impact.

No urban development below the 566-foot elevation line is allowed in the Specific Plan, so there should be no loss of surface water and riparian areas. No impacts are expected.

Least Bell's Vireo Critical Habitat

Currently, all riparian habitat below the elevation of 543 feet, is federally designated as least Bell's vireo critical habitat by the USFWS. These areas are all located in the southern portion of Subarea 2 below the 566-foot elevation line and are designated Open Space Natural (OS-N) by the Specific Plan. No urban development is allowed by the Specific Plan in these areas.

There will be no loss of least Bell's vireo habitat and, therefore, no direct impact to this species. However, uncontrolled public access, discharge of untreated stormwater, or flood control projects, unless mitigated, could impact habitat below the 566-foot elevation line.

Southwestern Willow Flycatcher Habitat

Currently, all areas within the 100-year floodplain below the 566-foot elevation line where thickets of riparian trees and shrubs occur or may become established as a result of natural floodplain processes are designated as southwestern willow flycatcher critical habitat by the USFWS. These areas are designated Open Space Natural (OS-N) by the Specific Plan which restricts uses that will compromise habitat values. No urban development is allowed by the Specific Plan in this area.

There will be no loss of southwestern willow flycatcher habitat and no direct impacts to this species. However, uncontrolled public access, discharge of untreated stormwater, or flood control projects, unless mitigated, could adversely impact habitat below the 566-foot elevation line.

Western Yellow-Billed Cuckoo Habitat

Currently, all areas within the 100-year floodplain below the 566-foot elevation line where thickets of riparian trees and shrubs occur or may become established as a result of natural floodplain processes could provide habitat for the western yellow-billed cuckoo. This species has a moderate potential to occur in the riparian habitat associated with Mill Creek. These areas are designated Open Space Natural (OS-N) by the Specific Plan which restricts uses that will compromise habitat values. No urban development is allowed by the Specific Plan in this area.

There will be no loss of western yellow-billed cuckoo habitat and no direct impacts on this species. However, unless mitigated, uncontrolled public access, discharge of untreated stormwater, or flood control projects could adversely impact habitat below the 566-foot elevation line.

Loss of Agricultural Open Space

Much of the agricultural lands and other open space within Subarea 2 provides roosting and foraging habitat for populations of several raptor species, including burrowing owl, and is part of the larger Prado Basin/Chino Valley/Chino Hills region which functions as a discrete ecological unit or system. Land cover types within Subarea 2 considered suitable roosting and foraging habitat include most agricultural land types with the exclusion of dairy lands. Dairy lands are principally stockyards devoid of all vegetation, heavily disturbed and covered with cow manure. Agricultural lands considered suitable roosting and foraging habitat include croplands (both active and fallow fields), pasture lands, and associated windrows. In total, there is 1,256 acres of land that may provide roosting and foraging habitat for burrowing owl and other raptor species, generally north of the 566-foot inundation line (see Table 5.4-4), that will be lost at project build-out.

This represents a loss of 2.2 percent of all suitable raptor foraging habitat within the existing region (see *The Preserve Raptor Foraging Habitat Assessment* by PCR, Appendix B). This loss was

determined not to have a significant adverse effect on regional raptor populations (excluding burrowing owls) and eagles. However, this loss of agricultural Open Space would have a significant impact on the local burrowing owl population. Cumulative impacts are discussed in Section 5.4.5.

Delhi Sands Flower-loving Fly Habitat

A remnant of the Delhi series soils are located within the extreme northeasterly sector of Subarea 2, east of Chino Airport. The Draft Recovery Plan for the Delhi sands flower-loving fly (DSF), prepared by the USFWS, indicates that some utility rights-of-way and a few other locations that fall within Subarea 2 (designated as the Ontario Recovery Unit) may be suitable as habitat restoration sites for reestablishing the DSF in the area. Under the USFWS' Draft Recovery Plan, it is unlikely that any restoration effort would achieve the desired goal of contributing to the recovery of the DSF.

Under the thresholds of significance, impacts to the DSF would be significant if they would "substantially affect a rare, endangered, or otherwise sensitive species of plant or animal or the habitat of such species". The Specific Plan designates lands in the northeast sector of the Plan Area as Agricultural (AG), consistent with existing uses. All of this area is owned by the Southern California Agricultural Land Foundation (SCALF) and/or the County of San Bernardino. This area has been under active agricultural use for over 50 years and no longer supports native DSF habitat. Although protocol surveys have not been conducted within that area, it is very unlikely that the area is occupied by DSF and it is likely the area will remain uninhabitable without costly and long-term restoration measures. Numerous protocol inventories for DSF over the last 5 years in the adjacent cities and communities of Mira Loma, Rancho Cucamonga, Ontario, and Fontana have all been negative.

Because it is unlikely that DSF exists in Subarea 2 and the Specific Plan's land uses for areas containing Delhi soils are consistent with existing agricultural uses, the Project would not result in any direct or indirect significant impacts to this species.

Wildlife Movement

Movement by wildlife within or into the northern portions of Subarea 2, above the 566-foot elevation line, has been greatly reduced due to the intense existing agricultural activities, lack of viable water sources and lack of native habitat. However, the southern portion of Subarea 2, below the 566-foot elevation line, accommodates wildlife movement, linking the Chino Hills with the Santa Ana River Watershed. Additionally, the southern portion of the site provides year-round water supplies and foraging areas. Many wildlife species travel to Prado Basin and the surrounding area to breed and forage. Proposed development will be limited to the northern portion of Subarea 2, primarily above the 566-foot elevation line.

The northern portion of Subarea 2 does not contribute significantly to wildlife movement or migration; therefore, the proposed development within this portion of Subarea 2 will not significantly impact wildlife movement. Lands below the 566-foot elevation are planned for Open Space, passive Recreation and Agricultural uses that are consistent with the existing pattern and low intensity of open space uses in this area. This open space and low-intensity land use will remain compatible with wildlife movement in the Prado Basin and will not be a significant impact on wildlife movement.

Impacts to Subarea 2 Drainage Areas, Riparian Habitats, and Potential Wetlands

Two small drainages extend south from the Chino Airport north of the 566-foot elevation line in Subarea 2 before joining Prado Lake within Prado Regional Park. Those two drainage courses are quite dry in most locations, and are essentially narrow roadside drainage ditches that are sparsely vegetated with weeds in many areas. These two watercourses provide little biological value in their present condition and less than 1 acre of riparian habitat exists above the 566-foot elevation line.

Two major creeks transverse Subarea 2 below the 566-foot elevation line: Chino Creek which drains southerly along the base of the Chino Hills and Mill Creek which drains into the eastern portion of the Prado Basin and eventually into the Santa Ana River. These drainage courses support significant riparian vegetation and provide areas of high biological sensitivity.

Most development will occur above the 566-foot elevation line where wetlands and jurisdictional waters are extremely limited, and will not have an impact on these sensitive biological resources. However, all developments within wetlands and jurisdictional drainages require coordinated review and permitting with the USACE, CDFG, and/or the Regional Water Quality Control Board. The loss of wetlands and jurisdictional drainages will be mitigated, if needed, as part of these permitting procedures.

5.4.5 CUMULATIVE IMPACTS

Ongoing development in Subarea 2 and the surrounding Prado Basin region will contribute to the incremental loss of open space and, with it, habitat for plants and wildlife. Past agricultural activities in Subarea 2 and the rate of present development in the surrounding region has already resulted in the decline of several species. The economic value of the remaining areas is expected to continue to increase, resulting in increased pressure for further development.

Future development within Subarea 2 above the 566-foot elevation line will result in the continued conversion of agricultural lands and open space areas to a built environment. This reflects a regional land use decision by the counties of Riverside and San Bernardino and the cities of Ontario and Chino. As stated in Section 5.4.4, the loss of open space and agricultural lands will not have a direct impact on any federal or state listed species occurring within the project site or within the region as a

whole. All listed species occur below the 566-foot elevation line and, therefore, occur in an area that will not be subject to urban development. With the exception of burrowing owl nesting and foraging habitat, impacts to biological resources were determined to be insignificant at the project level, but were cumulatively significant for the loss of raptor foraging habitat. A separate and independent regional analysis of raptor foraging habitat by PCR Services Corporation found that the loss of foraging habitat in Subarea 2 was a insignificant impact to the raptor populations within the Prado Basin and Chino Hills at the project level (a loss of 2.1%), but significant when considered cumulatively. The loss at the regional level of burrowing owl nesting and foraging habitat above 566-foot elevation line within Subarea 2 was determined to be significant at the project level and cumulatively at the regional level. Thirteen separate planned and/or approved projects are within the region and will result in the loss of 9,246 acres of an estimated 124,500 available acres for raptor foraging. This total represents approximately 16.5 percent of the existing available habitat in the region. This cumulative loss is a significant adverse impact to regional populations of raptors.

Mitigation measures identified in this EIR (Section 5.4.6), including preparation and implementation of a Resources Management Plan and adherence to the various wildlife and habitat permitting procedures, would address the loss of riparian habitat and loss of upland wildlife habitat on a local and regional level.

5.4.6 MITIGATION MEASURES

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 and waterfowl habitat, and cumulative loss of agricultural and open space lands with habitat value. These impacts are largely restricted to areas planned for development above the 566-foot elevation inundation line, away from the most sensitive areas below the 566-foot elevation line. Land Use Designations in these more sensitive areas have been designated for open space and agricultural uses, thereby avoiding impacts to biological resources. Additional impacts to the sensitive biological resources below the 566-foot elevation line could occur from increased public access and use of the open space system if not mitigated. The Specific Plan zoning designations for all land below the 566-foot inundation line restricts development likely to cause significant adverse impacts to biological resources.

The following mitigation measures shall be implemented to eliminate or reduce potentially significant impacts to biological resources.

B-1 <u>Zoning and Land Use Regulation</u>

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 <u>Required Biological Studies</u>

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 <u>Resources Management Plan</u>

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 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.

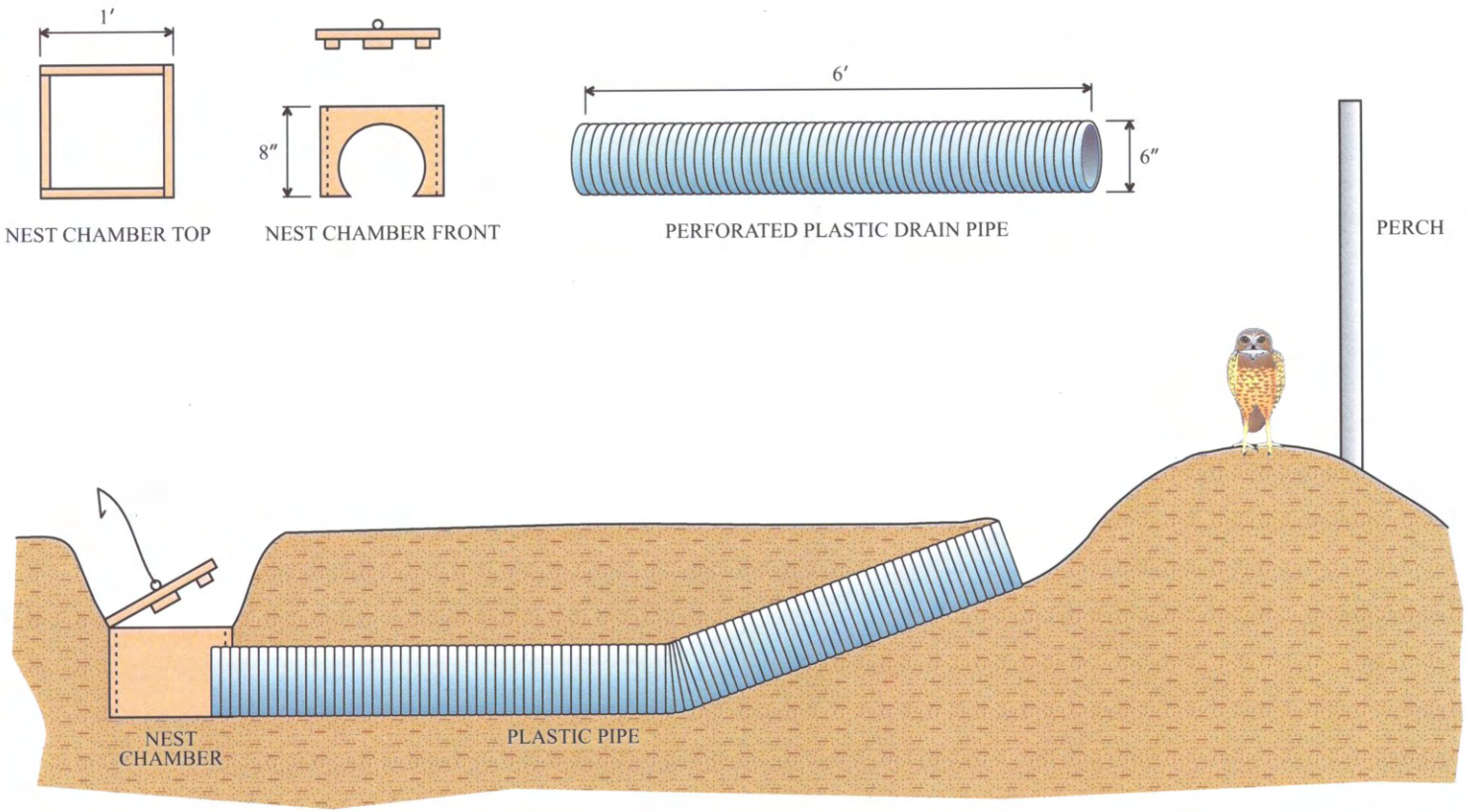
b.) Installation and maintenance of twenty (20) artificial burrowing owl nesting sites to mitigate for the loss of burrowing owl habitat. An illustrative example of an artificial burrow is provided in Exhibit 5.4.4). Nesting sites will be located and designed to facilitate use by burrowing owls.

c.) 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.

d.) 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,



Michael Brandman Associates

05760012 • 07/2002

Exhibit **5.4-4**

Artificial Nest Design for Burrowing Owls

THE PRESERVE • CHINO SUBAREA 2

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 (Exhibit 5.4.4). 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 (see Exhibit 5.4.4).

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 study 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.

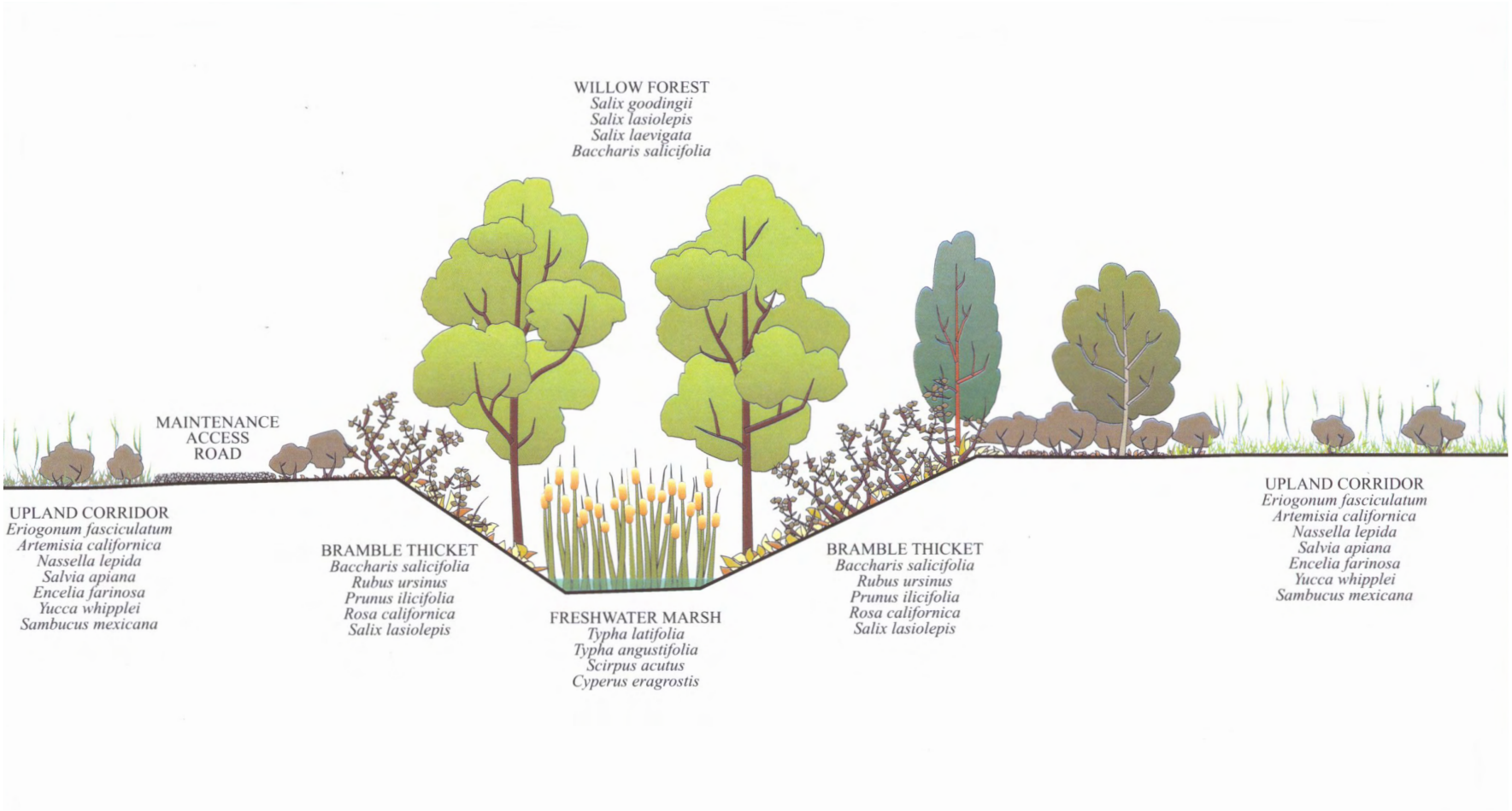
While every reasonable effort will be made to seek such a buffer, this mitigation measure does not require land acquisition or obtaining any agreements with landowners in the form of an irrevocable license, conservation easement, right of entry, or other legally enforceable instrument for the purposes 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 5.4.5) 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. Exhibit 5.4.6 provides an illustrative example of how the drainage area may be designed. 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.



NORTH

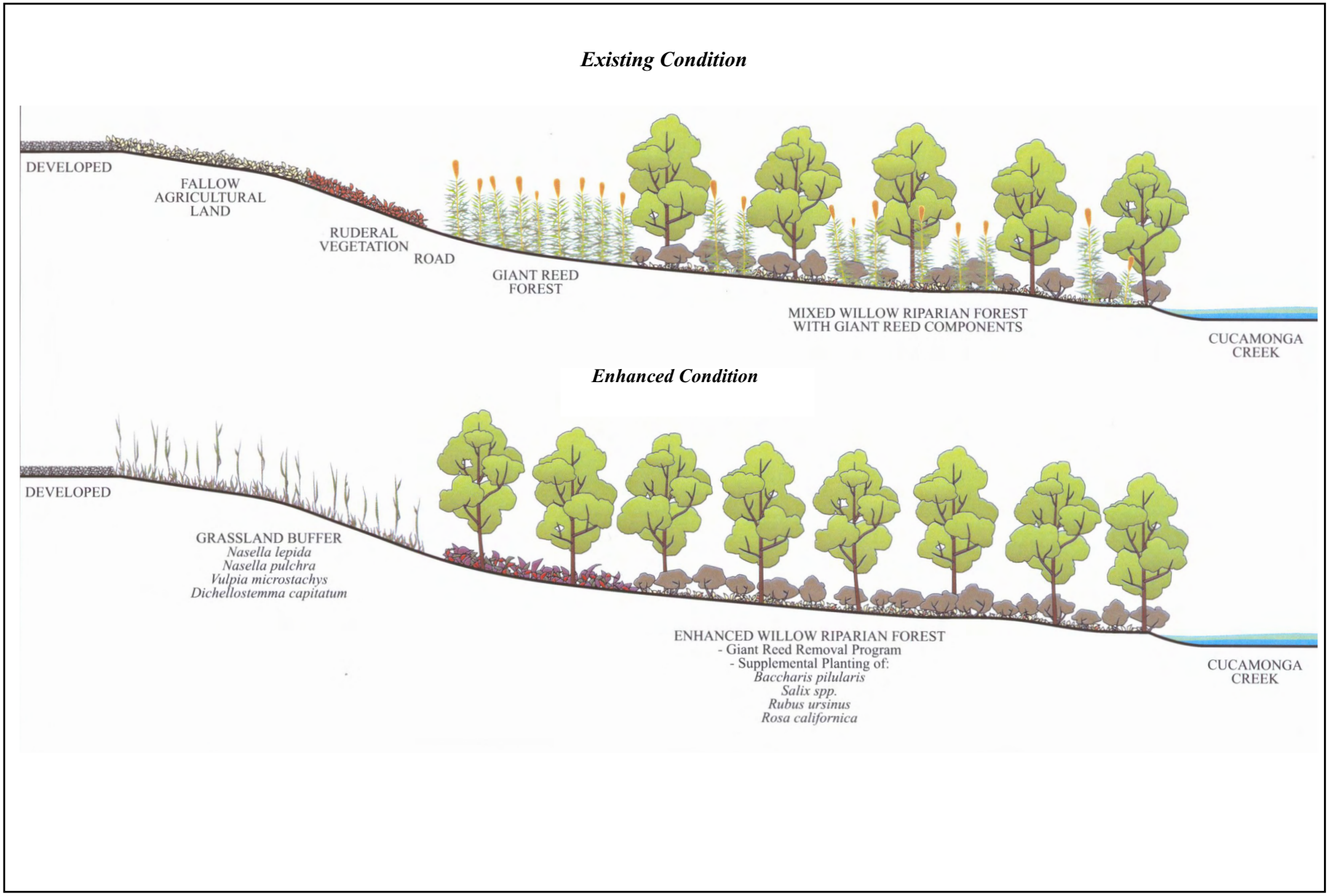
Michael Brandman Associates

05760012 • 07/2002

Exhibit **5.4-5**

Conceptual Cross Section For Drainage B

THE PRESERVE • CHINO SUBAREA 2



NORTH

Michael Brandman Associates

05760012 • 07/2002

Exhibit **5.4-6**

Conceptual Cross Section For 300 Acre Conservation Area

THE PRESERVE • CHINO SUBAREA 2

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 study 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 ornithologist.

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 their involvement 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.

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 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.

5.4.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the above mitigation measures would reduce, avoid, lessen or compensate for some, but not all, of the adverse impacts to biological resources above the 566-foot inundation line. Impacts to burrowing owls from the loss of nesting and foraging habitat will remain significant. Impacts to Delhi Sands flower-loving fly and/or its habitat are considered non-significant. Impacts to regional raptor populations are also considered non-significant at the project level but cumulatively will have a significant impact. There will not be any significant adverse impacts to wildlife movement in the region.

Impacts to biological resources below the 566-foot inundation line will not be significant. Although least Bell's vireo are known to occur and have federally designated critical habitat within Subarea 2 below the 566-foot inundation line, and southwestern willow flycatchers and yellow-billed cuckoos were determined to have a high probability of occurrence below the 566-foot line, no direct or indirect impacts will occur to these species as a result of the project.

5.5 GEOLOGY AND SOILS

5.5.1 INTRODUCTION

This section describes the characteristics of the rock units, the surficial (alluvial) deposits, and the geologic fault systems within and adjacent to the project area (the 'plan area'), as those characteristics affect the future development potential. Existing geologic and soils conditions have been analyzed at the 'plan' level of environmental review. Areas where geologic/seismic and related hazards are likely to occur are identified in order to provide guidance for more detailed geologic assessments to occur with subsequent projects within the plan area.

This section summarizes a report of geologic, soils engineering and seismic conditions compiled for this plan area by Wilson Geosciences Inc. (2000). The impacts associated with various geologic hazards (fault rupture, ground shaking, liquefaction, foundation suitability, and slope stability) are addressed in this section.

5.5.2 EXISTING CONDITIONS

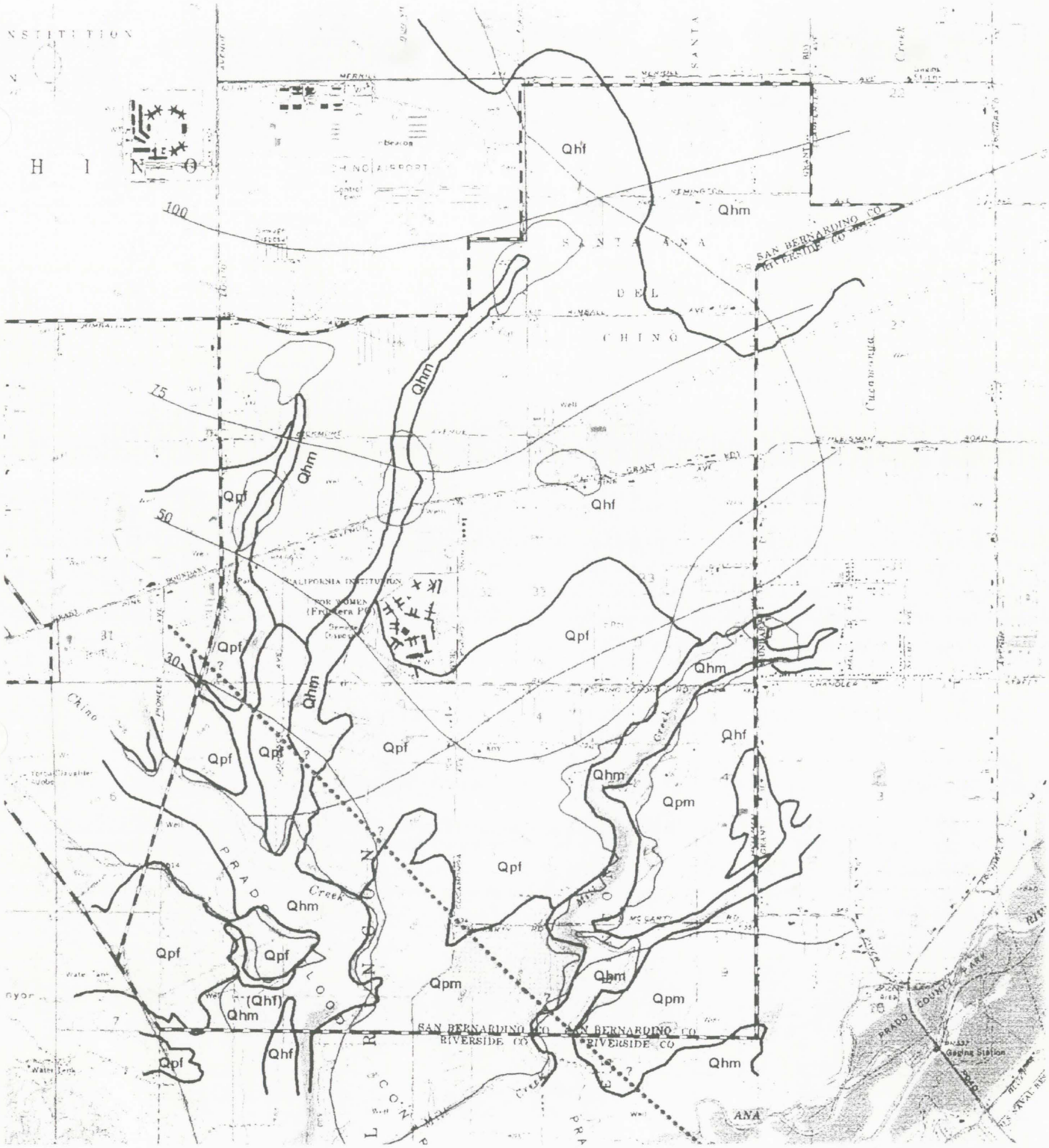
The plan area is entirely underlain by Pleistocene and Holocene (Recent) alluvium. There is a small bedrock exposure just west of the western boundary. Surficial units, faulting, seismicity, soils and slope, groundwater and subsidence conditions are described in this section.

Surficial Geologic Units

The surface geology of the plan area consists of four distinct alluvial units: two are Holocene (< 12,000 years old) and two are late Pleistocene (>12,000 years old).

Medium-Grained Holocene Alluvium (Qhm)

The youngest surficial unit is a medium-grained Holocene alluvium present in the stream valleys that trend northeast-southwest to northwest-southeast (mainly in the southern half of the property) and as fan deposit in the far northeast corner of the property (Figure 5.5-1). These are unconsolidated deposits of fine-to-coarse-grained sand with interbeds of gravel and silt. As such these sand deposits are moderately to highly permeable and subject to erosion.



Fault Contact

Geologic Contacts

Qhm Medium-grained Holocene Alluvium

Qhf Fine-grained Holocene Alluvium

Qpm Medium-grained Late Pleistocene Alluvium

Qpf Fine-grained Late Pleistocene Alluvium

75 Minimum Depth to Groundwater (feet)

Bogs, Swamps and Marshlands

Approximate Artesian Area (southern extent)

SOI/Euclid Ave. Boundary

City of Chino Boundary

SOURCE: Psomas

NORTH

3250 1625 0 3250

SCALE IN FEET

Michael Brandman Associates

Exhibit **5.5-1**

Geology

Qhm covers roughly 30 percent of the plan area. The edges of the Qhm deposits merge with and overlie the older fine-grained Holocene alluvium (Qhf) described below, in the northeast corner of the property. Qhm in the alluvial valleys overlies the much older fine- and medium-grained Pleistocene alluvium (Qpf and Qpm), which together make up nearly one-half of the plan area.

Engineering characteristics of the Qhm unit are expected to be variable, but generally will require precautions. It is expected that the materials will be relatively porous, compressible, and subject to consolidation under structural loads. Erosion potential is moderate to high.

Fine-Grained Holocene Alluvium (Qhf)

Qhf is the third most abundant geologic unit within the plan area (~25%). It underlies roughly the northern half, and is present along the east and southeast edges, of the property (Fig. 5.5-1). Deposition of this fine-grained unit was in a low-energy, possibly restricted basin. Qhf overlaps older Pleistocene (Qpf and Qpm) alluvium deposited from the north, and rests against the bedrock along the western boundary.

This alluvium is considered moderately permeable to impermeable, and moderately to slightly erodible. Engineering characteristics of the Qhf will require precautions with regard to porosity, compressibility, and long-term consolidation under structural loads.

Medium-Grained Late Pleistocene Alluvium (Qpm)

This Pleistocene alluvium (Qpm) is the least abundant of the four surficial units, covering about 15 percent of the plan area, and is distributed primarily in the southeast corner. Deposition was in a river and alluvial fan environment with sediment sources probably to the north and northeast.

Qpm consists of fine- to coarse-grained sand that is weakly to moderately consolidated. Engineering properties will be variable but generally superior to those of the younger units. Qpm will be porous, moderately permeable, slightly compressible, and subject to some consolidation under structural loads. Erosion potential should be moderate in fresh exposures. Foundation and backfill suitability should be high with proper preparation and compaction.

Fine-Grained Late Pleistocene Alluvium (Qpf)

Qpf is the oldest surficial unit exposed, and along with Qhm, is the most widespread, occupying about 30% the plan area within the south-central portion and along the far western edge. Qpf consists of clay and silty clay. Engineering properties of the Qpf should be similar or somewhat superior to Qhf due to their similar lithology and depositional history. Therefore, Qpf will require precautions,

including proper engineering and geologic investigation, and implementation of report recommendations.

Bedrock Formation

The Sycamore Canyon Member of the Puente Formation (upper Miocene) crops out just beyond the southwestern perimeter of The Preserve, on the lower slopes of the Chino Hills. It could be encountered in relatively shallow subsurface excavations within adjacent portions of the plan area. This unit consists of sandstone, conglomerate, siltstone, and shale deposited in a deep offshore marine basin. Provided that standard engineering geologic and soils engineering investigation recommendations are implemented, this bedrock should be suitable for engineering purposes (i.e., foundations and backfill)

Faulting

Large and/or shallow earthquakes can result in surficial ground rupture along the fault trace. Both earthquake-induced shaking and fault rupture hazards are apparent within the plan area. Active (Holocene offset) and potentially active (Pleistocene) faults are potential sources for fault rupture in the plan area. In general, the more recent a fault's last movement, the higher its potential for future movement. Numerous faults in the vicinity of Chino have seismic potentials that can result in severe shaking. No Alquist-Priolo Earthquake Fault Zones are mapped on the site.

Central Avenue Fault

The plan area is just southeast of the potentially active Central Avenue fault. This buried fault is parallel to Central Avenue along its eastside, from just south of Kimball Avenue to the I-10 in Pomona The Central Avenue fault also parallels the Chino fault, which lies to the west along the base of the Chino Hills. Both faults are part of the Elsinore-Chino-Whittier fault system. Although only the North Elsinore and Whittier segments show clear evidence of Holocene offset, several factors suggest that the Central Avenue fault offsets near surface Holocene deposits.

Other Possible Late Quaternary or Younger Faults

An unnamed fault southeast of the plan area extends to the County line and can be projected northwesterly through the site on a trend that parallels the Central Avenue and Chino faults (Exhibit 5.5-2). This fault offsets late Pleistocene medium-grained alluvium (Qpm) on the on the terrace along south side of the Santa Ana River.

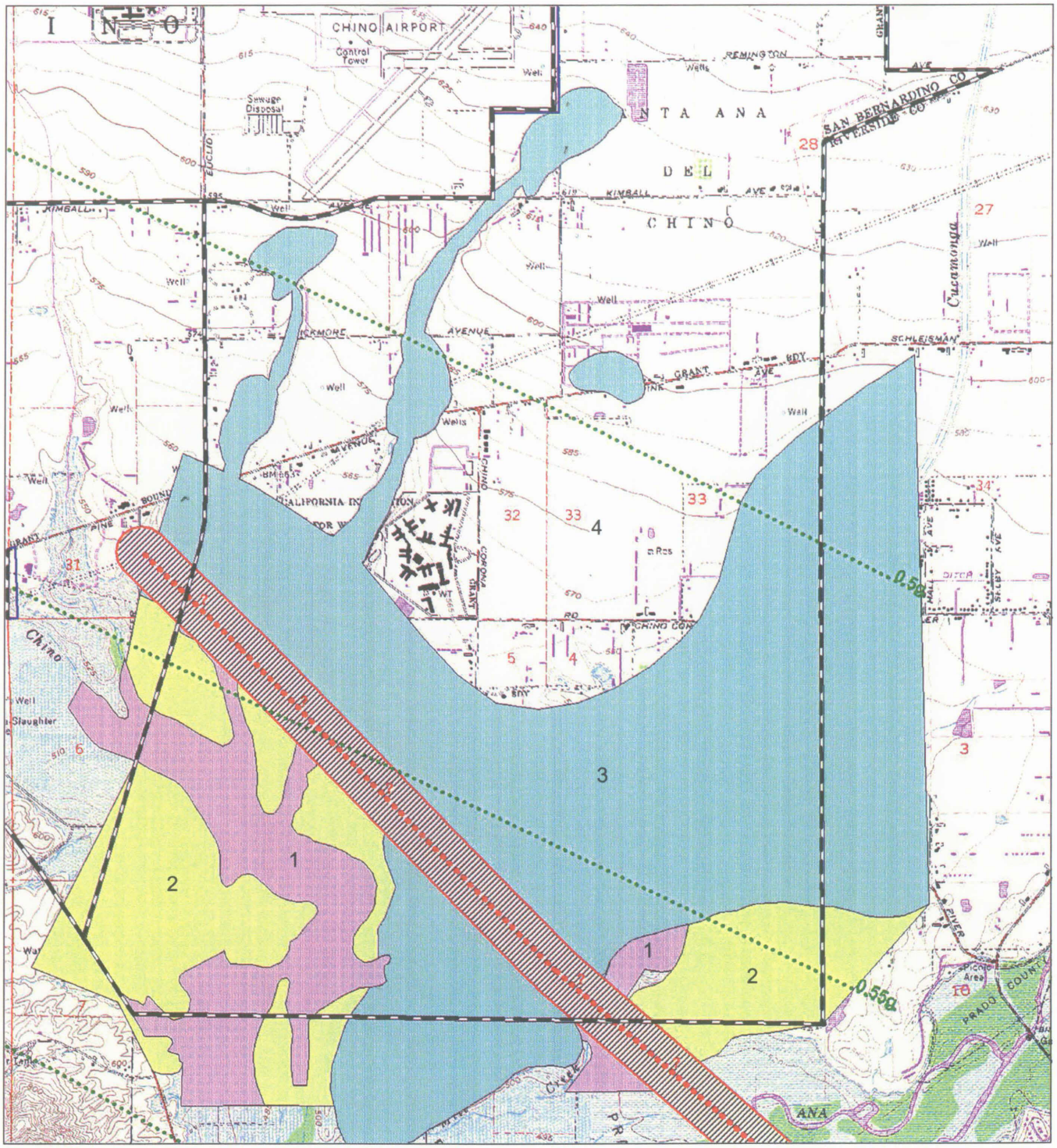
Aerial photographs reveal numerous lineaments in this area that appear to be of tectonic origin, but their history of movement is unknown. There is plausible evidence associated with lineaments and

groundwater barriers for late Pleistocene, and possible Holocene activity (faulting, uplift, and/or folding). Several northwest-trending lineaments subparallel the Central Avenue and Chino faults and enter the plan area at Chino-Corona Road east of Pioneer Avenue. Another northwest-trending lineament, east of the projected trace of the Central Avenue fault, enters the site at Pine and Euclid Avenues, and is distinguished by stream channel deflections and relatively abrupt changes in topography.

Seismicity

Table 5.5-1 lists data on the 20 active faults within 50-miles of the plan area that are capable of producing severe earthquakes. Of these, the Chino, Whittier-North Elsinore, and Sierra Madre-San Fernando faults have the potential to generate the strongest earthquakes in the plan area. The maximum probable earthquake is the 100-year event normally considered in design of non-critical structures, whereas the maximum credible event (MCE) must be considered in the design of critical or important facilities such as hospitals, dams, and class III landfills.

MCEs on the Chino, Whittier-North Elsinore, and Sierra Madre-San Fernando, and Elsinore faults would yield accelerations in the plan area ranging from 0.29 to 0.59 g. Although the two San Andreas fault segments are capable of larger earthquakes with a higher probability of occurrence, their MCEs would yield peak horizontal ground accelerations here of only 0.25 to 0.26 g due to the distance from the epicenter and thick section of alluvium on top of the bedrock.



0.55 g Severe Ground Shaking Potential

Fault Study Zone

1 Potential Liquefaction Area - Very High

2 Potential Liquefaction Area - High

3 Potential Liquefaction Area - Moderate

4 Potential Liquefaction Area - Low

SO/Euclid Ave. Boundary

City of Chino Boundary

NORTH

3250 1625 0 3250

SCALE IN FEET

Michael Brandman Associates

05760012 · 6/2001

Exhibit **5.5-2**

Geologic Hazards

CHINO SUBAREA 2

Soils and Slope

Four soil associations correspond to the areal distribution of geologic units underlying the plan area:

1. Foster-Grangeville (Fp-Gw; on Recent alluvial fans)
2. Tujunga-Delhi (TD-Dg/AR; on Recent alluvial fans)
3. Merrill-Chino (MB-CE); on older alluvial fans and terraces), and
4. Placentia (Py/BC; on older alluvial fans)

The soils overlying the recent alluvial deposits account for approximately 45% of plan area soils. Foster-Grangeville soils are deep, permeable, devoid of a profile, and formed from unconsolidated materials. Slopes range 0-9%, particles are generally more granular, runoff is slow, and depths reach 60 inches. Tujunga-Delhi soils extend to depths of 60 inches or more, are very permeable, loose and unconsolidated, and subject to wind erosion if unprotected. These soils generally correspond with surficial geologic units Qhm and Qpm in the southeast along the Santa Ana River.

Soils overlying older alluviums (3 and 4 above) comprise the remaining 55% of soils. Merrill-Chino and Placentia soils are silty and sandy loam overlying clay loam, and have 0-9% slopes and depths greater than 60 inches. These soils are moderately erodible and well drained, have a low to moderate permeability, and are associated with surficial geologic units Qhf and Qpf.

The geotechnical engineering properties of the soils in the plan area have not been studied in detail. Concerns and precautions for subsequent potential development activity exist, but no highly unusual or hazardous conditions are apparent.

Average surface slope across the plan area ranges about 0.5 to 1.0 %. Slopes into the primary drainages average about 2 to 3 %. Some gullies have slopes of 10 % or more. The incised Chino Creek and the larger flood plain have slopes of 0.5 to 0.6 % along the flowline. Areas between drainages and the flat valley surface tend to be of low relief and devoid of landslides. With standard geotechnical practices and adherence to Uniform Building Code (UBC) requirements, there is generally a low potential for instability. Slopes greater than 10% on any of the soils present a moderate risk of failure.

TABLE 5.5-1
DETERMINISTIC SITE PARAMETERS FOR EARTHQUAKES ASSOCIATED WITH ACTIVE FAULTS LOCATED WITHIN APPROXIMATELY 50 MILES OF THE SITE AREA

Abbreviated Fault Name	Approximate Distance (Miles)	Maximum Credible Event			Maximum Probable Event		
		Magnitude	Peak Acceleration	MMI Intensity	Magnitude	Peak Acceleration	MMI Intensity
Chino	3	7.00	0.59	X	5.40	0.29	IX
Whittier—North Elsinore	6	7.10	0.39	X	6.00	0.23	IX
San Jose	10	6.7	0.23	IX	5.00	0.06	VI
Sierra Madre—San Fernando	13	7.30	0.31	IX	6.30	0.17	VIII
Cucamonga	14	6.90	0.22	IX	6.10	0.13	VIII
Elsinore	14	7.50	0.29	IX	6.60	0.16	VIII
Glen Helen Lytle Creek Claremont	19	7.00	0.15	VIII	6.70	0.12	VII
Clamshell-Sawpit	23	6.60	0.10	VII	4.90	0.03	V
San Andreas (San Bernardino Mountains)	23	8.00	0.26	IX	6.70	0.10	VII
San Gorgonio Banning	23	7.50	0.19	VIII	6.60	0.10	VII
San Andreas (Mojave Segment)	24	8.0	0.25	IX	7.40	0.16	VIII
North Frontal Fault Zone(San Bernardino Mountains)	25	7.70	0.19	VIII	6.00	0.05	VI
Raymond	26	7.50	0.16	VIII	4.90	0.02	IV
Elysian Park Seismic Zone	29	7.10	0.11	VII	5.80	0.04	V
Compton-Los Alamitos	30	7.20	0.17	VIII	5.80	0.06	VI
Newport-Inglewood Offshore Zone of Deformation	30	7.10	0.10	VII	5.90	0.04	V
San Gabriel	31	7.40	0.12	VII	5.60	0.03	V
Verdugo	32	6.70	0.07	VI	5.20	0.02	IV
Newport-Inglewood North	33	6.70	0.06	VI	4.20	0.01	II
Casa Loma Clark (San Jacinto)	35	7.00	0.08	VII	7.00	0.08	VII

TABLE 5.5-1 (Cont.)
DETERMINISTIC SITE PARAMETERS FOR EARTHQUAKES ASSOCIATED WITH ACTIVE FAULTS LOCATED WITHIN APPROXIMATELY 50 MILES OF THE SITE AREA

Abbreviated Fault Name	Approximate Distance (Miles)	Maximum Credible Event			Maximum Probable Event		
		Magnitude	Peak Acceleration	MMI Intensity	Magnitude	Peak Acceleration	MMI Intensity
Santa Monica-Hollywood	37	7.00	0.07	VI	5.80	0.03	V
Wilshire Arch	37	5.70	0.04	V	5.00	0.02	IV
Palos Verdes-Coronado Banks—Agua Blanca	38	7.20	0.08	VII	6.20	0.03	V
Santa Monica Mountains Thrust	38	7.20	0.12	VII	6.30	0.06	VI
Hot Springs Buck Ridge (San Jacinto)	42	7.00	0.06	VI	6.10	0.03	V
Coronado Bank-Agua Blanca	46	7.50	0.08	VII	6.70	0.04	V

Notes: The maximum credible event is the largest estimated earthquake magnitude (Richter scale thought to be possible associated with a given fault or fault zone The maximum probable event is the largest estimated earthquake magnitude likely to occur in a 100-year period associated with a given fault or fault zone Peak acceleration is the estimated peak horizontal ground acceleration in percent gravity abbreviated g) using the attenuation relationship of Campbell and Bozorgnia (1994) with an uncertainty of mean + 1-sigma The intensity is the estimated Modified Mercalli Intensity (MMI) at the site which represents an empirical measure of physical damage to structures and of disturbance to the earth's surface as a result of various magnitude earthquakes at various site distances.

Groundwater

The southern Chino Basin area has a relatively shallow water table due to the large drainage area feeding the Santa Ana River and the natural restriction at Corona and the Santa Ana Canyon. In addition, tectonic activity along the Chino-North Elsinore fault zone, which formed the Chino Hills and Santa Ana Mountains, has created a natural damming of the Chino Basin. Water-bearing strata in the Chino Basin are the Holocene and Pleistocene alluviums described above. These units vary in thickness from less than 300 feet along the western edge, to slightly more than 800 feet along a north-south axis through the center of the plan area.

Regional groundwater elevations at the site range from about 550 to 560 feet (depth of approximately 100 feet) at the northeast corner to 500 feet (depth of 30 feet) or less in the southern half. Seasonal variations are generally within a range of about 5 to 10 feet. In the early 1900s, the northern two-thirds of the site included an important zone of artesian ground water. However, groundwater migrated through the poor confining layers into perched zones at shallower depths.

Limited historic data for the upper Santa Ana River Valley indicates that minimum depth to water (MDW) in the project vicinity has ranged from less than 30 feet to greater than 100 feet. Imbalances in recharge versus discharge of the groundwater system suggest that MDW values may vary within the plan area.

Liquefaction

Liquefaction occurs when saturated cohesionless sediments (usually sand or silty sand) transform from a solid to a near liquid state due to an increase in pore-water pressure, often resulting from moderate to severe seismicity. Liquefaction can cause surface structures (e.g., bridges, buildings, storage tanks) to settle non-uniformly and buried structures (e.g., fuel tanks, pipelines) to float. In either situation, severe structural damage is highly likely. Liquefaction can also result in lateral spreading landslides, especially on steep slopes or relatively gentle slopes adjacent to bodies of water.

The expected level of ground shaking in the southerly portions of the plan area is above 0.5 g (Exhibit 5.5-2), high enough to initiate liquefaction. Two of the three key conditions that are conducive to liquefaction, shallow groundwater and cohesionless sands, are thought to be present within the plan area, however insufficient data exist to map either condition with precision. There is limited potential for liquefaction where water is greater than about 50 feet deep (LP '4' on Exhibit 5.5-2), but the potential is higher with depths less than 50 feet (LP '3' on Exhibit 5.5-2). Liquefaction potential is substantially higher where water is less than 30 feet deep (LH '1' and '2' on Exhibit 5.5-2).

The expected level of seismicity is sufficient for liquefaction where there is shallow groundwater and cohesionless sands. The areas of highest liquefaction potential are those coincident with Holocene deposits (Qhm and Qhf) in the lowest lying areas where there was surface water in the late 1880s, where the water table has been reported at depths of less than 30 feet, and in the major drainages.

Subsidence

Subsidence is often a consequence of discharging groundwater much faster than it can be recharged, especially from thick aquifers of poorly consolidated sediments. Although groundwater withdrawal from such aquifers has been going on in the Chino Basin for approximately 100 years, subsidence in the Chino Basin has been recognized where there are ground fissures northwest of the plan area. It is not known if Chino Basin subsidence features are associated with faults, or if the identified lineaments are the result of subsidence.

5.5.3 THRESHOLDS OF SIGNIFICANCE

Pursuant to Appendix G of the California Environmental Quality Act Guidelines (CEQA), a project would typically have a potentially significant impact for geologic, seismic and soil conditions if it would expose people or structures to major geologic or seismic hazards. For purposes of this analysis, if urban land uses and development are proposed within areas directly associated with one or more major hazards, then the impact is judged to be potentially significant.

A project would also be considered to have a potentially significant impact if it would result in one or more of the following:

- Trigger or accelerate processes such as landslides or erosion;
- Disturb or adversely affect significant mineral resources, or unique geologic features of unusual scientific value for study or interpretation;
- Include project grading or construction that would cause displacements, compaction, or over-covering of soil such that project development poses a reasonable probability of damage, endangerment, or other hazard to on- or offsite buildings or structures by ground or soil failure;
- Development of habitable structures in an Alquist-Priolo Earthquake Fault Zone; or
- Expose people to unacceptable risks due to the presence of geologic (including soil and groundwater) or seismic hazards.

Much of the plan area, particularly south of Pine Avenue, has one or more hazards present. Thresholds identified above are for impact assessment at the 'plan level' of environmental review.

Subsequent development proposals and specific project plans must be accompanied by additional site-specific geologic and soils data in order to provide an adequate basis for 'project-level' environmental review.

5.5.4 PROJECT IMPACTS

Impacts of the proposed plan are described for the geotechnical properties of surficial geologic units, unique geologic formations, faulting, seismicity and groundshaking, liquefaction, subsidence, and near-surface groundwater.

Geotechnical Properties of Surficial Geologic Units

Qhf on the valley floor is generally devoid of landslides, and therefore has a very low potential for slope instability. Qhm and Qpf in the low relief areas are also generally devoid of landslides. Natural slope instability generally will be limited to surficial failures in Qhf, Qhm and Qpf on slopes greater than 10% that occur almost entirely within the planned open space system.

Slope stability evaluations, required for development within the plan area, must consider the effects of construction on both natural and newly created cut slopes. Design and construction mitigation measures (e.g., retaining walls, reduce slope angles, earth buttress) that conform to City of Chino and UBC (1997) standards must be employed to prevent slope instability. The planned development area is predominantly on slopes of 2% or less. Exceptions may include roadway cuts and fills to achieve grade separation (e.g. depressed Pine Avenue road section). No significant slope stability impacts are anticipated.

The clayey nature of Qhf and Qpf soils (including organic content and hydroconsolidation) make these units susceptible to high expansion coefficients and long-term consolidation. Of special concern in the plan area is the definition of the distribution, character and thickness of surface organic residue (e.g. manure and other organic deposition) within the soils that remain from activities of the dairy industry.

A related concern for development and building foundations is the potential accumulation and/or release of methane in soils with manure and other organic content. However, building code and grading code requirements, and engineering investigation report requirements are in place as safeguards to prevent unsafe design and construction practices related to soil stability and potentially unsuitable foundation conditions. With adherence to these codes and requirements, including implementation of standard mitigation measures (e.g., reinforced foundations, proper surface drainage, removal and replacement of expansive soils) adverse affects on slope stability, foundations and overlying structures can be reduced to less than significant levels.

Unique Geologic Formations

Geologic formations are considered unique if their outcrop pattern, stratigraphic significance, or fossil content is relatively unusual among the local geology. Such a case may qualify the unit for scientific study of its unique character.

The late Pleistocene (Qpf and Qpm) deposits consist of clay, silty clay, silt, and sand deposited in restricted basin and riverine environments. They are considered unique because they have a limited distribution in the region and their vertebrate paleofauna is unusual and rare. In the Chino Basin area, significant fossils have been recovered within five feet of the surface, which is within the depth range of normal construction. Planned development activities have the potential to disturb or destroy significant paleontological resources that may exist in the near surface soil horizons. Thus, standard mitigation measures for paleontological resources will be included in subsequent project development plans.

Fault Rupture

It is uncertain if the trace of the Central Avenue fault transects the plan area. However, the trace of this feature extends only within the planned open space system south of Pine Avenue, Habitable structures and critical or important public facilities are not allowed within the open space system below the 566 foot high water inundation elevation. Therefore, no significant impact to planned development is anticipated.

Geomorphologic features ('lineaments') aligned northwest are generally parallel to the Central Avenue and Chino faults. These features observed from aerial photographs are located predominantly south of Pine Avenue. Although these lineaments are of uncertain origin and significance, their general trend suggests that they are related to faulting. The lineaments may indicate locations with potential in the future to experience ground rupture from a possible severe local earthquake on the Chino-Elsinore fault zone, severe ground shaking from a moderate-to-severe earthquake under the basin, and differential movement and ground fissures from local subsidence and groundwater withdrawal.

Seismicity and Groundshaking

Current Uniform Building Code Standards (ICBO, 1997) set a threshold for horizontal ground acceleration at approximately 0.4 g. for design of non-critical residential structures, and some commercial and industrial facilities. A potentially significant impact exists where this value has a high likelihood of being exceeded during the design life of planned structures (e.g., the MPE acceleration assumed to occur in a 100-year period). This is especially true for this area due to the high water table and thick alluvium, which can amplify seismic waves. As peak horizontal ground

accelerations for the Maximum Probable Earthquake are approximately 0.45 to 0.55 g. for the planned development areas within the site, a potentially significant seismic and groundshaking impact is apparent.

Standard mitigation for seismic and groundshaking effects includes compliance with building codes and engineering investigation report requirements. However, a higher standard of caution is warranted for these higher levels of acceleration, particularly for critical, important, or high occupancy facilities (e.g. the Community Core, police/fire and civic facilities, schools, churches, medical facilities). Major facilities, and other critical facilities and structures, should receive a more intensive seismic design, review, and possible upgrades with consideration of site-specific geologic conditions and actual earthquake accelerograms.

Liquefaction

In general, liquefaction potential increases through the plan area from north to south, generally corresponding with reduced depth to groundwater (Exhibit 5.5-2). Accurate assessment of liquefaction potentials for specific locations will require data from geotechnical borings and groundwater level monitoring. The depth and intensity of study will vary according to location and type of use/facility for each site-specific project.

Mitigation measures established for development in liquefaction-prone areas include excavation and removal or recompaction of liquefiable soils, *in situ* ground densification, ground modification and improvement, deep foundations, reinforced shallow foundations, and reinforced structures to resist deformation during liquefaction.

Subsidence

There is currently no specific information on subsidence within the plan area, although subsidence may have induced ground fissures nearby at the California Institution for Men and further to the northwest at Ayala Park. Evidence suggests that the artesian zone encompassing the northern 60% of the plan area has undergone (and may still be undergoing) subsidence. As a result, it is assumed there is a significant potential for subsidence throughout the plan area.

A stepwise program of data evaluation should be conducted, beginning with all existing leveling survey data, to determine subsidence areas and to identify specific measures to reduce potentially significant impacts.

Near-Surface Groundwater

Groundwater in the Chino Basin occurs at depths of about 100 feet at the northeast corner of the plan area and possibly less than 30 feet in the southern portions. The potential for perched water zones at very shallow levels also exists throughout the plan area. These occurrences can be dealt with in a comprehensive geotechnical engineering investigation that includes subsurface borings to the depth of influence for the proposed construction.

Two potential concerns exist for the presence of shallow groundwater. These relate to 1) water seepage that may collect within, around, or on a structure (e.g., foundations, slabs, cut/fill slopes, and utility trenches), and 2) water that may be intercepted in a deep excavation causing potential dewatering and safety problems. The first instance could cause damage and/or nuisance with regard to the long-term care and maintenance of facilities. The second instance could cause safety problems for workers, as well as the aforementioned problems.

Geologic, hydrologic, and soils engineering/geotechnical investigations should be performed to determine if shallow groundwater may be present at a given site. Such investigations will specify measures to be taken to mitigate the potential affects of any significant hydrologic and engineering concerns.

Soils

Soils in the plan area are generally susceptible to expansion, settlement, and possibly hydroconsolidation. Higher clay content in the soils and repeated episodes of wetting and drying will cause distress to structures in contact with such soils. Consolidation and long-term settlement is most prominent in clay-rich and silt-rich soils due to the loading pressure of man-made structures, including buildings or artificial fill. The added weight can reduce porosity, resulting in settlement of, and possibly damage to, overlying structures. Consolidation and settlement effects are more pronounced under severe seismic shaking (dynamic settlement). Hydroconsolidation can also lead to settlement, but includes the addition of water into the soil structure causing more rapid and more substantial settlements.

Potential impacts associated with expansion, consolidation/settlement, and hydroconsolidation potential can be mitigated through standard, comprehensive geotechnical and soils engineering investigation and analysis. Recommendations made in conjunction with such investigations will specify all necessary steps to be taken to mitigate the potential effects of these soils concerns.

5.5.5 CUMULATIVE IMPACTS

Development of the proposed project and other approved, pending and probable future projects may expose future populations to regional seismic hazards. However, compliance with seismic safety standards for new construction, recommendations of project geotechnical engineering reports, and ongoing provisions for emergency preparedness and response are anticipated to reduce such risks, on a project-by-project basis, to acceptable levels. Other geologic and soils influences are largely site specific, and there is little if any cumulative relationship between proposed project development and development of cumulative projects identified in Section 4.2.

Impact Summary

The potentially significant geologic hazards affecting land use and development in the plan area are fault rupture and severe groundshaking due to a local moderate to large earthquake, liquefaction (including lateral spread landslides) due to shallow groundwater and severe groundshaking from local and major regional faults, and subsidence-induced ground fissures due to groundwater withdrawal.

Development and buildout according to the proposed plan will have the potential to expose additional people, residences, commercial and industrial development, and public facilities to these geologic and seismic hazards. However, numerous federal, state and local laws, regulations, codes, and policies are in effect to mitigate geologic and seismic hazards experienced within the region and at the project site. Examples are the Earthquake Hazards Reduction Act, the Uniform Building Code, the Alquist-Priolo Earthquake Fault Studies Zone Act, the municipal and county grading codes, Public Resources Code sections dealing with Division of Oil, Gas, and Geothermal Resources, the Subdivision Map Act, and the City of Chino General Plan policies.

While geologic and seismic hazards are expected to be adverse and potentially significant for development within the plan area, conformance with standard measures, code requirements, and recommendations of detailed geotechnical and soils engineering studies required for subsequent development projects, should serve to reduce hazards to less than significant levels.

5.5.6 MITIGATION MEASURES

GS-1. All applications for individual development projects shall include a detailed Geotechnical and Soils Engineering Study which addresses potential hazards associated with fault rupture, seismicity and groundshaking, liquefaction, subsidence and near-surface groundwater. Such studies shall:

- Conform to code requirements, and standards and guidelines established by the City of Chino;

- Fully and accurately reflect site conditions regarding the possible hazards identified herein; and

- Include all mitigation measures necessary for reducing risks posed by geologic hazards on the project site.

GS-2. All individual developments shall be constructed according to requirements established in geologic studies pertaining to the project site, and general engineering practices established by the City of Chino.

GS-3. Grading operations on all former dairy lands and other agricultural properties will be conducted in accordance with the soils report prepared by a registered soils engineer approved by the City of Chino. The soils engineer will make recommendations concerning removal of any organic material or the proper handling of such material during grading. All manure from dairy corrals and other surface areas shall be stripped and removed prior to grading operations, in accordance with applicable codes and regulations. The potential for methane in remaining soils shall be specifically addressed in soils reports on all former dairy lands and other agricultural properties. Where the potential for methane accumulation or release is identified, soils testing shall occur with results and remedial measures identified in the soils report.

5.5.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Compliance with policies, codes and standard conditions designed to reduce geologic and soil hazards, as well the identified mitigation measures, will reduce adverse impacts to less than significant levels.

5.6 HAZARDS

5.6.1 INTRODUCTION

This section discusses potential hazards associated with Chino Airport, hazardous waste, and other risks. The plan area is currently affected by a variety of potential hazards, including airport operations and regulations related to the Chino Airport, identified hazardous materials, vector control issues due to the area's intensive dairy use, and electromagnetic fields caused by existing overhead electrical lines.

5.6.2 EXISTING CONDITIONS

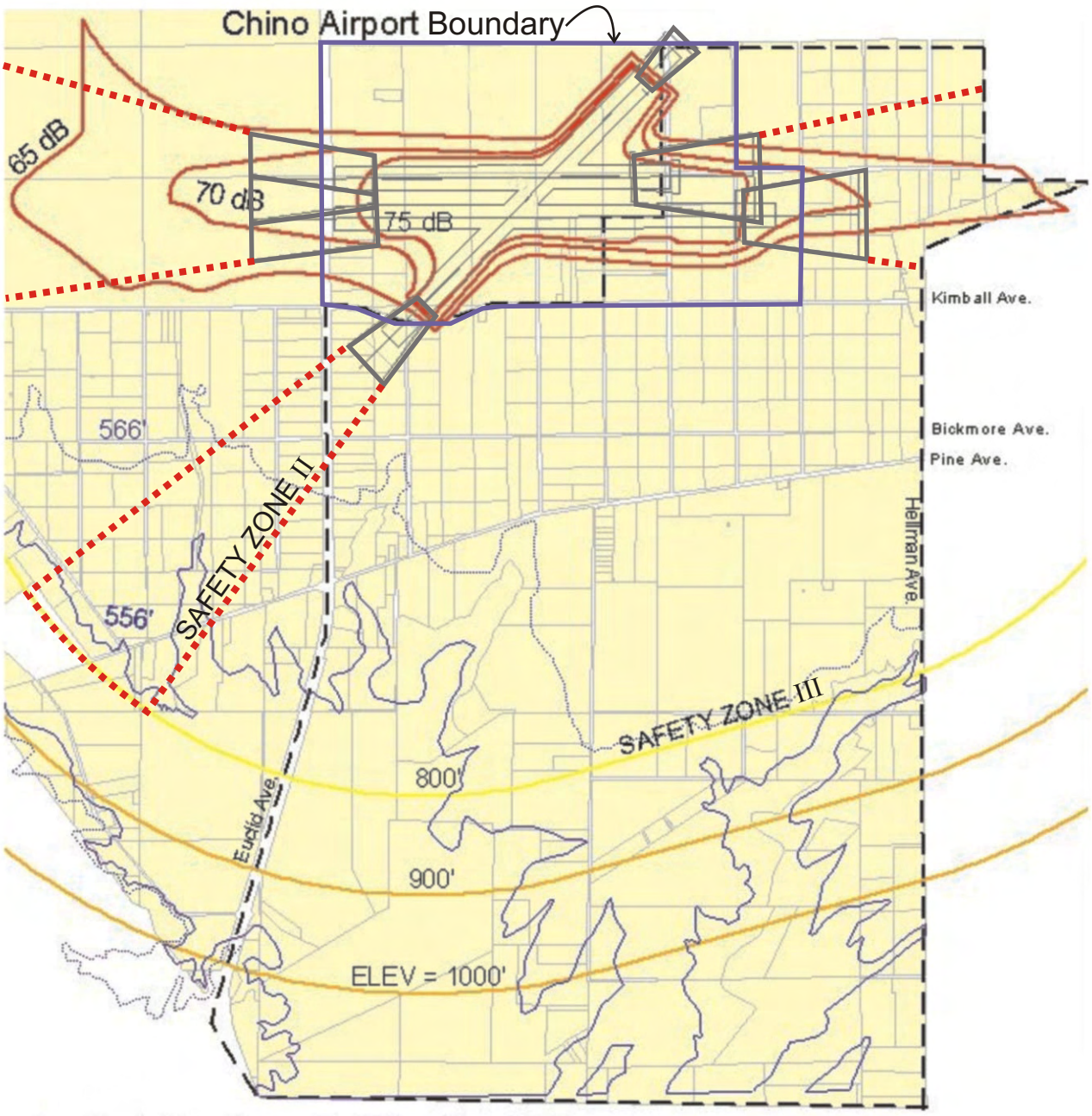
Airport Operations and Regulations

Chino Airport includes approximately 1,150 acres bound by Euclid Avenue, Merrill Avenue, Walker Avenue and Kimball Avenue, north of the plan area. Portions of the airport runway extend into the proposed plan area north of Kimball Avenue. The airfield is classified as a General Utility (GU) airport in the City of Chino, and is operated by the San Bernardino County Department of Airports. The airport is currently planned for classification as a Basic Transport Airport in the National Plan of Integrated Airport Systems (NPIAS) and is considered a reliever airport for John Wayne Airport general aviation in Orange County, and a future reliever airfield for business jets now flying out of Ontario Airport.[1] Currently over 200,000 annual aircraft operations and 940 aircraft are based at Chino Airport, the 30th busiest airport in the nation.[2]

The airport currently operates three (3) runways—Runways 3-21 (6,222 feet long, 150 feet wide), 8L-26R (4,858 feet long, 150 feet wide), and 8R-26L (7,000 feet long, 150 feet wide) (Exhibit 5.6-1). Runway 8R-26L is a recent east-west addition to accommodate current and future aircraft fleet mixes, including business jets and selected larger aircraft (e.g. Boeing 727's). The new runway has stimulated demand for new hangar facilities, tie-downs and airport-serving businesses, and the potential for development of residual airport property for commercial and/or industrial/warehouse-type uses. Operations on the crosswind Runway 3-21 represent only about 5% of all airport operations, and this figure is likely to decline further in the future.

[1] Communication with Ken Nebrig, former Chino Airport Manager (3/00)

[2] ibid; Ken Nebrig (3/00)



Runway Protection Zone
Safety Zone II
Safety Zone III
Primary Safety Zone (altitudes as labeled)
Sound Study Contours (db as labeled)
Subarea 2 Boundary
Parcels

SOURCE: The Planning Center

Michael Brandman Associates

Exhibit **5.6-1**
Airport Noise & Safety Zone Overlay

The County Department of Airports is initiating a Chino Airport Master Plan Update, anticipated to begin in the summer of 2001, and to take one year to complete. As a result, it is anticipated that the master plan update will be adopted well after adoption of The Preserve Specific Plan, and will be coordinated with the adopted land use of the Specific Plan. The Airport Master Plan Update will consider potential airport expansions, possibly including further runway extensions to the east, and may evaluate airport-related development potential on 300-400 acres of available land currently in cultivation within the airport boundaries. Current adopted airport noise contours and safety zones will be reviewed in light of projected fleet mix changes to account for increased business jet usage, and increased annual operations.[3]

Airport Comprehensive Land Use Plan and Related Safety Zones

Operation of Chino Airport creates noise and potential safety impacts to the surrounding vicinity. As required by state law, an Airport Comprehensive Land Use Plan (ACLUP) was prepared and adopted in 1992 which delineates referral zones surrounding the airport and defines special land use requirements and development limitations which are generally described below and in the Chino Airport Land Use Compatibility Matrix (Table 5.6-1).

The ACLUP has identified special review procedures for development projects located within the operational sphere of the Airport. The provisions of the review are listed below.

Runway Protection Zone (RPZ)/Referral Area "A". This RPZ, formerly known as the runway clear zone, is located both within and extending outside of the immediate confines of the airport facility and severely restricts land use to only uses of low intensity, such as agriculture and golf courses. FAA Circular 150/5300-13 indicates it is desirable to clear all objects from the RPZ, which is trapezoidal in shape and centered about the extended runway centerline. The RPZ begins 200 feet beyond the end of the runway area usable for takeoff and landing. Some uses are permitted within the RPZ provided they do not attract wildlife and are outside the runway Object Free Area (OFA), which lies wholly within the RPZ. The OFA is defined as a two (2) dimensional ground area surrounding runways taxiways, and taxilanes which is clear of objects except for those objects whose location is fixed due to their function. Land uses prohibited from the RPZ include residences and places of public assembly. The latter include churches, schools, hospitals, office buildings, shopping centers and other uses with similar concentrations of people. Auto parking, though discouraged, may be permitted as long as it is outside of the OFA. Roads are also an allowable use within the RPZ provided that a minimum 17 foot clearance requirement with the "airport imaginary surface" is met. The airport imaginary surface is further defined below.

[3] Personal communication with Robert Olislagers, San Bernardino County Airports Division, (4/17/00).

Within the project area, portions of the RPZ for Runway 8R-26L extend approximately 1000 feet east of Walker Avenue beyond the current airport limits. This includes portions of an existing dairy. The RPZ for Runway 8L-26R is located entirely within airport owned property. The RPZ for crosswind Runway 3-21extends diagonally approximately 1000 feet into the extreme northwest corner of the plan area, near the Euclid Avenue/Kimball Avenue intersection (Exhibit 5.6-1)

Safety Zone II/Referral Area "B". This zone includes the balance of the approach and departure zones, the remaining portion of the 70 Community Noise Equivalent Level (CNEL) noise contour area, which refers to a noise level that weights evening and night time noise levels more heavily than daytime, and all of the area within the 65 CNEL noise contour area. A variety of land uses within this designated area are conditionally permitted provided they comply with the provisions of the Airport Compatibility Matrix, which can include ensuring interior noise levels are met and that above ground hazardous materials are not provided.

Agricultural land to the east of the airport and north of Kimball Avenue is located within this zone. Also included are land extending diagonally to the southwest from the terminus of the Runway 3-21 RPZ in the vicinity of the Euclid Avenue/Bickmore Avenue intersection.

Safety Zone III/Referral Area "C". This zone encompasses an oval area around the Airport extending out approximately 10,000 feet from the airport, in which aircraft accidents and exposure to noise is minimal. Certain development limitations exist in this zone, while most land use types are acceptable. This safety zone encompasses that portion of the plan area generally located south of Chino-Corona Road and Prado Lake.

Conical Surface. This area extends out an additional 4,000 feet from the perimeter of Referral Area "C". This zone is still subject to FAA Part 77 height restrictions (i.e. FAA 'Restricted Height Area'), and is identified within an overall potential impact area where it may be necessary to obtain an avigation easement alerting property owners of the existence of airport operations in the area. Within the plan area, this surface extends all the way south to approximately the Euclid Avenue/SR 71 interchange.

Imaginary Surface Over the Planning Area

Height restrictions are imposed around the airport pursuant to FAA Part 77 regulations in order to minimize obstructions to air navigation. An imaginary surface is superimposed on the airspace around the airport to determine whether an object is an obstruction to the airport. The major height restrictions lie within the 800-foot horizontal surface (800 foot elevation Safety Zone), the 900-foot horizontal surface (900 foot elevation Primary Safety Zone), and the 1,000-foot conical surface (1,000 foot elevation Primary Safety Zone) (Exhibit 5.6-1).

TABLE 5.6-1
AIRPORT COMPATIBILITY MATRIX

	Referral Area "A" (Includes RPZ & Safety Zone I)	Referral Area "B" (Includes Safety Zone II)	Referral Area "C" (Includes Safety Zone III)	Conical Surface Area
LAND USES				
Single Family Dwelling(s)	Not Permitted	Conditionally Permitted if: • Interior noise levels are no more than 45 Ldn, and • Does not exceed the maximum persons per acre • Avigation Easement provided. • Residences which were in existence at that location prior to January 1, 1989 if interior CNEL is 45 dB or less and exterior CNEL is 75 dB or less in private habitable areas (e.g. backyard, patio, balcony)	Conditionally Permitted All residences permitted within the 60 – 65 Ldn range shall be required to provide forced air ventilation and prepare an acoustical study to show that 45 dB interior and 65 dB exterior in private open space areas is not exceeded.	Permitted
Multi-Family Dwellings	Not Permitted	Conditionally Permitted if: • The interior noise levels are no more than 45 Ldn, and • Does not exceed the maximum persons per acre. • Avigation Easement provided. • Residences which were in existence at that location prior to January 1, 1989 if interior CNEL is 45 dB or less and exterior CNEL is 75 dB or less in private habitable areas (e.g. backyard, patio, balcony).	Permitted All residences permitted within the 60 – 65 Ldn range shall be required to provide forced air ventilation and prepare an acoustical study to show that 45 dB interior and 65 dB exterior in private open space areas is not exceeded.	Permitted
Commercial (e.g. retail, restaurant, movie theater)	Not Permitted	Not Permitted	Conditionally Permitted	Permitted
Schools, Nursing Homes, Hospitals	Not Permitted	Not Permitted	Conditionally Permitted An acoustical study shall be required which shows how the 45-dB interior and 65-dB exterior standard shall be met.	Permitted
Office	Not Permitted	Not Permitted	Conditionally Permitted	Permitted
Warehouses	Not Permitted	Conditionally Permitted if: • Does not exceed persons per acre limitation, • Is not hazardous in nature, • Has no above ground hazardous materials, and • Does not create electronic hazards (including interfering with radio communications, distracting lights, or smoke).	Conditionally Permitted if: • No above ground hazardous materials, and • Does not create electronic hazards (including interfering with radio communications, distracting lights or smoke).	Permitted
Manufacturing	Not Permitted	Conditionally Permitted if: • Does not exceed maximum persons per acre, • Is not hazardous in nature, • Has no above ground hazardous materials, and • Does not create electronic hazards (including interfering with radio communications, distracting lights, or smoke).	Conditionally Permitted if: • No above ground hazardous materials, and • Does not create electronic hazards (including interfering with radio communications, distracting lights or smoke).	Permitted
Assembly Uses (indoor and outdoor) e.g. churches, auditoriums, and stadiums	Not Permitted	Not permitted	Not permitted (ACLUP) Conditionally Permitted by SBC General Plan	Permitted

TABLE 5.6-1 (CONT.)
AIRPORT COMPATIBILITY MATRIX

	Referral Area "A" (Includes RPZ & Safety Zone I)	***Referral Area "B" (Includes Safety Zone II)***	***Referral Area "C" (Includes Safety Zone III)***	***Conical Surface Area***
Playground, Neighborhood Park	Not Permitted	Not Permitted	Conditionally Permitted	Permitted
Hotels, Motels and Transient Lodging	Not Permitted	Not Permitted	Conditionally Permitted if maximum persons per acre are not exceeded. An acoustical study shall be prepared which shows how the 45 dB interior noise requirement will not be exceeded	Permitted
Golf Course, riding stables, cemeteries	Not Permitted	Not Permitted	Conditionally Permitted	Permitted
Agriculture	Permitted outside OFA except if it attracts birds	Permitted	Permitted	Permitted
Automobile Parking	Permitted outside of runway OFA extended and below the approach surface (but not recommended)	Conditionally Permitted	Permitted	Permitted
Any use which generates smoke	Not Permitted	Not Permitted	Not Permitted	Permitted
Use or structure which generates glare	Not permitted	Not Permitted	Not Permitted	Permitted
Fuel handling or storage	Not Permitted	Not Permitted	Conditionally Permitted (tanks must be underground)	Permitted
RESTRICTIONS				
Maximum Persons Per Acre	No uses that generate more than 10 persons per acre at any one time but only for short periods of time.	Uses not in a structure: No more than 50 persons per acre at any one time. Uses in structures: No more than 25 persons per acre and no more than 15 persons per building at any one time	No Limitation	No Limitation
Height Restrictions	The applicant shall notify the FAA Administrator if the structure is: • Above 200 feet in height • Greater than an imaginary surface extending outward and upward at a slope of 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the runway.			
Avigation Easement Required?	Yes	Yes	Yes	No

To estimate building height restrictions within these surfaces, the ground elevation is merely subtracted from either the 800, 900 or 1,000-foot elevation. The remaining number is the maximum building height. Maximum allowable building heights will vary within these horizontal and conical surfaces, depending on the ground elevations. As a result of the above methodology, a survey of height restrictions in the plan area suggests that height restrictions are not likely to represent a significant constraint to development options. For example, maximum building heights east of the Runway 8R-26L RPZ are estimated at 160 feet (800'-640'=160'); south of Kimball Avenue at Grove Avenue at 185 feet (800'-615'=185'); and Chino-Corona Road at Cucamonga Avenue at 234 feet (800'-566'=234').

FAA Part 77 requires that the FAA Regional Office receive notice of any construction that would pierce an imaginary surface extending outward from the airport boundary at a slope of 100:1. The Notice of Construction criteria is different than the imaginary flight surfaces defined for the airport runways. When the FAA receives Notice of Construction, an aeronautical study is undertaken to determine whether or not the proposed construction might create an airspace hazard or have an adverse impact on the operation of airport navigational aids. The FAA recommendations are then transmitted to the applicant/agency for their consideration in processing development applications and entitlements.

Airport Vicinity Wildlife Hazards

The possible location of wildlife areas/water features near airports is a safety concern for aircraft operations, particularly with regard to waterfowl near runways. FAA Advisory Circular 150/5200-32 presents various recommendations to restrict the location of water features, one of which is to "Locate water features at least 1,200 feet from the runway centerline and not off the ends of runways; water features should not be located in safety areas…[and] as far away from the runway end as is physically possible." The concern is with aircraft/bird collisions, which often occur approximately 500 feet above ground level, although they can occur at 1,000 feet or more above ground level.

Hazardous Materials and Risk of Upset

The presence of suspected or known hazardous waste contamination sites within the plan area was determined through a computerized database search of various governmental agency lists (see Appendix G). CEQA requires the lead agency to consult the lists of hazardous waste sites compiled by various state agencies (Cal EPA, the Department of Health Services, the State Water Resources Control Board, and the California Integrated Waste Management Board) pursuant to governmental Code Section 65962.5 (CEQA, California Public Resources Section 21092.6). The database search included review of all of the required state lists and a search of various federal (U.S. EPA) and local (San Bernardino County Fire Department) hazardous waste sites lists. The California Regional Water

Quality Control Board (RWQCB) was also contacted regarding any Cease and Desist Orders or Cleanup Abatement Orders issued for uses within the plan area.

Table 5.6-2 contains a summary of active known or suspected contamination sites within the plan area. A total of 27 known sites are located within the project area, although many of the individual sites have multiple site listings. Exhibit 5.6-2 locates these sites within the plan area.

TABLE 5.6-2
REPORTED HAZARDOUS WASTE SITES THE PRESERVE PLAN AREA[1]

Map I.D. Number	Site Listing
1, 3, 4, 9, 10, 14, 15, 16, 18, 23	LUST
2, 3, 8	SWLF
4, 6, 7, 9, 12, 14, 17, 18, 20, 21, 22, 24, 25, 27	UST
2, 4, 11	AST
4, 5, 10, 13, 16, 19, 26	GNRTR

[1] Includes Chino Airport outside The Preserve plan area.
* Individual sites may have multiple listings
Source: Vista Information solutions, Inc., MBA, 2000

KEY
LUST – Leaking Underground Storage Tank
SWLF – Solid Waste Landfill Facility
UST – Underground Storage Tank
AST—Above Ground Storage Tank
GNRTR—RCRA small (< 1,000 kg/month of non-acute hazardous waste) or large (> 1,000 kg/month of non-acute hazardous waste) generators of hazardous waste

The reported hazardous waste sites are of five types - LUST, SWLF, UST, AST, and GNRTR, as identified in Table 5.6-2 (see table for acronym meaning). Of all confirmed LUST sites reported in the project area, the leaking material was gasoline, the leaks have been remediated, and cases closed. The SWLF sites in operation include the IEUA Co-Composting Facility, a brine filter facility, and a non-hazardous solid waste facility, none of which pose an immediate health or environmental hazard. All UST sites contain gasoline (e.g. diesel and unleaded gas) ranging from 550 gallons to 10,000 gallons in volume. Of the three registered AST sites within the project area, one is known to contain sludge and is located at the Chino Basin Master Water District, and the other two contain gasoline and are located at the California Institution for Women. Finally, all GNRTR sites generate under 1000 kilograms/month of non-acutely hazardous waste or non-hazardous solid waste. No sites within the project are under investigation for violation by the California Department of Toxic Substance Control (DTSC), U.S. Environmental Protection Agency (U.S. EPA), or any other state or federal agency. Nor is there any information in the hazardous sites search to suggest any current spills, releases, or violations. Therefore, the hazardous sites search suggests that none of the aforementioned agency-listed hazardous materials sites pose an immediate threat to human or environmental health within or surrounding the project area.

Other Risk Management Issues

Hazards that potentially effect the plan area also include vector control issues associated with existing dairy operations, fuels and chemicals located at the Chino Airport, the Co-Composting Facility, potential methane accumulations or releases from organic soils, hazardous building materials and electromagnetic fields associated with electrical lines traversing the project area. These conditions are discussed below.

Vector Control

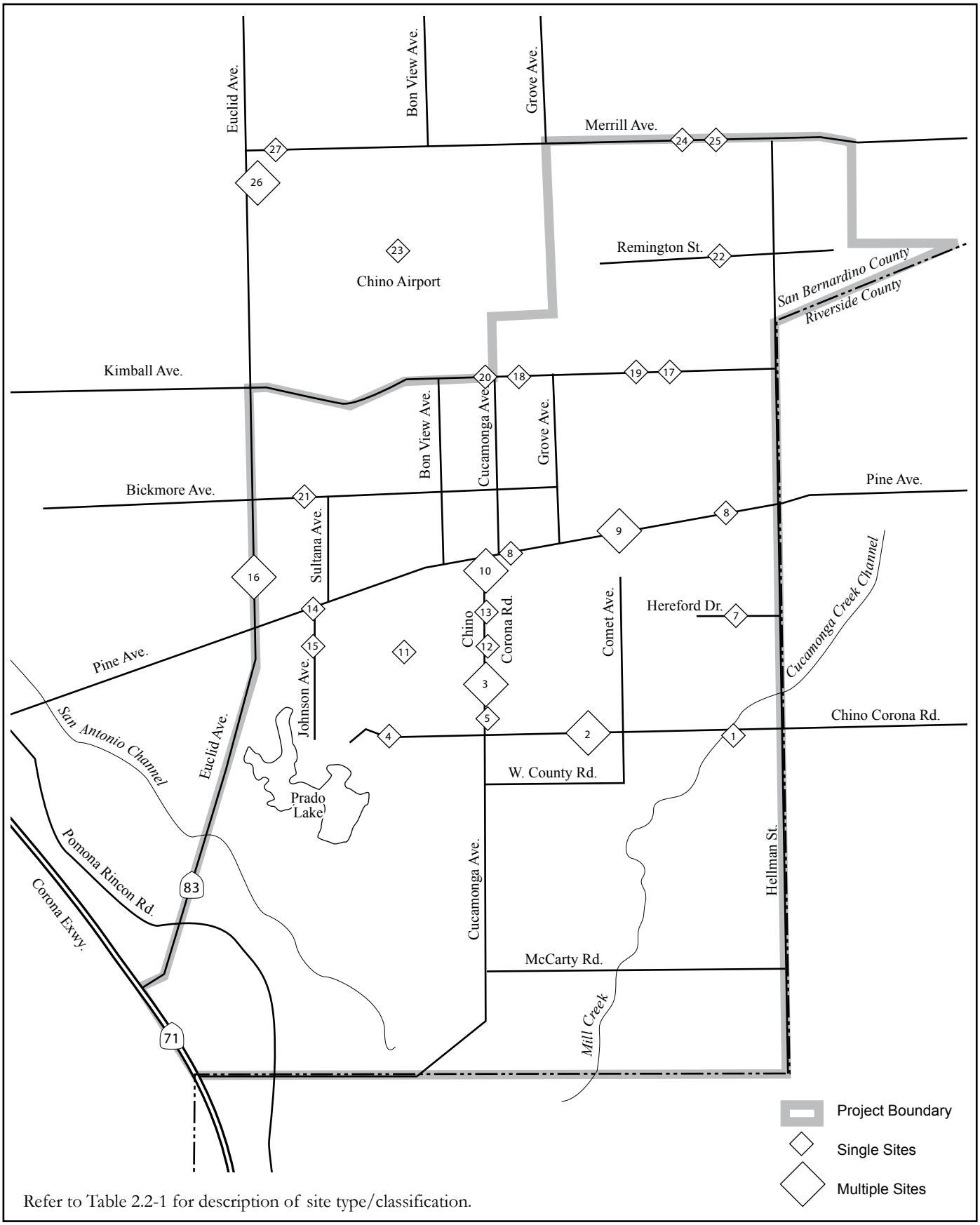
The project area is part of the Chino Basin Dairy Area (CBDA), which is home to the largest dairy cattle population in the world. The dairy operations result in the generation of millions of tons of manure each year. It is currently estimated that there is 2 million tons of manure stockpiled within the CBDA.[4] As a result of the stockpiling of manure, there has been an increase in the fly population within the CBDA. To control the increasing fly population, chemical treatments are used. The West Valley Mosquito and Vector Control District promotes the practice of routine application of adulticiding chemicals, in the absence of the ability to practice proper composting. Unfortunately, the continued use of these chemicals in the CBDA has resulted in minor to severe resistance in the adult fly populations.

Activities that would increase the potential for standing water, especially during the summer months, has the potential for increasing the mosquito population. As pesticides are used to control the increasing fly population, herbicides are also used in the plan area by dairies to control plant and algae population in the numerous dairy manure ponds and water ponds.

Chino Airport

Chino Airport is located in the northwest portion of the project area. The Chino Airport has been subject to oil and fuel spills in the past, though presently the site is considered to be relatively clean. The Vista report previously referenced noted no hazardous waste sites at the airport but two private hangers were listed as small generators of hazardous waste (less than 1,000 kg/month). There is the possibility that there may be some ethylene-glycol soil contamination within the airport grounds, but there are no known plumes. All underground storage tanks at the airport have been removed and fuel storage is concentrated in the northwest corner of the airport. Fuel storage consists of a total of four

[4] Santa Ana River Watershed Group (SARWG), Manure Management Strategy (10/99)



Refer to Table 2.2-1 for description of site type/classification.

Michael Brandman Associates

Exhibit **5.6-2**

Reported Hazardous Waste Sites

tanks, three 10,000-gallon tanks and one 20,000-gallon tank.[5] There is the possibility of additional fuel tanks in the future to be stationed near Kimball Avenue between Bon View and Grove Avenue.

Co-Composting Facility

The Inland Empire Utility Agency operates a Co-Composting Facility for both dairy manure and wastewater sludge within the project area. The total permitted capacity of the Facility is 400,000 wet tons/year and the estimated annual operating tonnage of manure in 1997 was 804,000 dry tons/year and 120,000 wet tons/year. The Co-Composting Facility, listed as a Solid Waste Landfill Facility, has no violations and is not subject to any enforcement actions. The sludge used for blending at the Co-Composting Facility has been deemed non-hazardous by EPA criteria. Greenwaste (bulking agent) brought to the facility by municipal solid waste collection companies is pre-sorted at curbside and is low in contamination. The greenwaste is inspected, sorted, and screened prior to processing for use as a bulking agent.

Hazardous Building Materials

Pre-1979 Buildings

It is likely that a number of buildings within the boundaries of the Sphere of Influence contain other potentially hazardous materials including asbestos and lead-based paints. These buildings may include, but are not limited to, pre-1979 residential structures as well as commercial and industrial buildings. Although the quantity and distribution of these sites is not presently known, their identification will be facilitated through preliminary investigation of individual properties within the Sphere of Influence prior to demolition. Buildings constructed prior to 1979 will be required by SCAQMD and the State of California, Division of Occupational Heath and Safety (Cal DOSH) to have asbestos and lead-based paint surveys prior to issuance of permits for major renovation or demolition. For those cases where asbestos and lead-based paint are found, there are a variety of abatement technologies currently available which are capable of safely reducing or removing contamination to make the area suitable for future development. With proper investigation of the structures within the Sphere of Influence on an individual basis prior to development, all possible sources of asbestos and lead-based paints can be identified and handled appropriately without significant adverse impacts.

[5] Ibid

Power Transmission Lines and Electromagnetic Fields

Electrical Facilities

Southern California Edison (SCE) provides electrical services to the City of Chino and the surrounding areas. SCE substations closest to the project area are located along Edison Avenue and Milliken Avenue northwest and northeast of the project area, respectively.

Power distribution lines in the vicinity of project area include 12 kilovolt (kv) lines, 20 kv, 66 kv, 200 kv and 500 kv lines. SCE transmission lines follow along select roadways: Kimball Avenue; Bickmore Avenue; and Euclid Avenue. A major east-west power line corridor, including 2-200 kv lines plus 2-500 kv lines, traverses the project area in the vicinity of Pine Avenue. A 66 kv line runs east-west through the site below Chino-Corona Road, and another 66 kv line runs along Euclid Avenue between Kimball and Bickmore avenues. SCE does not currently plan to upgrade their facilities in the vicinity however, development in the area would increase the demand for electrical service and that would require a significant upgrade in services to the area.

Long term direct exposure to electric and magnetic fields (electromagnetic fields) has been identified as a possible risk to human health.

Electric fields are produced in electrical lines as a result of voltage applied to wiring, and are measured in volts per meter (V/m) or kilovolts per meter (Kv/m). Electric field strengths greatly diminish with distance from the source and many structures including trees and houses shield these fields. Most exposure to residential electric fields is the result of internal household appliance use. Magnetic fields are the result of the movement (current) of electricity. These fields are measured in Gauss, however this measure is extremely large, and fields from electrical lines are generally referred to in milligaus (mg). As with electric fields, magnetic field strengths decrease dramatically with distance from the source; however structures such as trees on houses do not shield magnetic fields. Exposure to EMFs from power lines or electrical substations is typically in the extremely low frequency (ELF) range of the electromagnetic spectrum.

Within the plan area, possible concern with EMFs resides mainly with the major SCE power line corridor in the vicinity of Pine Avenue, and the types of uses which may be planned within or directly adjacent the corridor. No U.S. federal agency has yet set ELF EMF standards. Presently, neither the State, the County of San Bernardino, nor the City of Chino have provisions or codes regulation development near major transmission lines or substations.

5.6.3 THRESHOLDS OF SIGNIFICANCE

When evaluating the proposed project terms of the potential impacts related to airport operations, Appendix G (Environmental Checklist) of the CEQA Guidelines indicates a potential significant affect could occur if the project would result in a safety hazard for people that reside or work in the project area, or if the area was "located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport."

Regulatory agencies at the state and federal level have also established detailed regulations to guide development in and around airports. Therefore, this section will include the potential impacts of Chino Airport on the proposed plan relative to published regulations and consistency with those regulations.

Thresholds for potentially significant effects of hazardous materials and hazardous waste generation also rely on Appendix G of the CEQA Guidelines. Therefore, a project would normally have a significant effect on the environment if it would either 1) create a hazard to the public or the environment through the routine transport, use or disposal of hazardous materials, or 2) create a hazard to the public or environment through reasonably foreseeable accident or upset condition involving release of hazardous materials into the environment.

5.6.4 PROJECT IMPACTS

Chino Airport Land Use Restrictions

The proposed land uses around the Airport and the existing land use regulations have been integrated to ensure the proposed project will not be adversely affected by the Airport operations. Land uses to the east of the Airport that are potentially affected by aircraft noise, safety, and other airport related operations are Light Industrial and Agricultural, consistent with allowable uses in the airport Land Use Compatibility Matrix. Planned land uses to the southwest of the Airport include Open Space-Recreational and Airport Related Uses.

Potential vertical building height impacts of the proposed project were evaluated using the Federal Aviation Administration's (FAA) Part 77 Regulations for determining vertical height restrictions. Building height restrictions apply not only to buildings, but to all penetrations of airspace by objects such as the antennas, light standards or church steeples. Potential vertical building heights within the project area would be restricted to 160 feet or less depending on the type of approach allowed on the pertinent runway and the project's distance from the Airport. To ensure compatibility with FAA standards, development of tall structures around the Airport would not be allowed until a Notice of Construction is filed and reviewed by the FAA and the FAA response is considered by the City.

The proposed plan includes school sites, including elementary schools, a junior high school, a learning center, and possibly a college campus. These sites would be located within two (2) miles of the Chino Airport. The California Department of Transportation (Caltrans), Division of Aeronautics recommends that schools be sited outside a two (2) mile radius from an airport. Schools proposed within this two (2) radius are reviewed by Caltrans on a case by case basis. The major issues of concern from Caltrans' perspective are penetrations into air space, proximity to primary air traffic patterns, and whether or not the school is under the base leg of an instrument approach. Previous environmental documentation indicated that Caltrans has approved over 70 percent of the school sites proposed within two (2) miles of airport when these types of impacts do not occur.

From a procedural standpoint the local school district would be responsible for coordinating with Caltrans during the design and approval process for schools within the Airport sphere. As currently envisioned the location of the proposed schools would not impact any of the criteria listed above, and would not conflict with adopted airport safety zones.

No significant airport safety impact is anticipated for proposed schools.

Chino Airport Wildlife Hazards

Wildlife, such as birds, can represent a significant issue around an airport due to the potential for collisions with aircraft. FAA Advisory Circular 150/5200-32 contains various recommendations to restrict the location of water features, one of which is to "Locate water features at least 1,200 feet from the runway centerline and not off the ends of runways; water features should not be located in safety areas…[and] as far away from the runway end as is physically possible." The proposed project does not include the establishment of a significant water feature, although water amenities such as fountains may be incorporated into the design of public spaces or commercial projects. Since the proposed project does not include the creation of a substantial water body near the Airport this issue would not be considered significant under FAA criteria.

Vector Control

Implementation of the proposed project will, over time, systemically reduce the volume of standing water and other sources associated with the dairies that are used for breeding by mosquitoes.

With the abundance of manure and the presence of stagnant water, these populations may continue to breed during the dairy transition to urban uses, and buildout of the community. Control of these populations can be achieved with non-chemical methods (i.e. mechanical methods) and the use of pesticides. With proper, vector control practices, health and safety impacts are not expected to be significant.

Past and present uses of pesticides and herbicides in agricultural operations may have left measurable residues in the area's soils. Future development proposals within the plan area will be required to submit, at a minimum, Phase 1 Environmental Site Assessments to address the possible presence of chemical residues in soils. With conformance to recommendations of such reports, including any necessary soil blending during grading or remediation measures, future uses would not be adversely affected by agricultural soils.

Co-Composting Facility

A possibility exists that some of the plant material brought to the facility in greenwaste and green material is infected with plant diseases and/or insect pests. Green material/waste loads are required to be covered in order to prevent transmission of plant pathogens. As plant pathogens or pests are destroyed during the composting process as a result of the heat generated by the decomposition process, no significant risk to surrounding uses is anticipated.

Pathogens occurring in domestic sewage that can result in health risks to humans and animals include viruses, bacteria, protozoa, parasitic helminths, and fungi. However, the sludge composted at the site is not classified as hazardous waste. Additionally, the sludge used at the Co-Composting Facility is generally low in metals due to its predominantly residential origins. The sludge received by the facility is one of the final products of the sewage treatment process. The sludge digestion process (both anaerobic and aerobic) reduces virus populations by 2 to 3 orders of magnitude (99.9% reduction) and the drying of the solids has proven to further reduce the number of viruses. The composting process further destroys all five pathogen groups.

Without proper management practices, the exposure of surrounding populations to odors, dust emissions and related health hazards resulting from Co-Composting Facility air quality impacts during windy conditions would be potential concerns. However, IEUA has implemented dust and odor control plans including measures to mitigate these potential effects.[6] Such measures include:

- Aeration of organic bulking agents onsite to prevent anaerobic decomposition and emission of odors;
- Cessation of deliveries of sludge, manure, and bulking agents during periods of high winds (25 mph average or greater);
- Cessation of compost windrow mixing and/or turning during periods of high winds;
- Spraying of existing compost windrows and facility roadways with water during periods of high winds.

[6] Final Mitigated Negative Declaration for Co-Composting Facility Improvements; IEUA (11/98).

All potential runoff from the facility is contained within an onsite detention basin.

The proposed plan envisions the transition of the Co-Composting Facility to an area outside of the project boundaries as a related project. The proposed land use plan identifies residential uses in and around the current Facility location. The Specific Plan includes an overlay zone to establish an appropriate buffer around the facility (see Section 5.1 Land Use) in the event that residential uses are developed prior to facility relocation. Following facility relocation, appropriate site remediation methods should be employed to ensure adequate site safety for residential use.

No significant airborne or waterborne health or safety risks are anticipated.

Methane in Manure and Organic Soils

Of special concern in the plan area is surface organic residue (e.g. manure and other organic deposition) within the soils that remain from activities of the dairy industry. A related concern is possible exposure of new development and human populations to explosive concentrations of methane released from such soils. However, building code and grading code requirements, and soils engineering investigation report requirements are in place as safeguards to prevent possible hazards from construction in these areas. Soils reports for construction in these areas will require identification and testing for methane, and soils remediation as necessary. No significant remaining hazards are anticipated.

Electromagnetic Fields

A number of overhead electrical lines traverse the project area. Electric fields are produced in electrical lines as a result of voltage applied to wiring, and are measured in volts per meter (V/m) or kilovolts per meter (Kv/m). Scientific research has suggested that long-term direct exposure to electric and magnetic fields (electromagnetic fields) may pose a risk to human health.

The strength of electric fields greatly diminish as the distance from the source increase. Structures can also act to shield these fields. Most exposure to residential electric fields is the result of internal household appliance use. Magnetic fields are the result of the movement (current) of electricity. These fields are measured in Gauss, however this measure is extremely large, and fields from electrical lines are generally referred to in milligauss (mg). As with electric fields, magnetic field strengths decrease dramatically with distance from the source; however structures such as trees of houses do not shield magnetic fields. Exposure to EMFs from power lines or electrical substations is typically in the extremely low frequency (ELF) range of the electromagnetic spectrum.

At present no U.S federal agency has yet set ELF EMF standards. Presently, neither the State, the County of San Bernardino, or the City of Chino have provisions or codes regulation development

near major transmission lines or substations. The proposed land use plan has located an element of the community paseo and open space system along the alignment of the major SCE power line corridor that is roughly parallel with Pine Avenue. This land use will create a corridor that separates the power transmission lines from other land uses, thereby diminishing the potential long term effects of electromagnetic fields. Recreational use of the power line easement is not expected to result in any significant health hazards or risks.

5.6.5 CUMULATIVE IMPACTS

Hazardous Materials

Implementation of the proposed plan will provide for a variety of residential, commercial, industrial, and open space related uses. In general, the types of uses allowed by the specific plan do not include those that would result in the generation of substantial quantities of hazardous wastes or toxic materials. Compliance with federal, state and local regulations concerning the handling, transport and disposal of hazardous materials and wastes would reduce impacts to less than significant levels. As related projects in the CBDA and project vicinity will be required to mitigate their own hazardous materials impacts, no significant cumulative impacts related to hazardous materials are anticipated.

Airport Operations

With cumulative development within the Chino Airport vicinity, additional populations will be exposed to some level of risk associated with aircraft activities and hazards. However, safety zones have been established to protect future uses and reduce hazards to an acceptable level of risk, and future development will be subject to review by the Airport Comprehensive Land Use Plan (ACLUP) to assure compatibility. No significant cumulative impact is anticipated.

5.6.6 MITIGATION MEASURES

Airport Safety

HM-1 To minimize aircraft/wildlife hazards, sizeable water features that might attract waterfowl should be prohibited in the plan area east of the Airport.

HM-2 The maximum building heights outside of the runway protection zones may not exceed 160 feet to prevent any conflict with adopted flight patterns.

Hazardous Materials

HM-3 Prior to City consideration of any specific development projects within the plan area, developers will be required by the City to submit a completed Phase 1 Environmental Site Assessment (ESAs), which at a minimum, meets with the requirements of the most

current standards of investigation established by the American Society of Testing and Materials (ASTM Standard E 1527). The recommendations of such ESAs, including testing and soil remediation, if necessary, shall be adhered to reduce any identified hazards to acceptable levels.

HM-4 Prior to issuance of permits by the City of Chino for major renovation or demolition of any pre-1979 structure within the project area, the project developer will be required to submit documentation to the City Building Department that asbestos and lead-based paint issues are not applicable to their property, or that appropriate actions will be taken to correct any asbestos or lead-based paint issues prior to development of the site.

HM-5 In order to minimize risks to life and property, projects within the plan area will be required to demonstrate compliance with all applicable federal, state and local laws and regulations governing the handling, transport, treatment, generation and storage of hazardous materials.

5.6.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of mitigation measures, all potential hazards are reduced to less than significant levels.

5.7 TRANSPORTATION AND CIRCULATION

5.7.1 INTRODUCTION

The information derived for this section is based upon existing circulation plans, the proposed Specific Plan, and a traffic analysis prepared by Urban Crossroads, dated July 16, 2002 and supplemented July 29, 2002. The traffic analysis includes the project area and surrounding vicinity, based upon the requirements of the City of Chino and the San Bernardino County Congestion Management Program (CMP). The analysis has been updated from the original May 17, 2001 traffic impact analysis to address San Bernardino Associated Governments (SANBAG) staff comments related to absorption and traffic modeling assumptions related to the project. The revised EIR Section 5.7 and Traffic Impact Analysis report in Appendix C are based on specific direction provided by SANBAG staff in order to satisfy the County's Congestion Management Program (CMP). Key changes in response to SANBAG requirements include a modified project trip distribution and specific recognition of project generated heavy truck traffic.

5.7.2 EXISTING CONDITIONS

Study Area and Methodology

A revised traffic analysis was completed by Urban Crossroads, Inc. on July 16, 2002 and supplemented on July 29, 2002 for the proposed project. The analysis was prepared consistent with the requirements of the City of Chino and the San Bernardino Association of Governments (SANBAG). SANBAG has adopted a Congestion Management Program (CMP) to analyze traffic impacts. The CMP requires an analysis of selected roadways within five (5) miles of the project boundaries. In this instance the selected roadways include the following Freeways, Expressways, and roadways: SR-91, I-15 Freeway, SR-83, SR-60, SR-17, SR-142, Edison Ave., Riverside Drive, Walnut Ave. Central Ave., Mountain Ave., and Archibald Ave.

The report divided the analysis into four (4) separate time frames, including: Existing Conditions-2001; Project Interim Year-2010, CMP Horizon Year-2020, and General Plan Buildout. The 2020 Horizon Year, with project traffic volumes, was based upon the subregional travel demand model used by San Bernardino County, referred to as the Comprehensive Transportation Plan (CTP). The average daily traffic volume forecasts were determined using the growth increment approach from the CTP traffic model for Year 1994 and Year 2020. A linear growth condition was then extrapolated between the 1994 and 2020 conditions. The Interim Year 2010 with Project traffic volumes were interpolated from the Year 2020 with Project traffic volumes using the applicable proportion of future growth.

The analysis determined the level of service (LOS) consistent with the 1997 Highway Capacity Manual (HCM). The HCM defines LOS as a qualitative measure that describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate the traffic flow vary based upon the type of roadway and whether the traffic flow is considered to be uninterrupted or interrupted.

The definitions of LOS for uninterrupted flow, which is a flow that is unrestrained by the existence of traffic control devices, are as follows:

- LOS "A" represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.

- LOS "B" is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.

- LOS "C" is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.

- LOS "D" represents high-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.

- LOS "E" represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.

- LOS "F" is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount that can traverse the point. Queues form behind such locations.

The level of service for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differs slightly depending on the type of traffic control. The level of service is typically dependent on the quality of traffic flow at the intersections along a roadway. The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control. The level of service is defined in terms of average delay for the various intersection analysis methodologies as noted below.

Level of Service	Average Stopped Delay Per Vehicle (Seconds) Signalized	Average Total Delay Per Vehicle (Seconds) Unsignalized
A	0 to 5.00	0 to 10.00
B	10.01 to 20.00	10.01 to 15.00
C	20.01 to 35.00	15.01 to 25.00
D	35.01 to 55.00	25.01 to 35.00
E	55.01 to 80.00	35.01 to 50.00
F	80.01 and up	50.01 and up

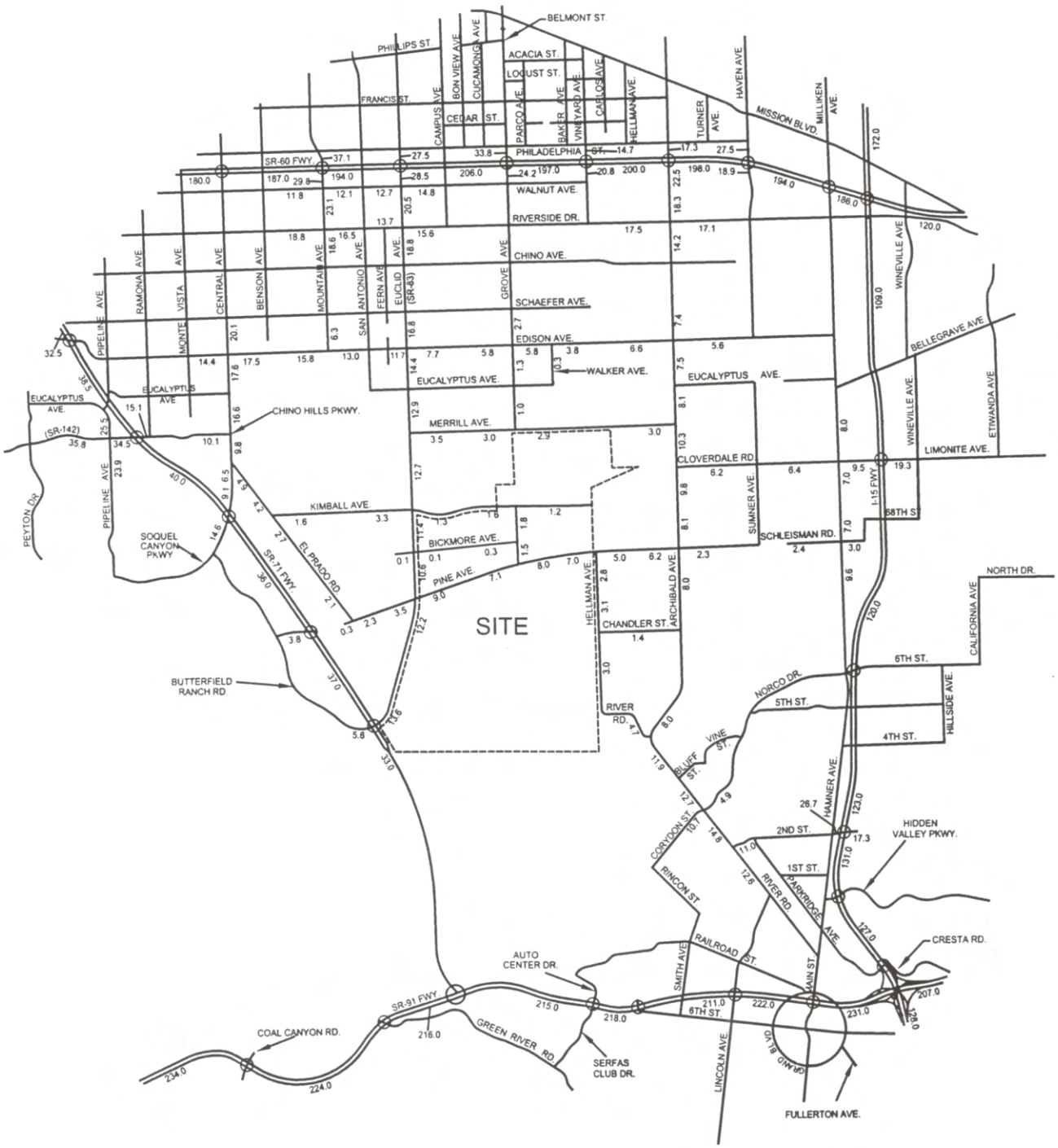
Existing Circulation Pattern

Regional access to the project vicinity is provided by SR-60 to the north, SR-91 to the south, I-15 to the east, and SR-71 to the west. Primary roadways through the project area include Euclid Avenue (SR-83), Merrill Ave., Kimball Ave., Pine Ave., Chino Corona Road, and Hellman Ave. The circulation pattern is impeded in a number of areas due to a variety of existing conditions, including the Prado Dam inundation area south of the 566' elevation, the Chino Airport, and Prado Regional Park.

Existing average daily traffic levels for roadways in the project area are listed below:

- Euclid Ave.: 11,600 to 13,600
- Grove Ave.: 1,500 to 1,800
- Hellman Ave.: 2,800 to 3,100
- Merrill Ave.: 2,900 to 3,000
- Kimball Ave.: 1,200 to 1,600
- Bickmore Ave.: 100 to 300
- Pine Ave.: 7,000 to 9,000

The average daily traffic levels and existing intersection conditions for the surrounding area are shown on Exhibit 5.7-1 and Table 5.7-1, respectively.



LEGEND

5.6 + VEHICLES PER DAY (1000'S)

SOURCE: Urban Crossroads

Michael Brandman Associates

Exhibit **5.7-1**

Existing Average Daily Traffic (ADT)

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THE PRESERVE • CHINO SUBAREA 2

TABLE 5.7-1
EXISTING CONDITIONS INTERSECTION ANALYSIS

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Pipeline Ave. (NS) at:																	
▪ Chino Hills Pkwy. (EW)	TS	1	2	0	1	2	0	1	3	1	1	2	1	45.4	64.4	D	E
SR-71 Fwy. SB Ramps (NS) at:																	
▪ Chino Hills Pkwy. (EW)	TS	0	0	0	1.5	0.5	1>>	0	4	1	1	2	0	9.4	9.6	A	A
▪ Soquel Canyon Pkwy. (EW)	TS	0	0	0	1.5	0	0.5	0	3	1>>	0	3	1>>	8.6	11.5	A	B
▪ Pine Ave. (EW)	TS	0	0	0	1	0	1	0	1	1	1	2	0	8.3	12.8	A	B
▪ Euclid Ave. (EW)	TS	1	0	1	1.5	0.5	1	0	2	1	1	2	0	17.7	17.1	B	B
SR-71 Fwy. NB Ramps (NS) at:																	
▪ Chino Hills Pkwy. (EW)	TS	1.5	1.5	0	0	0	0	2	2	0	0	2	1	12.9	12.1	B	B
▪ Soquel Canyon Pkwy. (EW)	TS	1.5	0	0.5	0	0	0	0	3	1>>	0	3	1>>	12.0	10.8	B	B
▪ Pine Ave. (EW)	AWS	2	0	0	0	0	0	2	0	0	0	0	0	8.8	8.6	A	A
▪ Euclid Ave. (EW)	TS	2	0	1>>	0	0	0	0	2	1>>	1	2	0	8.2	8.6	A	A
Central Ave. (NS) at:																	
▪ Edison Ave. (EW)	TS	1	2	1	1	2	1	1	2	0	1	2	1	31.4	31.4	C	C
▪ Chino Hills Pkwy. (EW)	TS	1	2	1	1	2	1	1.5	0.5	1	1	2	1	22.9	22.9	C	C
▪ El Prado Rd. (EW)	CSS	0	1	1	1	2	0	0	0	0	1	0	1	17.2	29.2	C	D
El Prado Rd. (NS) at:																	
▪ Kimball Ave. (EW)	CSS	1	1	0	1	1	1	1	1	0	1	1	0	12.6	12.7	B	B
▪ Pine Ave. (EW)	CSS	0	0	0	0	1	0	0	1	0	0	1	0	9.7	9.9	A	A
Mountain Ave. (NS) at:																	
▪ SR-60 Fwy. WB Ramps (EW)	TS	1	2	0	0	2	1	0	0	0	1	0	1	37.2	20.5	D	C
▪ SR-60 Fwy. EB Ramps (EW)	TS	0	2	1	1	2	0	1.5	0	0.5	0	0	0	23.4	--[4]	C	F
▪ Walnut Ave. (EW)	TS	1	2	1	1	2	1	1	1	1	1	1	1	--	17.4	F	B
▪ Riverside Dr. (EW)	TS	1	2	0	1	2	1	1	2	1	1	2	1	25.1	29.7	C	C
▪ Edison St. (EW)	TS	0	0	0	1	0	1	1	2	0	0	2	1	14.4	11.6	B	B

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; >> = Free Right Turn

[2] Delay and level of service calculated using the following analysis software: Traffix, Version 7.1.0607 (1999). Per the 1997 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal AWS = All Way Stop CSS = Cross Street Stop

[4] -- = Delay High, Intersection Unstable, Level of Service "F".

TABLE 5.7-1 (Cont.)
EXISTING CONDITIONS INTERSECTION ANALYSIS

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Euclid Ave. (NS) at:																	
▪ SR-60 Fwy. WB Ramps (EW)	TS	1	2	0	0	2	1	0	0	0	1.5	0	0.5	35.1	28.9	D	C
▪ SR-60 Fwy. EB Ramps (EW)	TS	0	2	1	1	2	0	1.5	0	0.5	0	0	0	17.8	50.9	B	D
▪ Walnut Ave. (EW)	TS	1	3	1	2	3	1	1	2	0	1	2	0	24.1	25.0	C	C
▪ Riverside Dr. (EW)	TS	1	2	1	1	2	1	0	2	0	0	2	0	19.0	25.7	B	C
▪ Edison St. (EW)	TS	1	2	1	1	2	1	1	1	1	1	1	0	18.6	17.6	B	B
▪ Merrill Ave. (EW)	TS	0	2	1	1	2	0	0	0	0	0	1	0	11.7	12.0	B	B
▪ Kimball Ave. (EW)	TS	1	2	1	1	2	1	0	1	0	0	1	0	14.2	14.3	B	B
▪ Bickmore Ave. (EW)	CSS	1	1	0	1	1	0	0	1	0	0	1	0	19.6	18.4	C	C
▪ Pine Ave. (EW)	TS	1	2	1	1	2	1	0	1	1	0	1	1	17.3	15.2	B	B
Grove Ave. (NS) at:																	
▪ SR-60 Fwy. WB Ramps (EW)	TS	1	2	0	0	2	1	0	0	0	1	0	1	27.4	14.9	C	B
▪ SR-60 Fwy. EB Ramps (EW)	TS	0	2	1	1	2	0	1	0	1	0	0	0	22.5	24.6	C	C
▪ Edison St. (EW)	AWS	0	1	0	0	1	0	0	1	0	0	1	0	11.6	14.0	B	B
▪ Merrill Ave. (EW)	AWS	0	0	0	0	1	0	0	1	0	0	1	0	7.9	8.6	A	A
▪ Kimball Ave. (EW)	AWS	0	1	0	0	0	0	0	1	0	0	1	0	7.5	7.6	A	A
▪ Bickmore Ave. (EW)	CSS	0	1	0	0	1	0	0	1	0	0	0	0	8.9	9.0	A	A
▪ Pine Ave. (EW)	CSS	0	0	0	0	1	0	1	1	0	0	1	0	13.7	17.7	B	C
Walker Ave. (NS) at:																	
▪ Edison Ave. (EW)	CSS	0	1	0	0	1	0	0	1	0	0	1	0	13.9	20.6	B	C
Hellman Ave. (NS) at:																	
▪ Pine Ave. (EW)	CSS	0	1	0	0	0	0	0	1	0	0	1	0	24.2	15.3	C	C
▪ Chandler St. (EW)	CSS	0	1	0	0	1	0	0	0	0	0	1	0	10.4	10.1	B	B
Vineyard Ave. (NS) at:																	
▪ SR-60 Fwy. WB Ramps (EW)	TS	1	1	0	0	2	0	0	0	0	1	0	1	19.0	18.4	B	B
▪ SR-60 Fwy. EB Ramps (EW)	TS	0	2	0	1	2	0	1	0	1	0	0	0	17.1	19.5	B	B

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; >> = Free Right Turn

[2] Delay and level of service calculated using the following analysis software: Traffix, Version 7.1.0607 (1999). Per the 1997 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal AWS = All Way Stop CSS = Cross Street Stop

[4] -- = Delay High, Intersection Unstable, Level of Service "F".

TABLE 5.7-1 (Cont.)
EXISTING CONDITIONS INTERSECTION ANALYSIS

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (Secs.)		Level of Service	
		North-Bound			South-Bound			East-Bound			West-Bound						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Archibald Ave. (NS) at:																	
▪ SR-60 Fwy. WB Ramps (EW)	TS	1	3	0	0	4	0	0	0	0	1	0	1	21.8	17.2	C	B
▪ SR-60 Fwy. EB Ramps (EW)	TS	0	4	0	1	3	0	1	0	1	0	0	0	15.6	22.8	B	C
▪ Riverside Dr. (EW)	TS	1	3	0	1	3	0	1	2	1	1	1	1	27.5	50.1	C	D
▪ Edison Ave. (EW)	TS	1	2	1	1	2	1	1	2	0	1	2	0	19.4	19.8	B	B
▪ Merrill Ave. (EW)	CSS	1	1	0	0	1	0	0	1	0	0	0	0	13.1	15.5	B	C
▪ Cloverdale Rd. (EW)	TS	0	1	0	1	1	0	0	0	0	1	0	1	13.0	15.4	B	B
▪ Pine Ave. (EW)	TS	1	1	0	1	1	0	1	1	0	1	1	0	31.1	24.4	C	C
▪ River Rd. (EW)	CSS	1	1	0	0	1	1	1	0	1	0	0	0	34.1	18.8	D	C
River Rd. (NS) at:																	
▪ Corydon St. (EW)	TS	1	1	1	1	2	0	1	1	1	1	1	1	28.6	28.0	C	C
▪ Second St. (EW)	TS	1	2	1	1	2	1	1	1	1	1	1	0	35.2	26.0	D	C
Haven Ave. (NS) at:																	
▪ SR-60 Fwy. WB Ramps (EW)	TS	2	3	0	0	3	1	0	0	0	1	0	1>>	10.8	9.2	B	A
▪ SR-60 Fwy. EB Ramps (EW)	TS	0	3	0	2	3	0	2	0	1	0	0	0	16.3	14.5	B	B
Hamner Ave. (NS) at:																	
▪ Cloverdale Rd. (EW)	TS	1	1	1	1	1	1	0	1	1	0	1	1	26.0	23.2	C	C
▪ Schleisman Rd. (EW)	CSS	1	1	0	1	1	0	0	1	0	0	1	0	--[4]	41.8	F	E
I-15 Fwy. SB Ramps (NS) at:																	
▪ Limonite Ave. (EW)	TS	0	0	0	1	0	1	0	2	1	1	2	0	15.2	17.4	B	B
▪ Second St. (EW)	TS	0	0	0	1	0	1	0	2	0	1	2	0	15.6	17.1	B	B
I-15 Fwy. NB Ramps (NS) at:																	
▪ Limonite Ave. (EW)	TS	0.5	0	1.5	0	0	0	1	2	0	0	2	1	14.7	15.0	B	B
▪ Second St. (EW)	TS	1	0	1	0	0	0	1	1	0	0	1	0	43.4	33.6	D	C
Lincoln Ave. (NS) at:																	
▪ Pomona Rd. (EW)	TS	2	2	0	1	2	0	0	1	1>	1	1	0	29.4	44.1	C	D
▪ SR-91 EB Ramps (EW)	TS	1	2	1	1	2	0	0	1	0	0	1	1	18.6	20.4	B	C

1 When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; >> = Free Right Turn

2 Delay and level of service calculated using the following analysis software: Traffix, Version 7.1.0607 (1999). Per the 1997 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

3 TS = Traffic Signal AWS = All Way Stop CSS = Cross Street Stop

4 -- = Delay High, Intersection Unstable, Level of Service "F".

Existing Service Levels

Exhibit 5.7-1 identified the existing average daily traffic. Intersections within the study area currently operate at LOS "D" or better during the peak hours, except for the following intersections that operate at LOS "E" or "F":

- Pipeline Ave. (NS) at Chino Hills Parkway (EW).
- Mountain Ave. (NS) at SR-60 Freeway EB Ramps (EW).
- Mountain Ave. (NS) at Walnut Ave. (EW).
- Hamner Ave. (NS) at Schleisman Road (EW).

Traffic signals currently appear to be warranted at the following study area intersections:

- Central Ave. (NS) at El Prado Road (EW)
- Hellman Ave. (NS) at Pine Ave. (EW)
- Archibald Ave. (NS) at Merrill Ave. (EW)
- Archibald Ave. (NS) at River Road (EW)
- Hamner Ave. (NS) at Schleisman (EW)

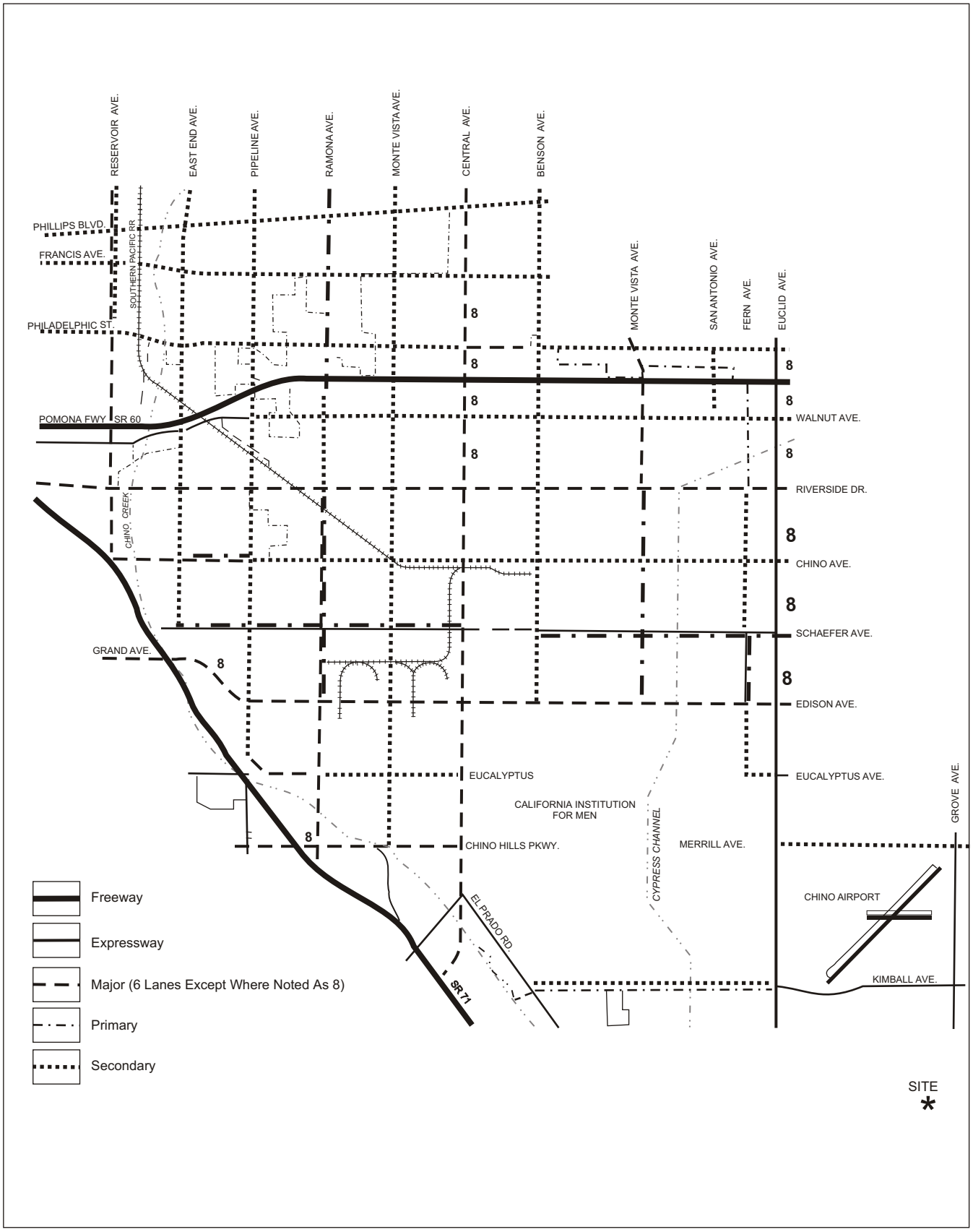
Existing Master Circulation Plans

The City of Chino General Plan Circulation Element delineates the future roadway pattern for the current City limits, but extends into only a portion of the project area (see Exhibit No. 5.7-2). The streets within or adjacent to the project area, Euclid Ave. and Merrill Ave., are designated on the City's of Chino General Plan as Expressway and Secondary roadways, respectively. The balance of the study area is located within a number of other jurisdictions, including the Cities of Chino Hills, Ontario, Corona, and Norco. A portion of the area lying north and east of the project site is within the unincorporated area of San Bernardino County and the Eastvale area of Riverside County, respectively. The traffic report in Appendix C identifies the roadway systems within these areas.

Existing Transit Services

Bus Service

Regular fixed route transit service is not provided within the project area. Bus transit in the vicinity of the project area is provided by Omnitrans, which operates transit systems within most San Bernardino County jurisdictions and some communities in Riverside County. Existing bus service is provided by Omnitrans on four outlying routes on hourly headways as follows: 1) Route 62 N. Upland—Chino Town Square, 2) Route 63 N. Ontario Civic Center—Chino Town Square, 3) Route 65 Montclair-Chino Hills, and 4) Route 72 Chino—Chino Hills.



SOURCE: Urban Crossroads and City of Chino

NORTH

MAP NOT TO SCALE

Michael Brandman Associates

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Exhibit **5.7-2**

Circulation Element City of Chino

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Rail Service

The only rail service near the project area is commuter rail service, referred to as Metrolink, which is provided by the Southern California Regional Rail Authority. The Southern California Regional Rail Authority (Metrolink) currently operates four commuter rail lines on weekdays surrounding the Chino Basin: 1) the San Bernardino Line (13 inbound, 13 outbound), 2) the Riverside Line (6 inbound, 6 outbound), 3) the Inland Empire-Orange County Line (5 inbound, 5 outbound), and the Riverside-Fullerton—Los Angeles Line (2 inbound, 2 outbound). This service operates primarily during peak hours and connects the Downtown Riverside Station with the Downtown Los Angeles station using the Union Pacific rail line. One of the intermediate stations along this route is the East Ontario Station, located north of the project area, near Mission Boulevard and Haven Avenue.

The California High Speed Rail Commission is evaluating a potential high speed rail line that approximates I-10 and SR-60 between Los Angeles and Ontario, and I-15 between Ontario and San Diego as part of a statewide system.

Other Relevant Transportation Studies

The Four Corners Study Final Report (June 2000) is a long-range transportation planning study of the needs in a broad area encompassed by SR-57 to the west, SR-60 to the north, I-15 to the east, and SR-91 to the south. The Four Corners Study Area is characterized by topographic constraints, few major roadways, and well-documented transportation needs. The area is strategically located as a 'gateway' from the Inland Empire to Orange and Los Angeles counties.

The study identifies a number of committed transportation and circulation improvements by the year 2005. These include, but are not limited to: 1) upgrades to the SR 71 freeway between SR-60 and SR-83 (Euclid Avenue), 2) addition of lanes to SR-71 between SR-83 and SR-91, 3) addition of HOV lanes to SR-60 west from I-15 to Los Angeles County, and 4) addition of auxiliary lanes to SR-91 between SR-71 and SR-241 (Eastern Tollway). These committed improvements are included in the SCAG regional circulation network used in the Traffic Impact Analysis in the proposed project EIR. The SCAG 2020 traffic model used in the EIR traffic analysis allocates trip to the regional network based upon land use data included in adopted SCAG forecasts. Employment centers in Los Angeles County and Orange County to the west and southwest are anticipated to be significant trip destinations for new residents, as are employment centers in Ontario and San Bernardino County to the northeast.

The Four Corners Study identifies a 47% increase in trip growth between the Inland Empire and Orange/Los Angeles counties (i.e. through the Four Corners Study Area) from 1997 to 2020. This trip growth is consistent with growth included in the SCAG traffic model utilized in the Traffic Impact

Analysis for the proposed project EIR. The ability to accommodate this trip growth is severely constrained by the limited number of existing east-west routes, including SR-91, SR-60, SR-142 (Carbon Canyon Road), and Grand Avenue.

The study identifies four broad alternatives to accommodate this regional trip growth: 1) maximize highway capacity; 2) maximize transit ridership; 3) add new roads and toll lanes; and 4) implement the Regional Transportation Plan. Key principles relied upon in defining a set of recommended improvements for the study area included the following: 1) Relieve inter-county congestion; 2) provide travel options; 3) identify feasible solutions and improvements with realistic costs; 4) protect the quality of life; 5) avoid shifting traffic problems; 6) minimize significant environmental impacts; and 6) demonstrate sensitivity to landowner concerns. Key policy recommendations of the study include: 1) Support Metrolink improvements; 2) use demographic forecasts that are compatible with transportation infrastructure; 3) provide incentives for employment in Inland Empire, and housing in Los Angeles/Orange counties; and 4) support Intelligent Transportation Systems (ITS), Transit-Oriented Development (TOD) and High-Occupancy Travel (HOT) lanes.

As an outgrowth of the Four Corners Study process, a Four Corners Policy Committee of representatives from participating and affected agencies has been established, and a list of fifty-three (53) active transportation projects has been identified within the study area. In the vicinity of the proposed project, the Four Corners Study specifically identifies Pine Avenue/Schleisman Avenue/Arlington Boulevard as a prospective corridor for intercounty transportation in the CTP being developed by SANBAG. The status and priorities of active projects on the list are monitored through the Policy Committee meeting process. The Four Corners Study circulation network, including committed and recommended improvements, was accounted for in the Traffic Impact Analysis for the proposed project.

5.7.3 THRESHOLDS OF SIGNIFICANCE

Thresholds of significance for traffic levels are separated into areas deemed deficient and those identified as significant. The term deficiency relates to the operational level below which traffic movement is no longer considered acceptable. The City of Chino General Plan indicates that peak hour intersection operations of LOS “D” or better are generally acceptable. Any operation below that, such as LOS “E” or “F” is considered inadequate or deficient.

For freeway facilities the San Bernardino CMP defines deficient as any freeway segment operating or projected to operate at LOS “F”, unless the segment is identified explicitly in the CMP document. Another way of viewing this is that by maintaining an LOS of “E” or better and allowing the continued existence of LOS “F”, as identified in the CMP, an acceptable level of service is achieved.

Significant impact is a CEQA related term and not addressed directly in the CMP document. A traffic impact is considered significant if it meets both of the following criteria:

- It contributes measurable traffic to, and;
- It substantially and adversely changes the level of service at any off-site location projected to experience deficient operations under foreseeable cumulative conditions, where feasible improvements consistent with the City of Chino General Plan cannot be constructed.

5.7.4 PROJECT IMPACTS

Analytical Process

The proposed project would result in the conversion of existing agricultural and dairy uses to a mixture of residential, commercial, business park, industrial, airport-related uses, and public facilities. A determination of the proposed project's traffic impact was evaluated using the following process:

- Determine trip generation rates.
- Determine trip distribution patterns.
- Assign or allocate traffic on area roadways/freeways.

The traffic impact analysis is summarized in this section, and included in Appendix C of this EIR. The impact analysis represents a "worst-case" analysis in that potential reductions in daily and peak hour vehicle trips attributable to the planned transit system for the project are not accounted for in the analysis.

Generation Rates

The traffic generation rates for each type of land use are displayed in Table 5.7-2.

The projected level of development for the Interim Year (2010) will generate a total of approximately 71,499 trip-ends per day with 5,722 vehicles per hour during the AM peak hour and 7,793 vehicles per hour during the PM peak hour. The heavy truck vehicle volumes (included in the totals) are 1,254 trip-ends per day with 70 vehicles per hour during the AM peak hour. For Buildout conditions, development is estimated to generate a total of approximately 244,930 trip-ends per day with 18,993 vehicles per hour during the AM peak hour and 25,911 vehicles per hour during the PM peak hour. The heavy truck vehicle volumes (included in the totals) are 3,633 trip-ends per day with 202 vehicles per hour during the AM peak hour.

TABLE 5.7-2
TRIP GENERATION RATES[1]

Land Use	Units[2]	AM		PM		Daily
		IN	OUT	IN	OUT	
Light Industrial (Auto)	TSF	0.68	0.14	0.18	0.70	5.81
Light Industrial (2&3 Axle Trucks)	TSF	0.03	0.01	0.01	0.03	0.63
Light Industrial (4+ Axle Trucks)	TSF	0.02	0.01	-	-	0.52
Light Industrial (Total)	TSF	0.73	0.16	0.19	0.73	6.96
Single-Family Detached Residential	DU	0.19	0.56	0.65	0.36	9.57
Multi-Family Attached Residential	DU	0.07	0.37	0.36	0.18	5.86
Hotel	RM	0.34	0.22	0.32	0.29	8.23
Elementary School	ST	0.17	0.12	0.01	0.01	1.02
Jr. High School	ST	0.26	0.20	0.08	0.08	1.45
Office (11.6 TSF)	TSF	2.54	0.35	1.35	6.60	21.88
Office (18.5 TSF)	TSF	2.31	0.32	0.92	4.49	19.63
Office (31.4 TSF)	TSF	2.08	0.28	0.62	3.03	17.36
Office (34.79 TSF)	TSF	2.03	0.28	0.58	2.82	16.95
Office (37.79 TSF)	TSF	2.00	0.27	0.55	2.67	16.63
Office (38.3 TSF)	TSF	1.99	0.27	0.54	2.65	16.58
Office (39.36 TSF)	TSF	1.98	0.27	0.53	2.60	16.48
Office (64.86 TSF)	TSF	1.79	0.24	0.40	1.95	14.67
Office (75.0 TSF)	TSF	1.74	0.24	0.37	1.81	14.19
Office (140.6 TSF)	TSF	1.53	0.21	0.29	1.40	12.26
Office (177.74 TSF)	TSF	1.46	0.20	0.27	1.30	11.61
Office (184.7 TSF)	TSF	1.45	0.20	0.26	1.29	11.51
Office (224.1 TSF)	TSF	1.39	0.19	0.25	1.22	11.01
Commercial Retail (6.7 TSF)	TSF	2.90	1.86	7.56	8.19	178.92
Commercial Retail (10.0 TSF)	TSF	2.47	1.58	6.59	7.14	155.09
Commercial Retail (10.8 TSF)	TSF	2.39	1.53	6.42	6.96	150.88
Commercial Retail (16.12 TSF)	TSF	2.04	1.30	5.61	6.07	130.78
Commercial Retail (18.5 TSF)	TSF	1.93	1.23	5.35	5.80	124.51
Commercial Retail (21.8 TSF)	TSF	1.80	1.15	5.06	5.48	117.42
Commercial Retail (24.49 TSF)	TSF	1.72	1.10	4.86	5.27	112.64
Commercial Retail (25.05 TSF)	TSF	1.70	1.09	4.83	5.23	111.74
Commercial Retail (30.38 TSF)	TSF	1.58	1.01	4.52	4.90	104.30

[1] Source: Institute of Transportation Engineers (ITE), Trip Generation, Sixth Edition, 1997, Land Use Category 210, 230, 310, 520, 522, 710, 770 and 820.
Source: San Diego Association of Governments (SANDAG), Traffic Generators, July, 1998.

Source: ITE Land Use Category 130 (Apportioned according to City of Fontana trip rates).

[2] TSF = Thousand Square Feet
DU = Dwelling Units
RM = Rooms
ST = Students
AC = Acres

TABLE 5.7-2 (Cont.)
TRIP GENERATION RATES[1]

Land Use	Units[2]	AM		PM		Daily
		IN	OUT	IN	OUT	
Commercial Retail (31.4 TSF)	TSF	1.56	0.99	4.47	4.84	103.08
Commercial Retail (33.34 TSF)	TSF	1.52	0.97	4.37	4.74	100.78
Commercial Retail (34.0 TSF)	TSF	1.51	0.96	4.35	4.71	100.19
Commercial Retail (38.35 TSF)	TSF	1.44	0.92	4.18	4.52	95.98
Commercial Retail (38.45 TSF)	TSF	1.43	0.92	4.17	4.52	95.89
Commercial Retail (39.2 TSF)	TSF	1.42	0.91	4.14	4.49	95.23
Commercial Retail (59.59 TSF)	TSF	1.26	0.81	3.75	4.06	85.75
Commercial Retail (127.4 TSF)	TSF	0.88	0.56	2.78	3.01	62.52
Commercial Retail (159.63 TSF)	TSF	0.81	0.52	2.57	2.79	57.68
Commercial Retail (179.36 TSF)	TSF	0.77	0.49	2.47	2.68	55.33
Commercial Retail (185.6 TSF)	TSF	0.76	0.49	2.44	2.65	54.66
Commercial Retail (656.11 TSF)	TSF	0.46	0.29	1.59	1.72	34.83
Airport—General Aviation	AC	0.16	0.38	0.54	0.54	6.00
Open Space—Recreation	AC	0.40	0.40	0.80	0.80	20.00
Prison	AC	1.75	1.89	0.76	0.70	25.45
Agriculture	AC	0.10	0.10	0.10	0.10	2.00

[1] Source: Institute of Transportation Engineers (ITE), Trip Generation, Sixth Edition, 1997, Land Use Category 210, 230, 310, 520, 522, 710, 770 and 820.
Source: San Diego Association of Governments (SANDAG), Traffic Generators, July, 1998.

Source: ITE Land Use Category 130 (Apportioned according to City of Fontana trip rates).

[2] TSF = Thousand Square Feet
DU = Dwelling Units
RM = Rooms
ST = Students
AC = Acres

Trip Distribution and Assignment

The trip distribution and assignment process represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the location of residential, commercial, employment, and recreational opportunities and proximity to the regional freeway system. Ten traffic analysis zones (TAZ) were established for the project using the CTP traffic model with the assistance of staff from the Southern California Association of Governments. The project internal capture is estimated at 26% (i.e. internal origins and destinations). This figure is typical for a large mixed-use Specific Plan. The internal capture percentage was calculated by subtracting the project only traffic leaving the site from the total traffic loaded onto the system from the ten project TAZ's. This approach is conservative in that some traffic is internal to each individual TAZ in the model and is never loaded onto the roadway system. The heavy truck trip distribution was developed in consultation with SANBAG staff and is depicted in the Appendix C

Traffic Impact Study. To evaluate impacts and to comply with existing CMP requirements 63 intersections and 35 freeway segments were analyzed. Please refer to the Appendix C for detailed information on turning movements and distribution patterns.

The project area and surrounding vicinity consists primarily of agriculture related uses. Future development, including that proposed by the project, will transform the area and add a number of new roadways and intersections. As such, the traffic study also analyzed a number of future intersections for review beyond those that currently exist, which include the following:

- Hellman Ave. and Merrill Ave.
- Hellman Ave. and Kimball Ave.
- Vineyard Ave. and Edison Ave.
- I-15 Freeway SB Ramps (NS) and Galena Street.
- I-15 Freeway NB Ramps (NS) at Galena Street.

Proposed Circulation Plan

The Specific Plan provides the following planned major roadways and circulation system characteristics as contained in Exhibits 5.7-3 and 5.7-4:

- Euclid Ave.: 200 feet right of way (Expressway, 8 lanes)

- Hellman Ave. (from north of Kimball Ave. south to River Road): 104 feet right of way with Paseo (Primary Arterial 4 lanes)

- Hellman Ave. (extending from north of Kimball Ave. to near Merrill Ave.): 104 feet right of way with Paseo (Primary Arterial 4 lanes)

- Pine Ave.: 122 feet right of way with Paseo (Major Arterial 6 lanes)

- Merrill Ave.: 88 feet right of way (Secondary Arterial 4 lanes)

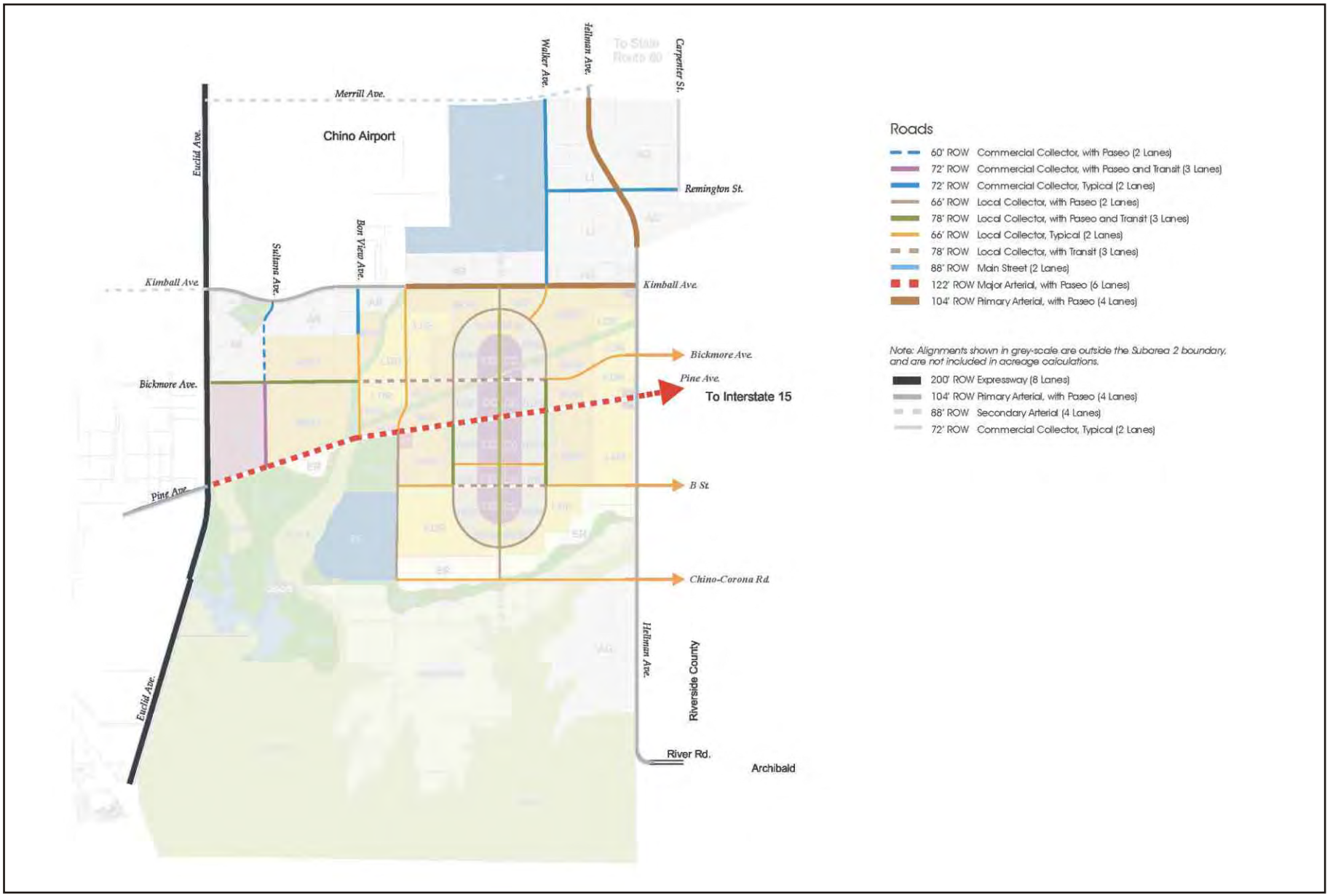
- Kimball Ave.: 104 feet right of way with Paseo (Primary Arterial with 4 lanes)

Impacts on Level of Service

Impacts on the level of service have been separated into the following categories:

- Without Project: The portion of the future traffic attributable to regional development without the proposed project.

- With Project: The combined portion attributable to regional development and the proposed project.



SOURCE: The Planning Center

NORTH

MAP NOT TO SCALE

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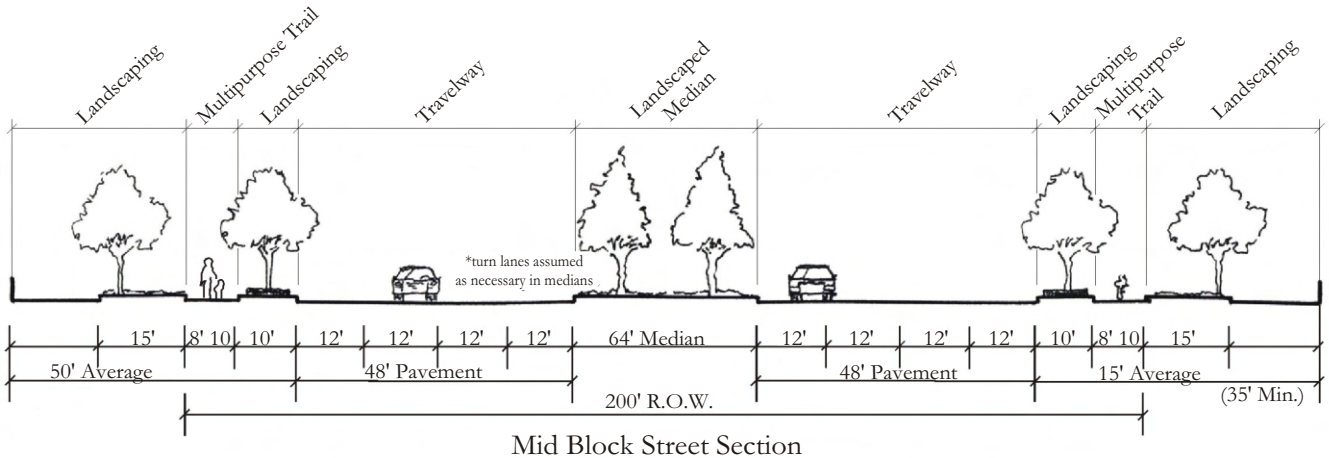
Exhibit **5.7-3**

Circulation Plan

THE PRESERVE • CHINO SUBAREA 2

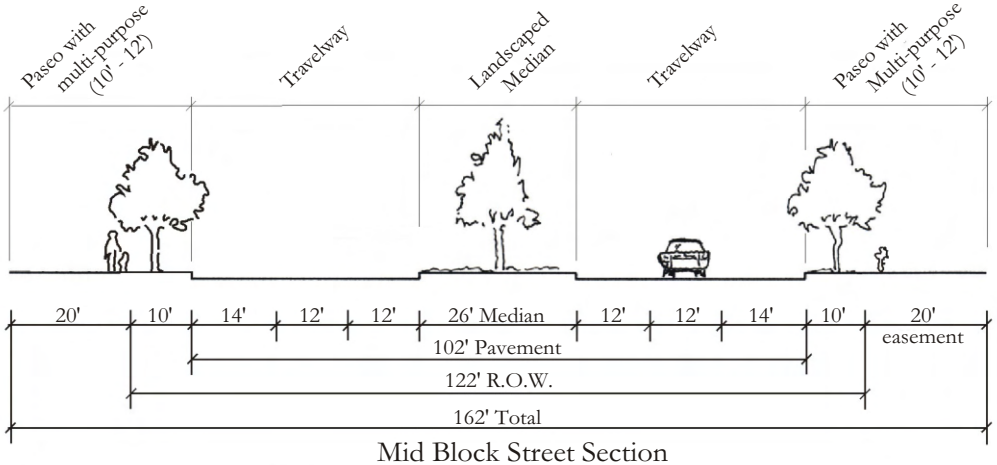


Mid Block Street Section

Major Arterial (expressway)

Euclid Ave. between Kimball & Pine Avenues

(no on-street parking)



Mid Block Street Section

Major Arterial w/ Paseo

e.g. Pine Avenue

(no on-street parking)

SOURCE: The Planning Center

NORTH

MAP NOT TO SCALE

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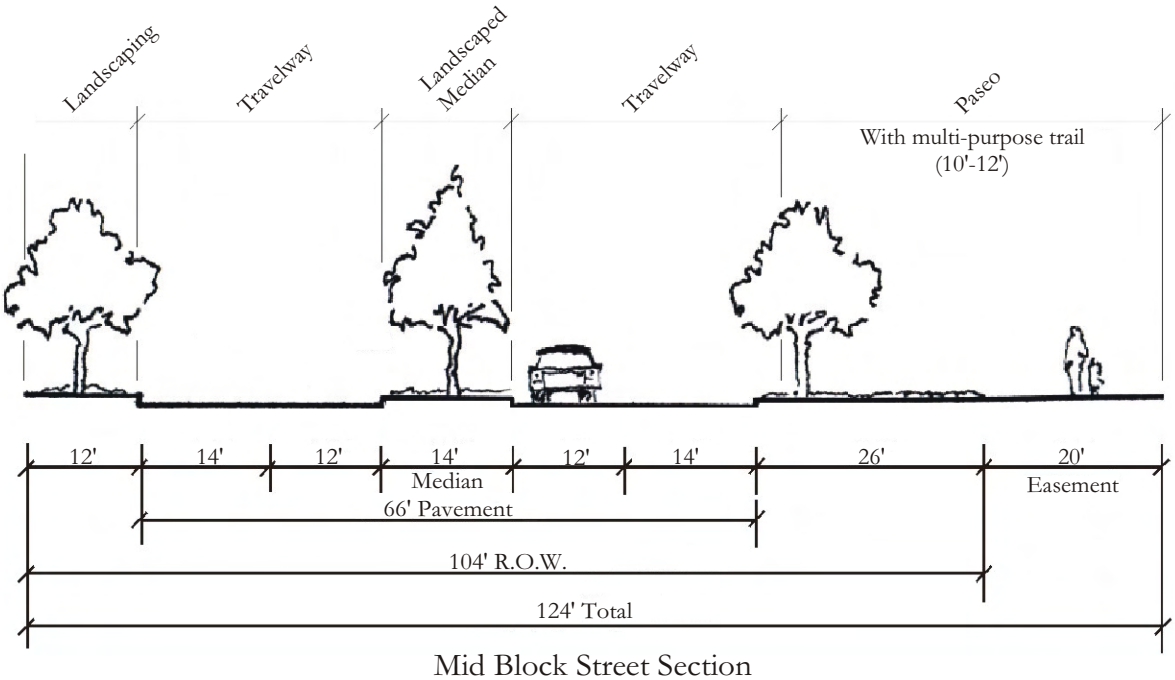
Exhibit **5.7-4A**

Roadway Sections

THE PRESERVE • CHINO SUBAREA 2

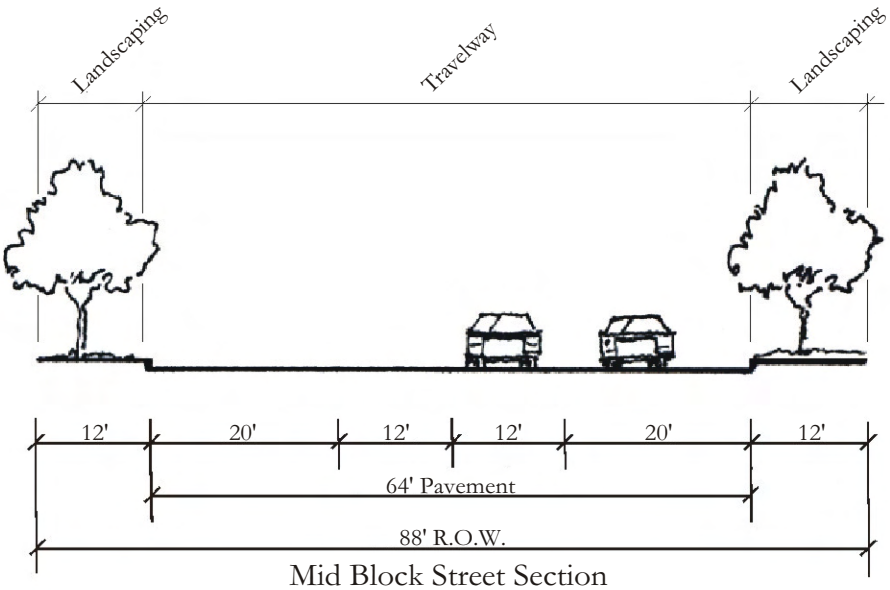


Mid Block Street Section

Primary Arterial w/Paseo

e.g. Kimball or Hellman

(no on-street parking)



Mid Block Street Section

Arterial

(no on-street parking)

SOURCE: The Planning Center

Michael Brandman Associates

Exhibit **5.7-4B**

Roadway Sections

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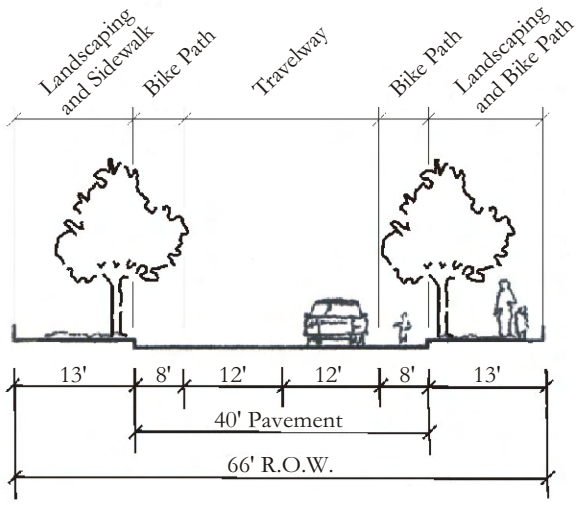
THE PRESERVE • CHINO SUBAREA 2

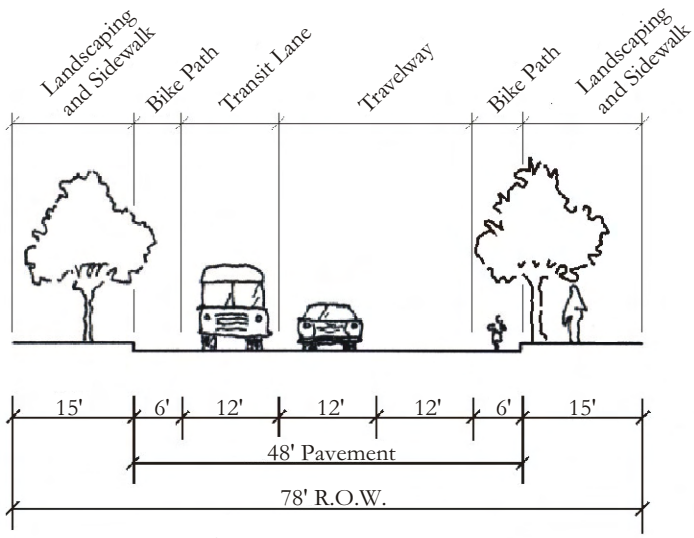


Mid Block Cross Section

Local Collector, Typical

e.g. A Street

(with on-street parking)



Mid Block Street Section

Local Collector w/Transit

e.g. Bickmore

(no on-street parking)

SOURCE: The Planning Center

Michael Brandman Associates

Exhibit **5.7-4C**

Roadway Sections

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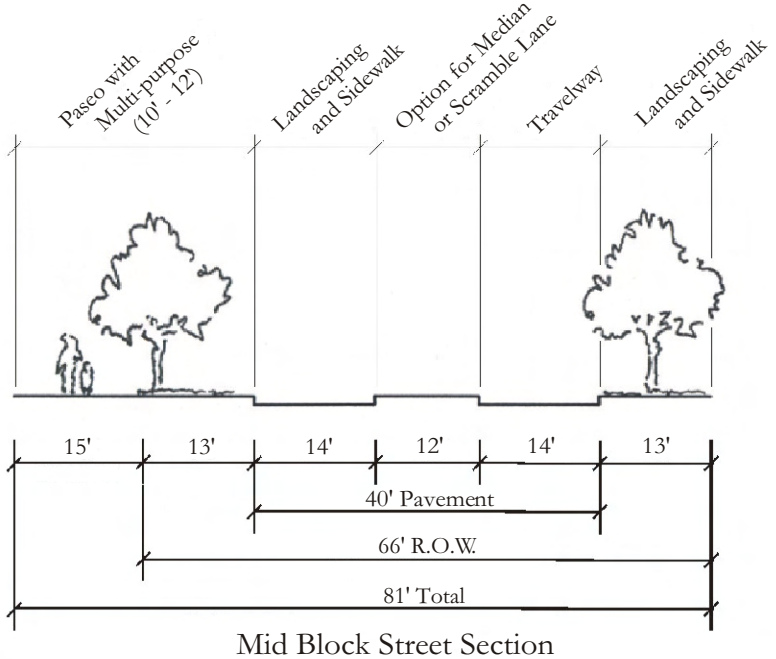
THE PRESERVE • CHINO SUBAREA 2

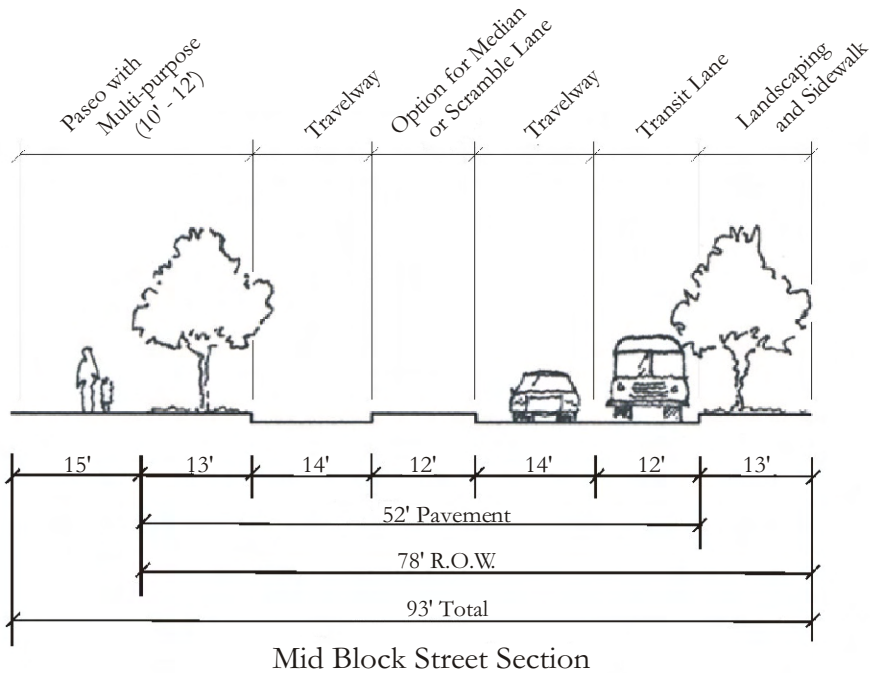


Mid Block Street Section

Local Collector w/Paseo

e.g. Loop Road

(with or without on-street parking)



Mid Block Street Section

Local Collector w/Paseo & Transit

(with or without on-street parking)

SOURCE: The Planning Center

Michael Brandman Associates

Exhibit **5.7-4D**

Roadway Sections

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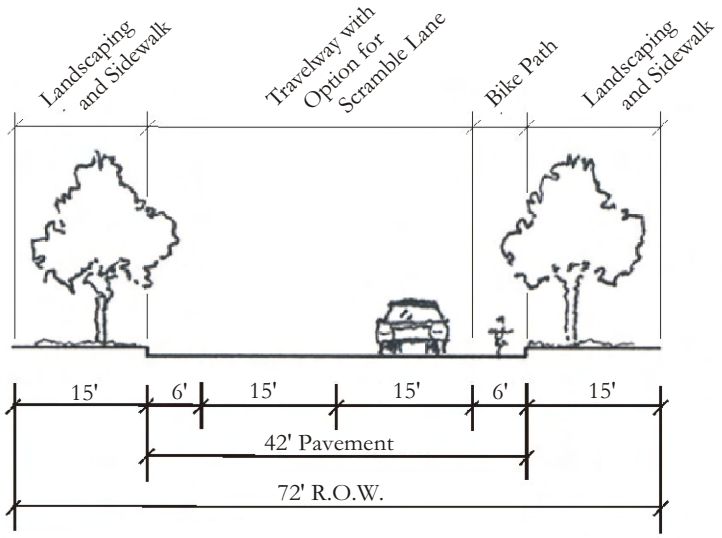
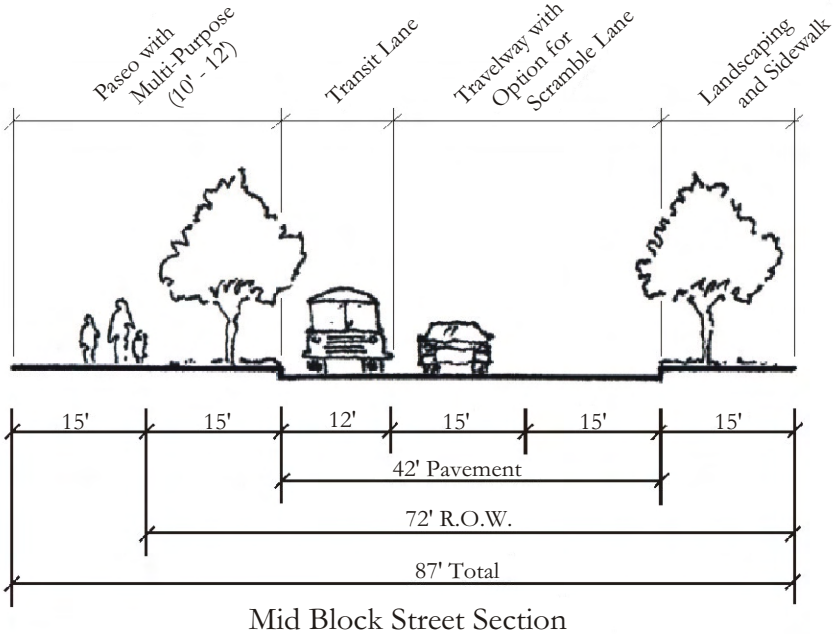
THE PRESERVE • CHINO SUBAREA 2



Mid Block Street Section

Typical Commercial Collector

(with or without on-street parking)



Mid Block Street Section

Commercial Collector w/Paseo & Transit

(no on-street parking)

SOURCE: The Planning Center

Michael Brandman Associates

Exhibit **5.7-4E**

Roadway Sections

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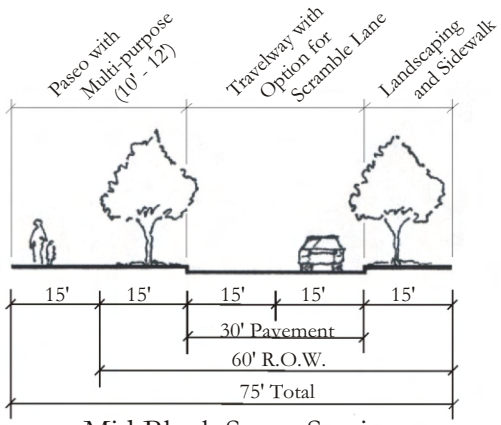
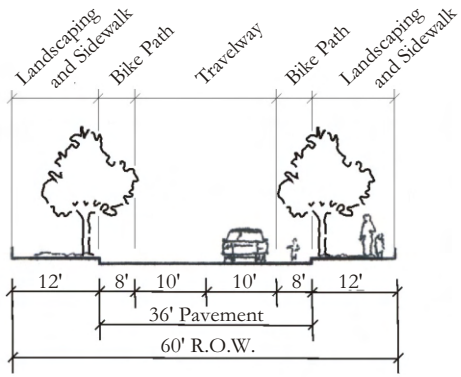
THE PRESERVE • CHINO SUBAREA 2



Mid Block Street Section

Commercial Collector w/Paseo

(no on-street parking)

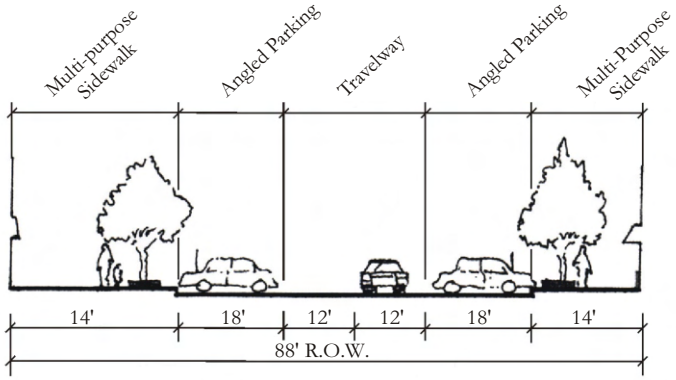


Mid Block Street Section

Typical Local Residential

General Access within a Tract

(with on-street parking)



Main Street Collector

(no on-street parking)

SOURCE: The Planning Center

Michael Brandman Associates

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Exhibit **5.7-4F**

Roadway Sections

THE PRESERVE • CHINO SUBAREA 2

Future Impacts—Without Project Traffic Conditions

Interim Year-2010 traffic projections have been interpolated between Year 2020 traffic volumes and existing traffic volumes utilizing a proportionate share of the future growth increment. For Interim Year-2010 Without Project traffic conditions, traffic signals are projected to be warranted at the following intersections:

- SR-71 Freeway NB Ramps (NS) at Pine Ave. (EW).
- El Prado Road (NS) at Kimball Ave. (EW).
- Grove Ave. (NS) at Edison Ave. (EW).
- Walker Ave. (NS) at Edison Ave. (EW).
- I-15 Freeway SB Ramps (NS) at Galena Street (EW).
- I-15 Freeway NB Ramps (NS) at Galena Street (EW).

For Year 2020 Without Project traffic conditions, a traffic signal is projected to be at the intersection of Vineyard Ave. (NS) at Edison Ave. (EW). Roadway improvements for Interim Year (2010) and Year 2020 are identified in the traffic report contained in Appendix C.

Level of Service

Fifteen intersections are projected to be at LOS "E" or "F" for the Interim Year (2010) Without Project. Table 5.7-3 highlights the study area intersections that are projected to experience LOS "E" or "F" operations during the peak hours without the project and are, therefore, deficient based upon the City of Chino General Plan. The "With Project" and "with Project and Improvements" proposed conditions are also displayed to provide a comparison of project impacts. Table 5.7-4 highlights conditions for the year 2020. By the Year 2020, 35 intersections are projected to be at LOS "E" or "F" Without Project.

TABLE 5.7-3
INTERIM YEAR (2010) WITH AND WITHOUT
PROJECT CONDITIONS ANALYSIS AND IMPROVEMENTS

Intersections	Existing Traffic Controls	Interim Year (2010) without Project				Interim Year (2010) with Project				Interim Year (2010) with Project and Improvements		
		Delay (secs.)		Level of Service		Delay (secs.)		Level of Service		TC (1)	Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM		AM	PM
Pipeline Ave. (NS) at:												
▪ Chino Hills Pkwy. (EW)	TS	50.9	--[4]	D	**F**	51.1	82.4	D	**F**	TS	D	D
SR-71 Fwy. SB Ramps (NS) at:												
▪ Chino Hills Pkwy. (EW)	TS	28.0	14.6	C	B	27.9	14.4	C	B	TS	C	B
▪ Soquel Canyon Pkwy. (EW)	TS	6.1	13.4	A	B	6.5	13.5	A	B	TS	A	B
▪ Pine Ave. (EW)	TS	19.8	24.1	B	C	21.8	23.1	C	C	TS	C	C
▪ Euclid Ave. (EW)	TS	18.3	17.5	B	B	18.3	17.3	B	B	TS	B	B
SR-71 Fwy. NB Ramps (NS) at:												
▪ Chino Hills Pkwy. (EW)	TS	15.5	14.1	B	B	15.4	13.9	B	B	TS	B	B
▪ Soquel Canyon Pkwy. (EW)	TS	10.9	9.2	B	A	11.4	10.4	B	B	TS	B	B
▪ Pine Ave. (EW)	AWS	12.3	11.3	B	B	14.1	12.9	B	B	**TS**	B	B
▪ Euclid Ave. (EW)	TS	12.6	20.5	B	C	12.1	18.1	B	B	TS	B	B
Central Ave. (NS) at:												
▪ Edison Ave. (EW)	TS	43.6	49.1	D	D	44.1	50.8	D	D	TS	D	D
▪ Chino Hills Pkwy. (EW)	TS	24.3	25.0	C	C	17.2	25.4	B	C	TS	B	C
▪ El Prado Rd. (EW)	CSS	50.2	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	D	D
El Prado Rd. (NS) at:												
▪ Kimball Ave. (EW)	CSS	18.8	28.7	C	D	32.2	67.0	D	**F**	**TS**	C	C
▪ Pine Ave. (EW)	CSS	12.6	17.2	B	C	21.1	80.5	C	**F**	**TS**	B	C
Mountain Ave. (NS) at:												
▪ SR-60 Fwy. WB Ramps (EW)	TS	42.9	35.4	D	D	44.7	37.5	D	C	TS	D	D
▪ SR-60 Fwy. EB Ramps (EW)	TS	36.2	--	D	**F**	37.8	--[4]	D	**F**	TS	B	C
▪ Walnut Ave. (EW)	TS	--	29.2	**F**	C	--[4]	29.1	**F**	C	TS	D	D
▪ Riverside Dr. (EW)	TS	47.5	47.2	D	D	47.4	46.1	D	D	TS	D	D
▪ Edison St. (EW)	TS	18.2	14.0	B	B	16.3	15.4	B	B	TS	B	B

(1) Includes proposed traffic signal improvements.

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; >> = Free Right Turn

[2] Delay and level of service calculated using the following analysis software: Traffix, Version 7.1.0607 (1999). Per the 1997Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal
AWS = All Way Stop
CSS = Cross Street Stop

[4] -- = Delay High, Intersection Unstable, Level of Service "F".

[5] Modify Eastbound-Westbound traffic signal phasing from split-phasing to permitted-phasing.

TABLE 5.7-3 (Cont.)
INTERIM YEAR (2010) WITH AND WITHOUT
PROJECT CONDITIONS ANALYSIS AND IMPROVEMENTS

Intersections	Existing Traffic Controls	Interim Year (2010) without Project				Interim Year (2010) with Project				Interim Year (2010) with Project and Improvements		
		Delay (secs.)		Level of Service		Delay (secs.)		Level of Service		TC (1)	Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM		AM	PM
Euclid Ave. (NS) at:												
▪ SR-60 Fwy. WB Ramps (EW)	TS	41.5	40.9	D	D	46.1	47.6	D	D	TS	D	D
▪ SR-60 Fwy. EB Ramps (EW)	TS	33.7	--	C	**F**	34.9	--[4]	C	**F**	TS	C	D
▪ Walnut Ave. (EW)	TS	22.9	25.2	C	C	21.6	23.5	C	C	TS	C	C
▪ Riverside Dr. (EW)	TS	35.2	38.7	D	D	32.1	42.7	C	D	TS	C	D
▪ Edison St. (EW)	TS	35.7	32.2	D	C	39.5	40.1	C	D	TS	D	D
▪ Merrill Ave. (EW)	TS	21.7	74.8	C	B	19.2	12.1	B	B	TS	B	B
▪ Kimball Ave. (EW)	TS	25.7	26.4	C	C	41.9	--[4]	D	**F**	TS	D	D
▪ Bickmore Ave. (EW)	CSS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	C	D
▪ Pine Ave. (EW)	TS	40.3	30.2	D	C	51.3	37.6	D	D	TS	D	D
Grove Ave. (NS) at:												
▪ SR-60 Fwy. WB Ramps (EW)	TS	40.6	28.5	D	C	42.4	30.3	D	C	TS	D	C
▪ SR-60 Fwy. EB Ramps (EW)	TS	41.5	51.0	D	D	41.5	52.5	D	D	TS	D	D
▪ Edison St. (EW)	AWS	--[4]	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	D	D
▪ Merrill Ave. (EW)	AWS	16.4	26.4	C	D	18.9	36.3	C	**E**	**TS**	C	D
▪ Kimball Ave. (EW)	AWS	10.5	13.8	B	B	--[4]	--[4]	**F**	**F**	**TS**	C	C
▪ Bickmore Ave. (EW)	CSS	33.4	--	D	F	72.5	--[4]	**F**	**F**	**TS**	A	A
▪ Pine Ave. (EW)	CSS	15.6	20.5	C	C	76.4	--[4]	**F**	**F**	**TS**	C	B
Walker Ave. (NS) at:												
▪ Edison Ave. (EW)	CSS	37.8	--	**E**	**F**	77.9	--[4]	**F**	**F**	**TS**	B	C
Hellman Ave. (NS) at:												
▪ Merrill Ave. (EW)	TS	32.8	36.4	C	C	35.7	40.6	D	D	TS	D	D
▪ Kimball Ave. (EW)	TS	46.6	33.8	D	D	48.5	--[4]	D	**F**	TS	D	D
▪ Pine Ave. (EW)	CSS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	D	D
▪ Chandler St. (EW)	CSS	28.6	28.0	D	D	--[4]	--[4]	**F**	**F**	**TS**	B	C
Vineyard Ave. (NS) at:												
▪ SR-60 Fwy. WB Ramps (EW)	TS	31.4	30.6	C	C	31.6	32.3	C	C	TS	C	C
▪ SR-60 Fwy. EB Ramps (EW)	TS	27.7	40.6	C	D	27.5	41.3	C	D	TS	C	D

(1) Includes proposed traffic signal improvements.

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; >> = Free Right Turn

[2] Delay and level of service calculated using the following analysis software: Traffix, Version 7.1.0607 (1999). Per the 1997Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal
AWS = All Way Stop
CSS = Cross Street Stop

[4] -- = Delay High, Intersection Unstable, Level of Service "F".

[5] Modify Eastbound-Westbound traffic signal phasing from split-phasing to permitted-phasing.

TABLE 5.7-3 (Cont.)
INTERIM YEAR (2010) WITH AND WITHOUT
PROJECT CONDITIONS ANALYSIS AND IMPROVEMENTS

Intersections	Existing Traffic Controls	Interim Year (2010) without Project				Interim Year (2010) with Project				Interim Year (2010) with Project and Improvements		
		Delay (secs.)		Level of Service		Delay (secs.)		Level of Service		TC (1)	Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM		AM	PM
Archibald Ave. (NS) at:												
▪ SR-60 Fwy. WB Ramps (EW)	TS	25.3	15.9	C	C	25.0	15.6	C	B	TS	C	B
▪ SR-60 Fwy. EB Ramps (EW)	TS	17.3	22.9	B	C	17.3	22.9	B	C	TS	B	C
▪ Riverside Dr. (EW)	TS	45.4	51.5	D	D	45.9	52.3	D	D	TS	D	D
▪ Edison Ave. (EW)	TS	39.3	32.5	D	C	40.7	35.5	D	D	TS	D	D
▪ Merrill Ave. (EW)	CSS	54.9	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	C	C
▪ Cloverdale Rd. (EW)	TS	28.5	31.2	C	C	28.5	30.6	C	C	TS	C	C
▪ Pine Ave. (EW)	TS	46.4	45.1	D	D	67.8	69.5	**E**	**E**	TS	D	D
▪ River Rd. (EW)	CSS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	C	C
River Rd. (NS) at:												
▪ Corydon St. (EW)	TS	45.8	42.5	D	D	44.4	43.9	D	D	TS	D	D
▪ Second St. (EW)	TS	32.1	31.8	C	C	33.0	31.3	C	C	TS	D	C
Haven Ave. (NS) at:												
▪ SR-60 Fwy. WB Ramps (EW)	TS	12.4	11.3	B	B	13.0	11.7	B	B	TS	B	B
▪ SR-60 Fwy. EB Ramps (EW)	TS	30.7	33.1	C	C	30.5	33.1	C	C	TS	C	C
Hamner Ave. (NS) at:												
▪ Cloverdale Rd. (EW)	TS	43.0	54.3	D	D	58.7	--[4]	**E**	**F**	TS	D	D
▪ Schleisman Rd. (EW)	CSS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	D	D
I-15 Fwy. SB Ramps (NS) at:												
▪ Galena St. (EW)	TS	37.5	18.7	D	B	35.8	19.8	D	B	TS	D	B
▪ Limonite Ave. (EW)	TS	32.1	38.0	C	D	36.8	38.4	D	D	TS	D	D
▪ Second St. (EW)	TS	35.5	--	D	**F**	35.6	--[4]	D	**F**	TS	C	C
I-15 Fwy. NB Ramps (NS) at:												
▪ Galena St. (EW)	TS	15.3	12.6	B	B	16.0	12.6	B	B	TS	B	B
▪ Limonite Ave. (EW)	TS	18.0	18.7	B	B	20.4	21.1	C	C	TS	C	C
▪ Second St. (EW)	TS	--	50.3	**F**	D	--[4]	53.2	**F**	D	TS	D	D
Lincoln Ave. (NS) at:												
▪ Pomona Rd. (EW)	TS	56.1	56.8	**E**	**E**	56.2	59.5	**E**	**E**	TS[5]	C	C
▪ SR-91 EB Ramps (EW)	TS	19.3	27.1	B	C	20.2	27.8	C	C	--	--	--

(1) Includes proposed traffic signal improvements.

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; >> = Free Right Turn

[2] Delay and level of service calculated using the following analysis software: Traffix, Version 7.1.0607 (1999). Per the 1997Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal
AWS = All Way Stop
CSS = Cross Street Stop

[4] -- = Delay High, Intersection Unstable, Level of Service "F".

[5] Modify Eastbound-Westbound traffic signal phasing from split-phasing to permitted-phasing.

Future Impacts—With Project Traffic Conditions

Project traffic volumes on study area roadway segments were determined by generating project trips and manually routing the traffic through the roadway network. Trips were assigned to each individual roadway link occurring along a specific route. The accumulation of traffic assigned to each roadway link represents the project traffic volume for that link.

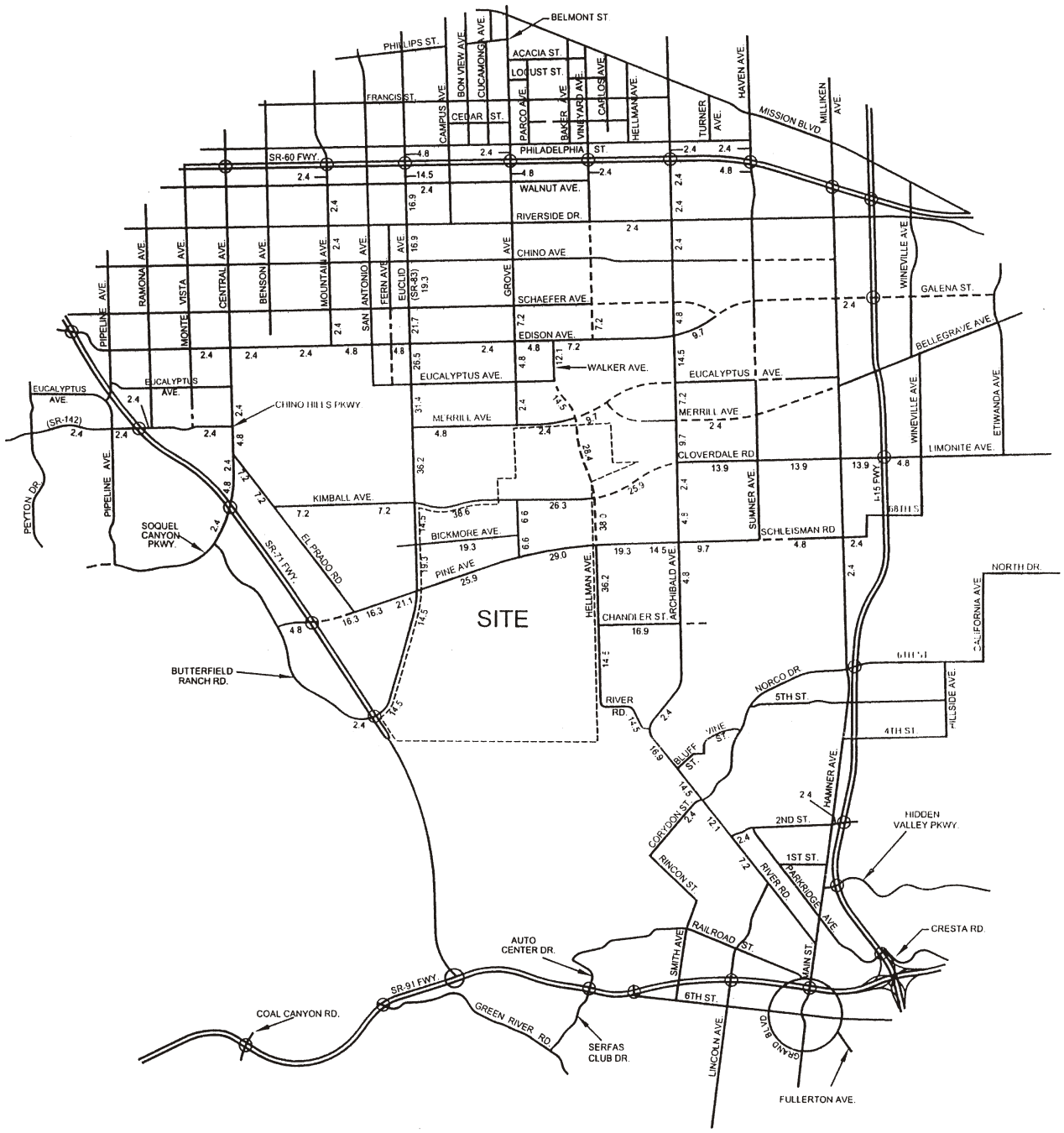
For the Interim Year (2010) With Project traffic conditions, traffic signals are projected to be warranted at the following intersections:

- El Prado Road (NS) at Pine Ave. (EW).
- Euclid Ave. (NS) at Bickmore Ave. (EW).
- Grove Ave. (NS) at Merrill Ave. (EW).
- Grove Ave. (NS) at Kimball (EW).
- Grove Ave. (NS) at Bickmore Ave. (EW).
- Grove Ave. (NS) at Pine Ave. (EW).
- Hellman Ave. (NS) at Merrill Ave. (EW).
- Hellman Ave. (NS) at Kimball Ave. (EW).
- Hellman Ave. (NS) at Chandler Street (EW).

No additional traffic signals are required for Year 2020 With Project scenario. Roadway improvements for Interim Year (2010), Year 2020 and Buildout conditions are identified in the traffic report contained in Appendix C. Buildout project average daily traffic volumes are shown on Exhibit 5.7-5.

Level of Service

25 intersections are projected to be at LOS "E" or "F" With Project for the Interim Year (2010). By the Year 2020, 42 intersections are projected to be at LOS "E" or "F" With Project. Table 5.7-4 highlights the study area intersections that are projected to experience LOS "E" or "F" operations during the peak hours for the Buildout with project condition and are, therefore, deficient based upon the criteria within the City of Chino General Plan.



LEGEND:

2.4 = VEHICLES PER DAY (1000'S)

SOURCE: URBAN CROSSROADS

MAP NOT TO SCALE

Michael Brandman Associates

05760012 · 7/2002

Exhibit **5.7-5**

Buildout Project Average Daily Traffic (ADT)

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Table 5.7-4
BUILDOUT WITH AND WITHOUT
PROJECT CONDITIONS ANALYSIS AND IMPROVEMENTS

Intersections	Existing Traffic Controls	Year 2020 Without Project				Buildout With Project				Buildout With Project and Improvements		
		Delay (secs.)		Level of Service		Delay (secs.)		Level of Service		TC (1)	Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM		AM	PM
Pipeline Ave. (NS) at:												
▪ Chino Hills Pkwy. (EW)	TS	56.6	--[4]	**E**	**F**	56.5	--[4]	**E**	**F**	TS	D	D
SR-71 Fwy. SB Ramps (NS) at:												
▪ Chino Hills Pkwy. (EW)	TS	30.4	18.4	C	B	39.6	96.9	D	**F**	TS	B	B
▪ Soquel Canyon Pkwy. (EW)	TS	4.7	17.3	A	B	7.3	17.4	A	B	TS	A	B
▪ Pine Ave. (EW)	TS	28.7	27.4	C	C	--[4]	45.5	**F**	D	TS	D	D
▪ Euclid Ave. (EW)	TS	19.3	17.2	B	B	18.6	17.2	B	B	TS	B	B
SR-71 Fwy. NB Ramps (NS) at:												
▪ Chino Hills Pkwy. (EW)	TS	17.3	15.2	C	B	20.2	18.6	C	B	TS	C	C
▪ Soquel Canyon Pkwy. (EW)	TS	10.8	10.0	B	A	11.3	14.9	B	B	TS	B	B
▪ Pine Ave. (EW)	AWS	12.0	16.6	B	C	--[4]	--[4]	**F**	**F**	**TS**	D	D
▪ Euclid Ave. (EW)	TS	15.9	16.7	B	B	11.6	18.8	B	B	TS	B	B
Central Ave. (NS) at:												
▪ Edison Ave. (EW)	TS	52.7	--	D	**F**	49.9	--[4]	D	**F**	TS	D	D
▪ Chino Hills Pkwy. (EW)	TS	27.4	30.4	C	C	19.9	31.0	B	C	TS	B	C
▪ El Prado Rd. (EW)	CSS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	D	D
El Prado Rd. (NS) at:												
▪ Kimball Ave. (EW)	CSS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	D	D
▪ Pine Ave. (EW)	CSS	23.0	--	C	**F**	--[4]	--[4]	**F**	**F**	**TS**	C	D
Mountain Ave. (NS) at:												
▪ SR-60 Fwy. WB Ramps (EW)	TS	46.9	38.3	D	C	--[6]	45.4	**F**	D	TS	D	C
▪ SR-60 Fwy. EB Ramps (EW)	TS	35.9	--	C	**F**	41.9	--[4]	D	**F**	TS	C	C
▪ Walnut Ave. (EW)	TS	--	29.2	**F**	B	--[4]	28.9	**F**	C	TS	D	D
▪ Riverside Dr. (EW)	TS	51.8	59.0	D	E	51.5	56.3	D	**E**	TS	D	D
▪ Edison St. (EW)	TS	23.6	17.5	C	B	26.7	20.4	C	C	TS	C	C

(1) Includes proposed traffic signal improvements.

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; >> = Free Right Turn

[2] Delay and level of service calculated using the following analysis software: Traffix, Version 7.1.0607 (1999). Per the 1997Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal
AWS = All Way Stop
CSS = Cross Street Stop

[4] -- = Delay High, Intersection Unstable, Level of Service "F".

[5] Modify Eastbound-Westbound traffic signal phasing from split-phasing to permitted-phasing.

TABLE 5.7-4 (Cont.)
BUILDOUT WITH AND WITHOUT
PROJECT CONDITIONS ANALYSIS AND IMPROVEMENTS

Intersections	Existing Traffic Controls	Year 2020 Without Project				Buildout With Project				Buildout With Project and Improvements		
		Delay (secs.)		Level of Service		Delay (secs.)		Level of Service		TC (1)	Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM		AM	PM
Euclid Ave. (NS) at:												
▪ SR-60 Fwy. WB Ramps (EW)	TS	--	45.8	**F**	D	--[4]	--[4]	**F**	**F**	TS	D	D
▪ SR-60 Fwy. EB Ramps (EW)	TS	35.9	--	C	**F**	--[4]	--[4]	**F**	**F**	TS	C	C
▪ Walnut Ave. (EW)	TS	35.9	31.9	C	D	22.1	28.6	C	C	TS	C	C
▪ Riverside Dr. (EW)	TS	36.9	--	D	F	39.6	--[4]	D	**F**	TS	D	D
▪ Edison St. (EW)	TS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	TS	D	D
▪ Merrill Ave. (EW)	TS	21.3	13.5	C	B	--[4]	--[4]	**F**	**F**	TS	D	B
▪ Kimball Ave. (EW)	TS	25.5	55.8	B	E	--[4]	--[4]	**F**	**F**	TS	C	D
▪ Bickmore Ave. (EW)	CSS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	B	B
▪ Pine Ave. (EW)	TS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	TS	D	D
Grove Ave. (NS) at:												
▪ SR-60 Fwy. WB Ramps (EW)	TS	--	37.1	F	D	--[4]	35.9	**F**	D	TS	C	C
▪ SR-60 Fwy. EB Ramps (EW)	TS	48.0	--[4]	D	**F**	48.9	--[4]	D	**F**	TS	C	C
▪ Edison St. (EW)	AWS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	D	D
▪ Merrill Ave. (EW)	AWS	12.9	21.6	B	C	12.9	22.8	B	C	**TS**	B	B
▪ Kimball Ave. (EW)	AWS	9.1	13.5	A	B	--[4]	--[4]	**F**	**F**	**TS**	B	D
▪ Bickmore Ave. (EW)	CSS	--	--	F	F	--[4]	60.2	**F**	**F**	**TS**	B	B
▪ Pine Ave. (EW)	CSS	62.2	--	F	F	--[4]	--[4]	**F**	**F**	**TS**	C	C
Walker Ave. (NS) at:												
▪ Edison Ave. (EW)	CSS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	C	D
Hellman Ave. (NS) at:												
▪ Merrill Ave. (EW)	TS	31.1	40.0	C	D	--[4]	--[4]	**F**	**F**	**TS**	D	D
▪ Kimball Ave. (EW)	TS	49.7	--	D	**F**	--[4]	--[4]	**F**	**F**	**TS**	D	D
▪ Pine Ave. (EW)	CSS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	D	D
▪ Chandler St. (EW)	CSS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	D	D
Vineyard Ave. (NS) at:												
▪ SR-60 Fwy. WB Ramps (EW)	TS	37.4	36.7	D	D	35.8	45.3	D	D	TS	D	D
▪ SR-60 Fwy. EB Ramps (EW)	TS	28.6	--	C	**F**	28.7	--[4]	C	**F**	TS	C	D
▪ Edison Ave. (EW)	TS	15.3	18.5	B	B	22.2	28.4	C	C	**TS**	C	C

(1) Includes proposed traffic signal improvements

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; >> = Free Right Turn

[2] Delay and level of service calculated using the following analysis software: Traffix, Version 7.1.0607 (1999). Per the 1997Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal
AWS = All Way Stop
CSS = Cross Street Stop

[4] -- = Delay High, Intersection Unstable, Level of Service "F".

[5] Modify Eastbound-Westbound traffic signal phasing from split-phasing to permitted-phasing.

TABLE 5.7-4 (Cont.)
YEAR 2020 WITH AND WITHOUT
PROJECT CONDITIONS ANALYSIS AND IMPROVEMENTS

Intersections	Existing Traffic Controls	Year 2020 Without Project				Buildout With Project				Buildout With Project and Improvements		
		Delay (secs.)		Level of Service		Delay (secs.)		Level of Service		TC (1)	Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM		AM	PM
Archibald Ave. (NS) at:												
▪ SR-60 Fwy. WB Ramps (EW)	TS	24.9	14.6	C	B	23.0	28.4	C	B	TS	C	B
▪ SR-60 Fwy. EB Ramps (EW)	TS	17.5	27.1	B	C	17.4	24.4	B	C	TS	B	C
▪ Riverside Dr. (EW)	TS	49.6	56.2	D	**E**	--[4]	--[4]	**F**	**F**	TS	D	D
▪ Edison Ave. (EW)	TS	64.9	56.3	**D**	E	--[4]	--[4]	**F**	**F**	TS	D	D
▪ Merrill Ave. (EW)	CSS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	C	C
▪ Cloverdale Rd. (EW)	TS	31.0	41.5	C	D	--[4]	--[4]	**F**	**F**	TS	D	D
▪ Pine Ave. (EW)	TS	53.3	44.2	D	D	--[4]	--[4]	**F**	**F**	TS	D	C
▪ River Rd. (EW)	CSS	--	--	**F**	**E**	--[4]	--[4]	**F**	**F**	**TS**	D	C
River Rd. (NS) at:												
▪ Corydon St. (EW)	TS	50.9	51.1	D	D	--	--[4]	**F**	**F**	TS	D	D
▪ Second St. (EW)	TS	34.9	31.0	C	C	45.7	36.5	D	D	TS	D	D
Haven Ave. (NS) at:												
▪ SR-60 Fwy. WB Ramps (EW)	TS	17.1	16.1	B	B	18.0	17.8	B	B	TS	C	C
▪ SR-60 Fwy. EB Ramps (EW)	TS	36.1	--	D	**F**	36.7	--[4]	D	**F**	TS	C	D
Hamner Ave. (NS) at:												
▪ Cloverdale Rd. (EW)	TS	47.0	--	D	**F**	--[4]	--[4]	**F**	**F**	TS	D	D
▪ Schleisman Rd. (EW)	CSS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	**TS**	D	D
I-15 Fwy. SB Ramps (NS) at:												
▪ Galena St. (EW)	TS	46.8	--	D	**F**	56.3	--[4]	**E**	**F**	**TS**	D	C
▪ Limonite Ave. (EW)	TS	36.2	41.6	D	D	--[4]	43.4	**F**	D	TS	D	D
▪ Second St. (EW)	TS	--	--	**F**	**F**	--[4]	--[4]	**F**	**F**	TS	C	C
I-15 Fwy. NB Ramps (NS) at:												
▪ Galena St. (EW)	TS	28.5	14.7	C	B	43.1	14.4	D	B	**TS**	D	C
▪ Limonite Ave. (EW)	TS	17.8	19.4	B	B	26.0	29.6	C	C	TS	C	C
▪ Second St. (EW)	TS	--	58.3	**F**	**E**	--[4]	--[4]	**F**	**F**	TS	D	D
Lincoln Ave. (NS) at:												
▪ Pomona Rd. (EW)	TS	--[4]	--[4]	**F**	**F**	--[4]	--[4]	**F**	**F**	TS[5]	D	C
▪ SR-91 EB Ramps (EW)	TS	21.7	41.2	C	D	26.1	48.0	C	D	--	--	--

(1) Includes proposed traffic signal improvements

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; >> = Free Right Turn

[2] Delay and level of service calculated using the following analysis software: Traffix, Version 7.1.0607 (1999). Per the 1997Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal
AWS = All Way Stop
CSS = Cross Street Stop

[4] -- = Delay High, Intersection Unstable, Level of Service "F".

[5] Modify Eastbound-Westbound traffic signal phasing from split-phasing to permitted-phasing.

Roadway Improvements

A cumulative listing of all project related roadway and signal improvements to be provided for post-2020 buildout conditions, including the proposed project, is contained in Table 5.7-5. This list identifies all the improvements necessary to meet Year 2020 With Project traffic demands, excluding freeway improvements which are discussed in the section below. The timing of the improvements are identified in the traffic report in Appendix C.

TABLE 5.7-5
BUILDOUT WITH PROJECT CONDITIONS
SUMMARY OF INTERSECTION AND ROADWAY IMPROVEMENTS

Intersection/Segment	Improvement
Pipeline Ave. (NS) at:	
▪ Chino Hills Pkwy. (EW)	▪ Second EB Left Turn Lane ▪ Second WB Left Turn Lane ▪ EB Right-Turn Overlap Phasing ▪ Third WB Through Lane ▪ WB Right-Turn Overlap Phasing
SR-71 Fwy. SB Ramps (NS) at:	
▪ Chino Hills Pkwy. (EW) ▪ Pine Ave. (EW)	▪ Third WB Through Lane ▪ Second EB Through Lane
SR-71 Fwy. NB Ramps (NS) at:	
▪ Pine Ave. (EW)	▪ Traffic Signal ▪ Second EB Through Lane
Lincoln Avenue (NS) at:	
▪ Pomona Road (EW)	▪ Traffic Signal Phasing Modification ▪ Restripe two existing SB through lanes to an exclusive right turn lane and a shared through-right lane ▪ Restripe SB approach to include two through lanes ▪ SB free-right turn lane

TABLE 5.7-5 (Cont.)
BUILDOUT WITH PROJECT CONDITIONS
SUMMARY OF INTERSECTION AND ROADWAY IMPROVEMENTS

Intersection/Segment	Improvement
Central Ave. (NS) at:	
▪ Edison Ave. (EW)	▪ NB Right-Turn Overlap Phasing ▪ Second EB Left Turn Lane ▪ Second WB Left Turn Lane ▪ EB Right Turn Lane
▪ El Prado Rd. (EW)	▪ Traffic Signal ▪ Second NB Through Lane ▪ Second SB Left Turn Lane
El Prado Rd. (NS) at:	
▪ Kimball Road (EW)	▪ Traffic Signal ▪ NB Right Turn Lane
▪ Pine Ave. (EW)	▪ Traffic Signal ▪ EB Left Turn Lane ▪ SB Left Turn Lane ▪ Second EB Through Lane ▪ WB Right Turn Lane
Mountain Ave. (NS) at:	
▪ SR-60 Fwy. WB Ramps (EW) ▪ SR-60 Freeway EB Ramps (EW)	▪ WB All-Way Lane ▪ Second SB Left Turn Lane ▪ EB All-Way Lane ▪ Restripe EB All-Way Lane to a Second EB Left Turn Lane ▪ Second EB Right Turn Lane
▪ Walnut Ave. (EW)	▪ Second WB Through Lane ▪ Second EB Through Lane
▪ Riverside Dr. (EW)	▪ NB Right Turn Lane ▪ Second SB Left Turn Lane
Euclid Avenue (NS) at:	
▪ SR-60 Freeway WB Ramps (EW) ▪ SR-60 Freeway EB Ramps (EW)	▪ WB All-Way Lane ▪ Second NB Right Turn Lane ▪ Restripe EB All-Way Lane to a Shared Through & Right Turn Lane ▪ EB free-Right Turn Lane ▪ Second EB Left Turn Lane

TABLE 5.7-5 (Cont.)
BUILDOUT WITH PROJECT CONDITIONS
SUMMARY OF INTERSECTION AND ROADWAY IMPROVEMENTS

Intersection/Segment	Improvement
▪ Riverside Drive (EW)	▪ Third NB Through Lane ▪ Second SB Left Turn Lane ▪ Third SB Through Lane ▪ SB Right-Turn Overlap Phasing ▪ EB Left Turn Lane ▪ WB Left Turn Lane
▪ Edison Street (EW)	▪ Third NB Though Lane ▪ Third SB Through Lane ▪ Second EB Left Turn Lane ▪ Second & Third EB Through Lanes (2) ▪ Second WB Through Lane
▪ Merrill Avenue (EW)	▪ Third NB Through Lane ▪ Third SB Through Lane
▪ Kimball Avenue (EW)	▪ NB Right-Turn Overlap Phasing ▪ EB Left Turn Lane ▪ First & Second WB Left Turn Lanes (2) ▪ WB Right Turn Lane ▪ Third & Fourth NB Through Lanes (2) ▪ Second SB Left Turn Lane ▪ Third SB Through Lane ▪ Second EB Left Turn Lane ▪ Second EB Through Lane ▪ EB Right Turn Lane ▪ Second WB Through Lane ▪ WB Right-Turn Overlap Phasing
▪ Bickmore Avenue (EW)	▪ Traffic Signal ▪ Second NB Through Lane ▪ Second SB Through Lane ▪ Third NB Through Lane ▪ NB Right Turn Lane ▪ Second SB Left Turn Lane ▪ Third SB Through Lane ▪ First & Second WB Left Turn Lanes (2) ▪ WB Right Turn Lane

TABLE 5.7-5 (Cont.)
BUILDOUT WITH PROJECT CONDITIONS
SUMMARY OF INTERSECTION AND ROADWAY IMPROVEMENTS

Intersection/Segment	Improvement
▪ Pine Avenue (EW)	▪ Third & Fourth NB Through Lanes (2) ▪ NB free-Right Turn Lane ▪ Second SB Left Turn Lane ▪ Third SB Through Lane ▪ First & Second EB Left Turn Lanes (2) ▪ Second & Third EB Through Lanes (2) ▪ First, Second & Third WB Left Turn Lanes (3) ▪ Second & Third WB Through Lanes (2) ▪ WB free-Right Turn Lane
Grove Avenue (NS) at:	
▪ SR-60 Freeway WB Ramps (EW)	▪ Westbound All-Way Lane
▪ SR-60 Freeway EB Ramps (EW)	▪ Second EB Left Turn Lane ▪ Second EB Right Turn Lane
▪ Edison Street (EW)	▪ Traffic Signal ▪ NB Left Turn Lane ▪ SB Left Turn Lane ▪ EB Left Turn Lane ▪ Second EB Through Lane ▪ WB Left Turn Lane ▪ Second WB Through Lane ▪ Second NB Through Lane ▪ Second SB Through Lane
▪ Merrill Avenue (EW)	▪ EB Left Turn Lane
▪ Kimball Avenue (EW)	▪ Traffic Signal ▪ NB Left Turn Lane ▪ WB Left Turn Lane ▪ Second EB Through Lane ▪ Second WB Through Lane
▪ Bickmore Avenue (EW)	▪ Traffic Signal ▪ NB Left Turn Lane ▪ SB Left Turn Lane ▪ EB Left Turn Lane ▪ WB Left Turn Lane

TABLE 5.7-5 (Cont.)
BUILDOUT WITH PROJECT CONDITIONS
SUMMARY OF INTERSECTION AND ROADWAY IMPROVEMENTS

Intersection/Segment	Improvement
▪ Pine Avenue (EW)	▪ Traffic Signal ▪ Second EB Through Lane ▪ SB Left Turn Lane ▪ Second WB Through Lane
Walker Avenue (NS) at:	
▪ Edison Street (EW)	▪ Traffic Signal ▪ NB Left Turn Lane ▪ SB Left Turn Lane ▪ EB Left Turn Lane ▪ Second EB Through Lane ▪ WB Left Turn Lane ▪ Second WB Through Lane ▪ NB Right Turn Lane ▪ NB Right-Turn Overlap Phasing ▪ EB Right Turn Lane
Hellman Avenue (NS) at:	
▪ Merrill Avenue (EW)	▪ Second NB Through Lane ▪ NB Right Turn Lane ▪ Second SB Through Lane ▪ Second WB Left Turn Lane
▪ Kimball Avenue (EW)	▪ Second SB Through Lane ▪ Second NB Left Turn Lane ▪ Second NB Through Lane ▪ NB Right Turn Lane ▪ Second SB Left Turn Lane ▪ SB Right Turn Lane ▪ Second EB Left Turn Lane ▪ Second EB Through Lane ▪ EB Right Turn Lane ▪ Second WB Left Turn Lane ▪ Second WB Through Lane
▪ Pine Avenue (EW)	▪ Traffic Signal ▪ NB Left Turn Lane ▪ Second NB Through Lane ▪ SB Left Turn Lane ▪ Second SB Through Lane

TABLE 5.7-5 (Cont.)
BUILDOUT WITH PROJECT CONDITIONS
SUMMARY OF INTERSECTION AND ROADWAY IMPROVEMENTS

Intersection/Segment	Improvement
	▪ EB Left Turn Lane ▪ Second EB Through Lane ▪ WB Left Turn Lane ▪ Second WB Through Lane ▪ Second NB Left Turn Lane ▪ NB Right Turn Lane ▪ Second SB Left Turn Lane ▪ SB Right Turn Lane ▪ Second EB Left Turn Lane ▪ EB Right Turn Lane ▪ Second WB Left Turn Lane ▪ WB Right Turn Lane ▪ NB Right-Turn Overlap Phasing ▪ SB Right-Turn Overlap Phasing ▪ Third EB Through Lane ▪ Third WB Through Lane
▪ Chandler Street (EW)	▪ Traffic Signal ▪ NB Left Turn Lane ▪ SB Left Turn Lane ▪ EB Left Turn Lane ▪ WB Left Turn Lane ▪ Second NB Through Lane ▪ Second SB Left Turn Lane ▪ Second SB Through Lane ▪ Second EB Through Lane ▪ Second WB Through Lane
Vineyard Avenue (NS) at:	
▪ SR-60 Freeway EB Ramps (EW)	▪ EB All-Way Lane
Archibald Avenue (NS) at:	
▪ Riverside Drive (EW)	▪ Second EB Left Turn Lane ▪ SB Right-Turn Overlap Phasing ▪ Second WB Through Lane

TABLE 5.7-5 (Cont.)
BUILDOUT WITH PROJECT CONDITIONS
SUMMARY OF INTERSECTION AND ROADWAY IMPROVEMENTS

Intersection/Segment	Improvement
▪ Edison Avenue (EW)	▪ Second NB Left Turn Lane ▪ NB Right-Turn Overlap Phasing ▪ EB Right Turn Lane ▪ EB Right-Turn Overlap Phasing ▪ Second WB Left Turn Lane
▪ Merrill Avenue (EW)	▪ Traffic Signal ▪ SB Left Turn Lane ▪ EB Left Turn Lane ▪ Second NB Through Lane ▪ Second SB Through Lane ▪ WB Left Turn Lane
▪ Cloverdale Road (EW)	▪ NB Left Turn Lane ▪ Second NB Through Lane ▪ Second SB Through Lane ▪ First & Second EB Left Turn Lanes (2) ▪ Second EB Through Lane ▪ Second WB Through Lane
▪ Pine Avenue (EW)	▪ Second SB Through Lane ▪ Second EB Through Lane ▪ Second NB Through Lane ▪ Second WB Through Lane
▪ River Road (EW)	▪ Traffic Signal ▪ EB free-Right Turn Lane ▪ Second SB Through Lane
River Road (NS) at:	
▪ Corydon Street (EW)	▪ SB Right Turn Lane ▪ Second EB Left Turn Lane ▪ Second EB Through Lane ▪ Second NB Through Lane
Haven Avenue (NS) at:	
▪ SR-60 Freeway EB Ramps (EW)	▪ NB free-Right Turn Lane ▪ Restripe Second EB Left Turn Lane to an All-Way Lane

TABLE 5.7-5 (Cont.)
BUILDOUT WITH PROJECT CONDITIONS
SUMMARY OF INTERSECTION AND ROADWAY IMPROVEMENTS

Intersection/Segment	Improvement
Hamner Avenue (NS) at:	
▪ Cloverdale Road (EW)	▪ Second EB Through Lane ▪ WB Left Turn Lane ▪ Second NB Through Lane ▪ Second SB Through Lane ▪ EB Left Turn Lane ▪ Second WB Through Lane ▪ NB Right-Turn Overlap Phasing ▪ Second SB Left Turn Lane ▪ Second WB Left Turn Lane
▪ Schleisman Road (EW)	▪ Traffic Signal ▪ EB Left Turn Lane ▪ WB Left Turn Lane ▪ Second NB Through Lane ▪ Second SB Through Lane ▪ NB Right Turn Lane ▪ SB Right Turn Lane ▪ Second WB Left Turn Lane
I-15 Freeway SB Ramps (NS) at:	
▪ Gelena Street (EW)	▪ Second EB Right Turn Lane
▪ Limonite Avenue (EW)	▪ Second SB Right Turn Lane
▪ Second Street (EW)	▪ First & Second EB Right Turn Lanes (2) ▪ Second SB Right Turn Lane
I-15 Freeway NB Ramps (NS) at:	
▪ Second Street (EW)	▪ WB Right Turn Lane ▪ NB All-Way Lane
Hellman Avenue	
▪ Eucalyptus Avenue to Merrill Avenue	▪ Construct 2 Lanes (0.6 Miles)
Kimball Avenue	
▪ Hellman Avenue to Archibald Avenue	▪ Construct 2 Lanes (1.1 Miles)
Pine Avenue	
▪ SR-71 Freeway to El Prado Road	▪ Construct 2 Lanes (0.6 Miles)

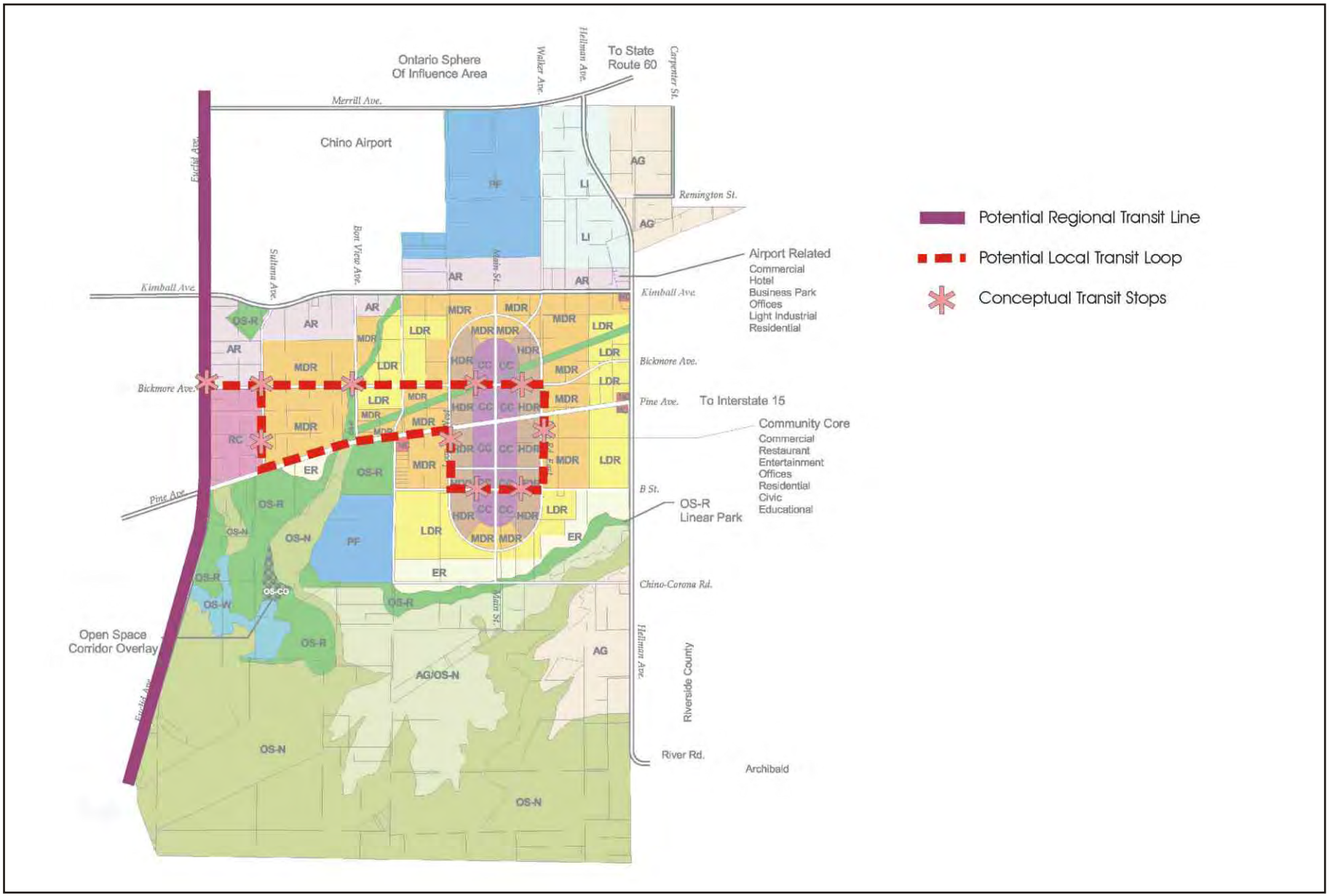
Freeway Improvements

The traffic report included an analysis of 35 freeway segments based upon the San Bernardino County CMP. The proposed project traffic study identified the number of general use and high occupancy traffic lanes required to accommodate the proposed project and other future development (See Tables 5.7-6 and 5.7-7). Providing the number of lanes necessary to provide an adequate level of service for all segments (except those on the SR-91 which are currently under study by the Counties of Riverside, San Bernardino, and Orange) is based upon obtaining adequate funding. A portion of the traffic generated by the proposed project will contribute toward the need to expand these freeway segments. To offset this impact, a project "fair-share' contribution has been identified in the traffic report in Appendix C per CMP requirements. See Appendix C for the number and proportional distribution of traffic for these segments. (Fair share costs set forth in Appendix C are estimates only, and do not include possible credits, reimbursements, or other revenue sources.)

Community Transit System

An integral part of the Specific Plan is its emphasis on an interactive development project that allows easy mobility within and beyond the project boundaries. One component of the project's access and mobility involves the potential use of a transit system, consisting of an on-site transit system connected with a regional bus service. The on-site system is envisioned as a one-way, continuous loop on dedicated or prioritized travel lanes. The system would provide transit stops to serve major features, such as the Community Core and areas of higher density residential development. The transit stops are also intended to serve as connection points with the regional transit system and bus service. The Specific Plan has designed roadway cross-sections to include future transit, and has suggested various locations for the placement of transit stops, with their ultimate location to be determined at a later date by the City of Chino. (See Exhibit 5.7-6)

The transit plan is conceptual at this time and will require further study to properly evaluate the potential impact it may have upon traffic patterns, vehicle trip reduction land use, and air quality. The system should significantly reduce the number of vehicle trips within the proposed plan area and in the region, thereby providing a beneficial effect. The City of Chino and Omnitrans have been actively seeking funds to complete a Transit Feasibility Study for the project area.



SOURCE: The Planning Center

NORTH

MAP NOT TO SCALE

Michael Brandman Associates

05760012 · 6/2001

Exhibit **5.7-6**

Potential Transit System

THE PRESERVE • CHINO SUBAREA 2

TABLE 5.7-6
CMP FREEWAY MAINLINE AM PEAK HOUR OPERATIONAL ANALYSIS (YEAR 2020)

Freeway	Segment Limits	Existing Count	Model		Growth Increment 0.38	Future Forecast	Lanes		Capacity	Project Trips	Year 2020 W/O Project			Year 2020 W/Project		
			Existing	Future			Gen. Use	HOV			Trips	VOL/ CAP	LOS	Trips	VOL/ CAP	LOS
I-15 Fwy. SB	Jurupa St. to SR-60 Fwy.	13,466	16,366	22,931	2,495	15,961	4	0	8,800	436	15,615	**1.77**	**F**	16,036	**1.82**	**F**
	SR-60 Fwy. to Galena St.	8,534	7,973	15,658	2,920	11,454	3	0	6,600	610	11,108	**1.68**	**F**	11,125	**1.69**	**F**
	Galena St. to Limonite Ave.	8,534	7,973	14,062	2,314	10,848	3	0	6,600	462	10,617	**1.61**	**F**	10,636	**1.61**	**F**
	Limonite Ave. to 6th St.	9,395	8,984	13,362	1,664	11,059	3	0	6,600	16	10,982	**1.66**	**F**	11,020	**1.67**	**F**
	6th St. to 2nd St.	9,630	8,976	13,471	1,708	11,338	3	0	6,600	14	11,261	**1.71**	**F**	11,381	**1.72**	**F**
	2nd St. to Hidden Valley Pkwy.	10,256	8,536	11,093	972	11,228	4	0	8,800	138	11,073	**1.26**	**F**	11,434	**1.30**	**F**
	Hidden Valley Pkwy. to SR-91 Fwy.	9,943	8,536	11,093	972	10,915	4	0	8,800	138	10,760	**1.22**	**F**	11,121	**1.26**	**F**
	SR-91 Fwy. to Magnolia Ave.	2,510	4,984	13,063	3,070	5,580	4	0	8,800	40	5,503	0.63	C	5,417	0.62	C
I-15 Fwy. NB	Magnolia Ave. to SR-91 Fwy.	10,021	15,990	24,969	3,412	13,433	3	0	6,600	171	13.318	**2.02**	**F**	12,966	**1.96**	**F**
	SR-91 Fwy. to Hidden Valley Pkwy.	2,490	9,490	18,323	3,357	5,847	4	0	8,800	131	5,616	0.64	C	5,559	0.63	C
	Hidden Valley Pkwy. to 2nd St.	2,569	9,490	18,323	3,357	5,926	4	0	8,800	131	5,695	0.65	C	5,638	0.64	C
	2nd St. to 6th St.	2,412	8,165	18,348	3,870	6,282	3	0	6,600	79	6,167	0.93	D	6,144	0.93	D
	6th St. to Limonite Ave.	2,353	8,672	20,499	4,494	6,847	3	0	6,600	24	6,732	**1.02**	**F**	6,732	**1.02**	**F**
	Limonite Ave. to Galena St.	2,137	8,264	20,962	4,825	6,962	3	0	6,600	83	6,807	**1.03**	**F**	6,896	**1.04**	**F**
	Galena St. to SR-60 Fwy.	2,137	8,264	19,542	4,286	6,423	3	0	6,600	116	6,191	0.94	E	6,439	0.98	E
	SR-60 Fwy. to Jurupa St.	3,373	10,248	17,479	2,748	6,121	4	0	8,800	104	5,889	0.67	C	6,306	0.72	C
SR-60 Fwy. WB	Van Buren Blvd. to I-15 Fwy.	5,428	14,635	25,785	4,237	9,665	3	1	8,200	601	9,089	**1.11**	**F**	9,588	**1.17**	**F**
	I-15 Fwy. to Milliken Ave.	8,413	13,853	29,699	6,021	14,434	3	1	8,200	428	13,858	**1.69**	**F**	14,322	**1.75**	**F**
	Milliken Ave. to Haven Ave.	8,775	19,448	37,112	6,712	15,487	4	1	10,400	462	14,911	**1.43**	**F**	15,702	**1.51**	**F**
	Haven Ave. to Archibald Ave.	8,956	19,448	36,255	6,387	15,343	4	1	10,400	463	14,882	**1.43**	**F**	15,587	**1.50**	**F**
	Archibald Ave. to Vineyard Ave.	9,046	19,068	36,600	6,662	15,708	4	1	10,400	498	15,247	**1.47**	**F**	16,035	**1.54**	**F**
	Vineyard Ave. to Grove Ave.	8,911	18,968	36,256	6,569	15,480	4	1	10,400	298	15,134	**1.46**	**F**	15,787	**1.52**	**F**
	Grove Ave. to Euclid Ave. (SR-83)	9,092	19,292	37,037	6,743	15,835	4	1	10,400	412	15,334	**1.47**	**F**	16,086	**1.55**	**F**
	Euclid Ave. (SR-83) to Mountain Ave.	8,775	20,746	38,159	6,617	15,392	4	1	10,400	222	15,160	**1.46**	**F**	15,673	**1.51**	**F**
	Mountain Ave. to Central Ave.	8,458	20,349	37,818	6,638	15,096	4	1	10,400	307	14,787	**1.42**	**F**	15,405	**1.48**	**F**
	Central Ave. to Ramona Ave.	8,142	19,959	37,814	6,785	14,927	4	1	10,400	291	14,618	**1.41**	**F**	15,669	**1.51**	**F**

TABLE 5.7-6 (Cont.)
CMP FREEWAY MAINLINE AM PEAK HOUR OPERATIONAL ANALYSIS (YEAR 2020)

Freeway	Segment Limits	Existing Count	Model		Growth Increment 0.38	Future Forecast	Lanes		Capacity	Project Trips	Year 2020 W/O Project			Year 2020 W/Project		
			Existing	Future			Gen. Use	HOV			Trips	VOL/ CAP	LOS	Trips	VOL/ CAP	LOS
SR-60 Fwy. EB	Ramona Ave. to Central Ave.	3,504	8,639	16,760	3,086	6,590	4	1	10,400	186	6,129	0.59	C	6,605	0.64	C
	Central Ave. to Mountain Ave.	3,641	8,839	16,312	2,840	6,481	4	1	10,400	230	6,020	0.58	C	6,526	0.63	C
	Mountain Ave. to Euclid Ave. (SR-83)	3,777	9,649	16,478	2,595	6,372	4	1	10,400	252	6,026	0.58	C	6,412	0.62	C
	Euclid Ave. (SR-83) to Grove Ave.	3,913	9,191	15,591	2,432	6,345	4	1	10,400	177	5,882	0.57	C	6,426	0.62	C
	Grove Ave. to Vineyard Ave.	3,835	8,432	14,339	2,245	6,080	4	1	10,400	28	5,848	0.56	C	6,217	0.60	C
	Vineyard Ave. to Archibald Ave.	3,894	7,880	13,913	2,293	6,187	4	1	10,400	25	5,878	0.57	C	6,336	0.61	C
	Archibald Ave. to Haven Ave.	3,855	7,172	13,752	2,500	6,355	4	1	10,400	39	6,046	0.58	C	6,502	0.63	C
	Haven Ave. to Milliken Ave.	3,777	7,172	13,092	2,250	6,027	4	1	10,400	48	5,640	0.54	B	6,173	0.59	C
	Milliken Ave. to I-15 Fwy.	3,621	3,458	6,304	1,081	4,702	3	1	8,200	46	4,315	0.53	B	4,681	0.57	C
	I-15 Fwy. to Van Buren Blvd.	2,336	5,756	9,060	1,256	3,592	3	1	8,200	59	3,205	0.39	B	3,599	0.44	B
SR-71 Fwy. SB	Chino Ave. to Grand Ave.	1,823	1,799	14,167	4,700	6,523	3	1	8,200	398	5,947	0.73	C	6,125	0.75	C
	Grand Ave. to Chino Hills Pkwy. (SR-142)	2,160	1,510	9,609	3,078	5,238	3	1	8,200	364	4,662	0.57	C	4,866	0.59	C
	Chino Hills Pkwy. (SR-142) to Ramona Ave.	2,244	1,991	7,257	2,001	4,245	3	1	8,200	321	3,669	0.45	B	3,892	0.47	B
	Ramona Ave. to Soquel Canyon Pkwy.	2,244	1,991	7,257	2,001	4,245	3	1	8,200	321	3,669	0.45	B	3,892	0.47	B
	Soquel Canyon Pkwy. to Pine Ave.	2,020	1,799	10,229	3,203	5,223	2	1	6,000	336	4,531	0.76	C	4,922	0.82	D
	Pine Ave. to Euclid Ave. (SR-83)	2,076	1,998	9,544	2,867	4,943	2	1	6,000	28	4,712	0.79	D	4,656	0.78	D
	Euclid Ave. (SR-83) to SR-91 Fwy.	1,851	2,822	10,373	2,869	4,720	2	0	4,400	342	3,869	0.88	D	4,764	**1.08**	**F**
SR-71 Fwy. NB	SR-91 Fwy. to Euclid Ave. (SR-83)	752	3,434	10,187	2,566	3,318	2	0	4,400	459	2,050	0.47	B	3,293	0.75	C
	Euclid Ave. (SR-83) to Pine Ave.	844	2,750	8,889	2,333	3,177	2	1	6,000	39	3,022	0.50	B	3,288	0.55	C
	Pine Ave. to Soquel Canyon Pkwy.	821	3,091	10,069	2,652	3,473	2	1	6,000	370	3,009	0.50	B	3,659	0.61	C
	Soquel Canyon Pkwy. to Ramona Ave.	912	2,223	9,845	2,896	3,808	3	1	8,200	344	3,421	0.42	B	4,133	0.50	B
	Ramona Ave. to Chino Hills Pkwy. (SR-142)	912	2,223	8,057	2,217	3,129	3	1	8,200	344	2,742	0.33	A	3,451	0.42	B
	Chino Hills Pkwy. (SR-142) to Grand Ave.	878	1,910	11,007	3,457	4,335	3	1	8,200	326	3,948	0.48	B	4,663	0.57	C
	Grand Ave. to Chino Ave.	741	1,682	13,192	4,374	5,115	3	1	8,200	290	4,728	0.58	C	5,288	0.64	C

TABLE 5.7-6 (Cont.)
CMP FREEWAY MAINLINE AM PEAK HOUR OPERATIONAL ANALYSIS (YEAR 2020)

Freeway	Segment Limits	Existing Count	Model		Growth Increment 0.38	Future Forecast	Lanes		Capacity	Project Trips	Year 2020 W/O Project			Year 2020 W/Project		
			Existing	Future			Gen. Use	HOV			Trips	VOL/ CAP	LOS	Trips	VOL/ CAP	LOS
SR-91 Fwy. WB	McKinley St. to I-15 Fwy.	9,074	19,487	32,677	5,012	14,086	4	1	10,400	174	13,855	**1.33**	**F**	13,784	**1.33**	**F**
	I-15 Fwy. to Main St.	10,126	30,165	45,418	5,796	15,922	4	1	10,400	265	15,807	**1.52**	**F**	15,866	**1.53**	**F**
	Main St. to West Grand Blvd.	9,424	28,466	42,892	5,482	14,906	4	1	10,400	149	14,791	**1.42**	**F**	14,668	**1.41**	**F**
	West Grand Blvd. to Lincoln Ave.	9,731	28,816	46,303	6,645	16,376	4	1	10,400	155	16,261	**1.56**	**F**	15,924	**1.53**	**F**
	Lincoln Ave. to Maple St.	9,249	28,289	46,360	6,867	16,116	4	1	10,400	244	16,001	**1.54**	**F**	16,295	**1.57**	**F**
	Maple St. to Serfas Club Dr.	9,556	28,932	52,839	9,085	18,641	4	1	10,400	255	18,526	**1.78**	**F**	18,573	**1.79**	**F**
	Serfas Club Dr. to SR-71 Fwy.	9,424	30,235	56,670	10,045	19,469	4	1	10,400	279	19,354	**1.86**	**F**	19,435	**1.87**	**F**
	SR-71 Fwy. to Green River Rd.	9,468	29,253	56,354	10,298	19,766	4	2	12,000	425	18,992	**1.58**	**F**	19,949	**1.66**	**F**
	Green River Rd. to Coal Canyon Rd.	9,819	30,953	60,231	11,126	20,945	4	2	12,000	419	20,171	**1.68**	**F**	21,085	**1.76**	**F**
	Coal Canyon Rd. to Gypsum Canyon Rd.	10,257	28,154	65,743	14,284	24,541	4	2	12,000	416	23,767	**1.98**	**F**	22,667	**1.89**	**F**
SR-91 Fwy. EB	Gypsum Canyon Rd. to Coal Canyon Rd.	6,544	9,404	20,542	4,232	10,776	4	2	12,000	287	9,623	0.80	D	10,647	0.89	D
	Coal Canyon Rd. to Green River Rd.	6,264	8,798	20,251	4,352	10,616	4	2	12,000	290	9,463	0.79	D	10,518	0.88	D
	Green River Rd. to SR-71 Fwy.	6,041	9,402	20,940	4,384	10,425	4	2	12,000	313	9,272	0.77	C	10,354	0.86	D
	SR-71 Fwy. to Serfas Club Dr.	6,013	9,772	21,444	4,435	10,448	4	1	10,400	47	10,371	1.00	E	10,234	0.98	E
	Serfas Club Dr. to Maple St.	6,097	9,857	21,020	4,242	10,339	4	1	10,400	48	10,262	0.99	E	10,113	0.97	E
	Maple St. to Lincoln Ave.	5,901	9,563	19,815	3,896	9,797	4	1	10,400	44	9,720	0.93	D	9,598	0.92	D
	Lincoln Ave. to West Grand Blvd.	6,208	8,793	18,869	3,829	10,037	4	1	10,400	11	9,960	0.96	E	9,868	0.95	E
	West Grand Blvd. to Main St.	6,013	9,682	19,888	3,878	9,891	4	1	10,400	11	9,814	0.94	E	9,753	0.94	E
	Main St. to I-15 Fwy.	6,460	10,839	22,229	4,328	10,788	4	1	10,400	11	10,711	**1.03**	**F**	10,870	**1.05**	**F**
	I-15 Fwy. to McKinley St.	5,789	10,214	14,165	1,501	7,290	4	1	10,400	58	7,135	0.69	C	7,317	0.70	C

TABLE 5.7-6 (Cont.)
CMP FREEWAY MAINLINE PM PEAK HOUR OPERATIONAL ANALYSIS (YEAR 2020)

Freeway	Segment Limits	Existing Count	Model		Growth Increment 0.38	Future Forecast	Lanes		Capacity	Project Trips	Year 2020 W/O Project			Year 2020 W/Project		
			Existing	Future			Gen. Use	HOV			Trips	VOL/ CAP	LOS	Trips	VOL/ CAP	LOS
I-15 Fwy. SB	Jurupa St. to SR-60 Fwy.	5,416	17,922	30,261	3,455	8,871	4	0	8,800	109	8,543	0.97	E	8,985	**1.02**	**F**
	SR-60 Fwy. to Galena St.	3,432	13,028	27,749	4,122	7,554	3	0	6,600	154	7,226	**1.09**	**F**	7,789	**1.18**	**F**
	Galena St. to Limonite Ave.	3,432	13,028	31,322	5,122	8,554	3	0	6,600	94	8,335	**1.26**	**F**	8,782	**1.33**	**F**
	Limonite Ave. to 6th St.	3,778	14,635	32,569	5,022	8,800	3	0	6,600	123	8,647	**1.31**	**F**	8,868	**1.34**	**F**
	6th St. to 2nd St.	3,873	14,031	27,461	3,760	7,633	3	0	6,600	148	7,480	**1.13**	**F**	7,795	**1.18**	**F**
	2nd St. to Hidden Valley Pkwy.	4,125	16,295	27,367	3,100	7,225	4	0	8,800	213	6,919	0.79	D	7,352	0.84	D
	Hidden Valley Pkwy. to SR-91 Fwy.	3,999	16,295	27,366	3,100	7,099	4	0	8,800	213	6,793	0.77	C	7,226	0.82	D
	SR-91 Fwy. to Magnolia Ave.	9,000	21,504	35,343	3,875	12,875	4	0	8,800	140	12,722	**1.45**	**F**	13,022	**1.48**	**F**
I-15 Fwy. NB	Magnolia Ave. to SR-91 Fwy.	4,030	11,839	29,355	4,904	8,934	3	0	6,600	35	8,825	**1.34**	**F**	9,064	**1.37**	**F**
	SR-91 Fwy. to Hidden Valley Pkwy.	8,930	15,328	24,444	2,552	11,482	4	0	8,800	52	11,263	**1.28**	**F**	11,690	**1.33**	**F**
	Hidden Valley Pkwy. to 2nd St.	9,211	15,328	24,444	2,552	11,763	4	0	8,800	52	11,544	**1.31**	**F**	11,971	**1.36**	**F**
	2nd St. to 6th St.	8,649	15,931	25,338	2,634	11,283	3	0	6,600	--	11,174	**1.69**	**F**	11,497	**1.74**	**F**
	6th St. to Limonite Ave.	8,438	16,221	27,602	3,187	11,625	3	0	6,600	--	11,516	**1.74**	**F**	11,689	**1.77**	**F**
	Limonite Ave. to Galena St.	7,664	14,818	27,509	3,553	11,217	3	0	6,600	216	10,911	**1.65**	**F**	11,275	**1.71**	**F**
	Galena St. to SR-60 Fwy.	7,664	14,818	28,373	3,795	11,459	3	0	6,600	297	11,000	**1.67**	**F**	11,631	**1.76**	**F**
	SR-60 Fwy. to Jurupa St.	12,094	25,571	33,113	2,112	14,206	4	0	8,800	297	13,747	**1.56**	**F**	14,496	**1.65**	**F**
SR-60 Fwy. WB	Van Buren Blvd. to I-15 Fwy.	4,059	12,373	20,752	2,346	6,405	3	1	8,200	55	5,858	0.71	C	6,401	0.78	D
	I-15 Fwy. to Milliken Ave.	6,292	11,943	25,255	3,727	10,019	3	1	8,200	11	9,472	**1.16**	**F**	10,113	**1.23**	**F**
	Milliken Ave. to Haven Ave.	6,562	15,941	31,509	4,359	10,921	4	1	10,400	13	10,374	1.00	E	10,999	**1.06**	**F**
	Haven Ave. to Archibald Ave.	6,698	15,941	32,322	4,587	11,285	4	1	10,400	17	10,848	**1.04**	**F**	11,388	**1.09**	**F**
	Archibald Ave. to Vineyard Ave.	6,765	17,030	32,525	4,339	11,104	4	1	10,400	19	10,667	**1.03**	**F**	11,258	**1.08**	**F**
	Vineyard Ave. to Grove Ave.	6,664	17,623	33,001	4,306	10,970	4	1	10,400	20	10,642	**1.02**	**F**	11,137	**1.07**	**F**
	Grove Ave. to Euclid Ave. (SR-83)	6,799	18,656	34,521	4,442	11,241	4	1	10,400	120	10,607	**1.02**	**F**	11,387	**1.09**	**F**
	Euclid Ave. (SR-83) to Mountain Ave.	6,562	19,917	35,440	4,346	10,908	4	1	10,400	141	10,449	1.00	E	11,070	**1.06**	**F**
	Mountain Ave. to Central Ave.	6,326	18,789	35,296	4,622	10,948	4	1	10,400	138	10,336	0.99	E	11,076	**1.07**	**F**
	Central Ave. to Ramona Ave.	6,089	18,420	35,896	4,893	10,982	4	1	10,400	104	10,370	1.00	E	11,106	**1.07**	**F**

TABLE 5.7-6 (Cont.)
CMP FREEWAY MAINLINE PM PEAK HOUR OPERATIONAL ANALYSIS (YEAR 2020)

Freeway	Segment Limits	Existing Count	Model		Growth Increment 0.38	Future Forecast	Lanes		Capacity	Project Trips	Year 2020 W/O Project			Year 2020 W/Project		
			Existing	Future			Gen. Use	HOV			Trips	VOL/ CAP	LOS	Trips	VOL/ CAP	LOS
SR-60 Fwy. EB	Ramona Ave. to Central Ave.	8,329	29,307	55,383	7,301	15,630	4	1	10,400	528	15,193	**1.46**	**F**	16,369	**1.57**	**F**
	Central Ave. to Mountain Ave.	8,653	29,248	53,743	6,859	15,512	4	1	10,400	554	15,075	**1.45**	**F**	16,383	**1.58**	**F**
	Mountain Ave. to Euclid Ave. (SR-83)	8,977	29,547	53,675	6,756	15,733	4	1	10,400	396	15,405	**1.48**	**F**	16,533	**1.59**	**F**
	Euclid Ave. (SR-83) to Grove Ave.	9,301	27,867	51,225	6,540	15,841	4	1	10,400	548	15,164	**1.46**	**F**	16,375	**1.57**	**F**
	Grove Ave. to Vineyard Ave.	9,116	26,880	48,922	6,172	15,288	4	1	10,400	286	14,829	**1.43**	**F**	15,730	**1.51**	**F**
	Vineyard Ave. to Archibald Ave.	9,255	26,835	49,599	6,374	15,629	4	1	10,400	505	15,017	**1.44**	**F**	16,025	**1.54**	**F**
	Archibald Ave. to Haven Ave.	9,162	27,357	49,598	6,227	15,389	4	1	10,400	490	14,777	**1.42**	**F**	15,593	**1.50**	**F**
	Haven Ave. to Milliken Ave.	8,977	27,357	51,368	6,723	15,700	4	1	10,400	683	14,935	**1.44**	**F**	15,861	**1.53**	**F**
	Milliken Ave. to I-15 Fwy.	8,607	12,761	28,347	4,364	12,971	3	1	8,200	653	12,206	**1.49**	**F**	12,792	**4.56**	**F**
	I-15 Fwy. to Van Buren Blvd.	5,553	19,958	37,300	4,856	10,409	3	1	8,200	653	9,644	**1.18**	**F**	10,236	**1.25**	**F**
SR.-71 Fwy. SB	Chino Ave. to Grand Ave.	1,038	2,443	25,295	6,399	7,437	3	1	8,200	248	6,890	0.84	D	7,218	0.88	D
	Grand Ave. to Chino Hills Pkwy. (SR-142)	1,230	2,850	21,060	5,099	6,329	3	1	8,200	289	5,782	0.71	C	6,415	0.78	C
	Chino Hills Pkwy. (SR-142) to Ramona Ave.	1,278	3,275	16,763	3,777	5,055	3	1	8,200	289	4,508	0.55	C	5,121	0.62	C
	Ramona Ave. to Soquel Canyon Pkwy.	1,278	3,275	16,764	3,777	5,055	3	1	8,200	290	4,508	0.55	C	5,120	0.62	C
	Soquel Canyon Pkwy. to Pine Ave.	1,150	4,216	17,603	3,748	4,898	2	1	6,000	320	4,242	0.71	C	4,847	0.81	D
	Pine Ave. to Euclid Ave. (SR-83)	1,182	3,798	15,393	3,247	4,429	2	1	6,000	290	4,210	0.70	C	4,389	0.73	C
	Euclid Ave. (SR-83) to SR-91 Fwy.	1,054	4,912	17,098	3,412	4,466	2	0	4,400	405	2,784	0.63	C	4,016	0.91	D
SR-71 Fwy. NB	SR-91 Fwy. to Euclid Ave. (SR-83)	1,886	4,882	16,826	3,344	5,230	2	0	4,400	282	4,028	0.92	D	5,345	**1.21**	**F**
	Euclid Ave. (SR-83) to Pine Ave.	2,115	3,202	14,782	3,242	5,357	2	1	6,000	539	5,051	0.84	D	5,368	0.89	D
	Pine Ave. to Soquel Canyon Pkwy.	2,057	3,153	16,024	3,604	5,661	2	1	6,000	525	4,744	0.79	D	5,447	0.91	D
	Soquel Canyon Pkwy. to Ramona Ave.	2,286	3,211	14,053	3,036	5,322	3	1	8,200	539	4,557	0.56	C	5,093	0.62	C
	Ramona Ave. to Chino Hills Pkwy. (SR-142)	2,286	3,211	11,574	2,342	4,628	3	1	8,200	539	3,863	0.47	B	4,378	0.53	B
	Chino Hills Pkwy. (SR-142) to Grand Ave.	2,200	2,187	15,751	3,798	5,998	3	1	8,200	552	5,233	0.64	C	5,726	0.70	C
	Grand Ave. to Chino Ave.	1,857	2,532	21,985	5,447	7,304	3	1	8,200	565	6,539	0.80	D	7,156	0.87	D

TABLE 5.7-6 (Cont.)
CMP FREEWAY MAINLINE PM PEAK HOUR OPERATIONAL ANALYSIS (YEAR 2020)

Freeway	Segment Limits	Existing Count	Model		Growth Increment 0.38	Future Forecast	Lanes		Capacity	Project Trips	Year 2020 W/O Project			Year 2020 W/Project		
			Existing	Future			Gen. Use	HOV			Trips	VOL/ CAP	LOS	Trips	VOL/ CAP	LOS
SR-91 Fwy. WB	McKinley St. to I-15 Fwy.	5,375	20,028	30,497	2,931	8,306	4	1	10,400	108	8,087	0.78	D	8,313	0.80	D
	I-15 Fwy. to Main St.	5,998	24,484	45,773	5,961	11,959	4	1	10,400	11	11,850	**1.14**	**F**	11,757	**1.13**	**F**
	Main St. to West Grand Blvd.	5,583	21,906	40,888	5,315	10,898	4	1	10,400	11	10,789	**1.04**	**F**	10,717	**1.03**	**F**
	West Grand Blvd. to Lincoln Ave.	5,764	22,364	41,553	5,373	11,137	4	1	10,400	11	11,028	**1.06**	**F**	10,935	**1.05**	**F**
	Lincoln Ave. to Maple St.	5,479	18,712	43,158	6,845	12,324	4	1	10,400	46	12,215	**1.17**	**F**	12,164	**1.17**	**F**
	Maple St. to Serfas Club Dr.	5,661	21,517	47,249	7,205	12,866	4	1	10,400	56	12,757	**1.23**	**F**	12,744	**1.23**	**F**
	Serfas Club Dr. to SR-71 Fwy.	5,583	21,921	48,130	7,339	12,922	4	1	10,400	62	12,813	**1.23**	**F**	12,836	**1.23**	**F**
	SR-71 Fwy. to Green River Rd.	5,609	21,242	47,874	7,457	13,066	4	2	12,000	329	11,537	0.96	E	13,152	**1.10**	**F**
	Green River Rd. to Coal Canyon Rd.	5,816	20,597	49,341	8,048	13,864	4	2	12,000	306	12,335	**1.03**	**F**	13,794	**1.15**	**F**
	Coal Canyon Rd. to Gypsum Canyon Rd.	6,076	21,408	50,578	8,168	14,244	4	2	12,000	299	12,715	**1.06**	**F**	13,773	**1.15**	**F**
SR-91 Fwy. EB	Gypsum Canyon Rd. to Coal Canyon Rd.	10,257	40,718	96,183	15,530	25,787	4	2	12,000	446	24,694	**2.06**	**F**	23,920	**1.99**	**F**
	Coal Canyon Rd. to Green River Rd.	9,819	43,002	88,953	12,866	22,685	4	2	12,000	452	21,592	**1.80**	**F**	22,895	**1.91**	**F**
	Green River Rd. to SR-71 Fwy.	9,468	41,332	82,969	11,658	21,126	4	2	12,000	457	20,033	**1.67**	**F**	21,602	**1.80**	**F**
	SR-71 Fwy. to Serfas Club Dr.	9,424	42,042	83,498	11,608	21,032	4	1	10,400	316	20,879	**2.01**	**F**	20,762	**2.00**	**F**
	Serfas Club Dr. to Maple St.	9,556	41,001	77,282	10,159	19,715	4	1	10,400	300	19,562	**1.88**	**F**	19,804	**1.90**	**F**
	Maple St. to Lincoln Ave.	9,249	39,237	67,807	8,000	17,249	4	1	10,400	290	17,096	**1.64**	**F**	17,208	**1.65**	**F**
	Lincoln Ave. to West Grand Blvd.	9,731	37,865	63,657	7,222	16,953	4	1	10,400	113	16,800	**1.62**	**F**	16,771	**1.61**	**F**
	West Grand Blvd. to Main St.	9,424	40,048	59,957	5,575	14,999	4	1	10,400	110	14,846	**1.43**	**F**	14,913	**1.43**	**F**
	Main St. to I-15 Fwy.	10,126	42,040	65,006	6,430	16,556	4	1	10,400	110	16,403	**1.58**	**F**	16,228	**1.56**	**F**
	I-15 Fwy. to McKinley St.	9,074	28,887	46,663	4,977	14,051	4	1	10,400	189	13,745	**1.32**	**F**	13,835	**1.33**	**F**

TABLE 5.7-7
CMP FREEWAY MAINLINE AM OPERATIONS ANALYSIS
WITH IMPROVEMENTS (YEAR 2020)

Freeway	Segment Limits	Improvement (Lanes Added)			Improved			
		GENERAL	HOV	AUX	CAPACITY	TRIPS	VOL/ CAP	LOS
I-15 Fwy. SB	Jurupa St. to SR-60 Fwy.	**3**	**1**		17,000	16,036	0.94	E
	SR-60 Fwy. to Galena St.	**2**	**1**		12,600	11,125	0.88	D
	Galena St. to Limonite Ave.	**2**	**1**		12,600	10,636	0.84	D
	Limonite Ave. to 6th St.	**2**	**1**		12,600	11,020	0.87	D
	6th St. to 2nd St.	**2**	**1**		12,600	11,381	0.90	D
	2nd St. to Hidden Valley Pkwy.	**1**	**1**		12,600	11,434	0.91	D
	Hidden Valley Pkwy. to SR-91 Fwy.	**1**	**1**		12,600	11,121	0.88	D
	SR-91 Fwy. to Magnolia Ave.				8,800	5,417	0.62	C
I-15 Fwy. NB	Magnolia Ave. to SR-91 Fwy.	**3**	**1**		14,800	12,966	0.88	D
	SR-91 Fwy. to Hidden Valley Pkwy.				8,800	5,559	0.63	C
	Hidden Valley Pkwy. to 2nd St.				8,800	5,638	0.64	C
	2nd St. to 6th St.		**1**		8,200	6,144	0.93	D
	6th St. to Limonite Ave.		**1**		8,200	6,7323	0.82	D
	Limonite Ave. to Galena St.		**1**		8,200	6,896	0.84	D
	Galena St. to SR-60 Fwy.				6,600	6,439	0.98	E
	SR-60 Fwy. to Jurupa St.				8,800	6,306	0.72	C
SR-60 Fwy. WB	Van Buren Blvd. to I-15 Fwy.	**1**			10,400	9,588	0.92	D
	I-15 Fwy. to Milliken Ave.	**3**			14,800	14,322	0.97	E
	Milliken Ave. to Haven Ave.	**3**			17,000	15,702	0.92	D
	Haven Ave. to Archibald Ave.	**3**			17,000	15,587	0.92	D
	Archibald Ave. to Vineyard Ave.	**3**			17,000	16,035	0.94	E
	Vineyard Ave. to Grove Ave.	**3**			17,000	15,787	0.93	D
	Grove Ave. to Euclid Ave. (SR-83)	**3**			17,000	16,083	0.95	E
	Euclid Ave. (SR-83) to Mountain Ave.	**3**			17,000	15,673	0.92	D
	Mountain Ave. to Central Ave.	**3**			17,000	15,405	0.91	D
	Central Ave. to Ramona Ave.	**3**			17,000	15,669	0.92	D
SR-60 Fwy. EB	Ramona Ave. to Central Ave.				10,400	6,605	0.64	C
	Central Ave. to Mountain Ave.				10,400	6,526	0.63	C
	Mountain Ave. to Euclid Ave. (SR-83)				10,400	6,412	0.62	C
	Euclid Ave. (SR-83) to Grove Ave.				10,400	6,426	0.62	C
	Grove Ave. to Vineyard Ave.				10,400	6,217	0.60	C
	Vineyard Ave. to Archibald Ave.				10,400	6,336	0.61	C
	Archibald Ave. to Haven Ave.				10,400	6,502	0.63	C
	Haven Ave. to Milliken Ave.				10,400	6,173	0.59	C
	Milliken Ave. to I-15 Fwy.				8,200	4,681	0.57	C
	I-15 Fwy. to Van Buren Blvd.				8,200	3,599	0.44	B

[1] = Congestion on the SR-91 Freeway corridor is the subject of studies by the Counties of San Bernardino, Riverside and Orange.

TABLE 5.7-7 (Cont.)
CMP FREEWAY MAINLINE AM OPERATIONS ANALYSIS
WITH IMPROVEMENTS (YEAR 2020)

Freeway	Segment Limits	Improvement (Lanes Added)			Improved			
		GENERAL	HOV	AUX	CAPACITY	TRIPS	VOL/ CAP	LOS
SR-71 Fwy. SB	Chino Ave. to Grand Ave.				8,200	6,125	0.75	C
	Grand Ave. to Chino Hills Pkwy. (SR-142)				8,200	4,866	0.59	C
	Chino Hills Pkwy. (SR-142) to Ramona Ave.				8,200	3,892	0.47	B
	Ramona Ave. to Soquel Canyon Pkwy.				8,200	3,892	0.47	B
	Soquel Canyon Pkwy. to Pine Ave.				6,000	4,922	0.82	D
	Pine Ave. to Euclid Ave. (SR-83)				6,000	4,656	0.78	D
	Euclid Ave. (SR-83) to SR-91 Fwy.		**1**		6,000	4,764	0.79	D
SR-71 Fwy. NB	SR-91 Fwy. to Euclid Ave. (SR-83)				4,400	3,293	0.75	C
	Euclid Ave. (SR-83) to Pine Ave.				6,000	3,288	0.55	C
	Pine Ave. to Soquel Canyon Pkwy.				6,000	3,659	0.61	C
	Soquel Canyon Pkwy. to Ramona Ave.				8,200	4,133	0.50	B
	Ramona Ave. to Chino Hills Pkwy. (SR-142)				8,200	3,451	0.42	B
	Chino Hills Pkwy. (SR-142) to Grand Ave.				8,200	4,663	0.57	C
	Grand Ave. to Chino Ave.				8,200	5,288	0.64	C
SR-91 Fwy. WB	McKinley St. to I-15 Fwy.	--[1]	--		10,400	13,784	1.33	**F**
	I-15 Fwy. to Main St.	--	--		10,400	15,866	1.53	**F**
	Main St. to West Grand Blvd.	--	--		10,400	14,668	1.41	**F**
	West Grand Blvd. to Lincoln Ave.	--	--		10,400	15,924	1.53	**F**
	Lincoln Ave. to Maple St.	--	--		10,400	16,295	1.57	**F**
	Maple St. to Serfas Club Dr.	--	--		10,400	18,573	1.79	**F**
	Serfas Club Dr. to SR-71 Fwy.	--	--		10,400	19,435	1.87	**F**
	SR-71 Fwy. to Green River Rd.	--	--		12,000	19,949	1.66	**F**
	Green River Rd. to Coal Canyon Rd.	--	--		12,000	21,085	1.76	**F**
	Coal Canyon Rd. to Gypsum Canyon Rd.	--	--		12,000	22,667	1.89	**F**
SR-91 Fwy. EB	Gypsum Canyon Rd. to Coal Canyon Rd.	--	--		12,000	10,647	0.89	D
	Coal Canyon Rd. to Green River Rd.	--	--		12,000	10,518	0.88	D
	Green River Rd. to SR-71 Fwy.	--	--		12,000	10,354	0.86	D
	SR-71 Fwy. to Serfas Club Dr.	--	--		10,400	10,234	0.98	E
	Serfas Club Dr. to Maple St.	--	--		10,400	10,113	0.97	E
	Maple St. to Lincoln Ave.	--	--		10,400	9,598	0.92	D
	Lincoln Ave. to West Grand Blvd.	--	--		10,400	9,868	0.95	E
	West Grand Blvd. to Main St.	--	--		10,400	9,753	0.94	E
	Main St. to I-15 Fwy.	--	--		10,400	10,870	1.05	**F**
	I-15 Fwy. to McKinley St.	--	--		10,400	7,317	0.70	C

[1] = Congestion on the SR-91 Freeway corridor is the subject of studies by the Counties of San Bernardino, Riverside and Orange.

TABLE 5.7-7 (Cont.)
CMP FREEWAY MAINLINE PM OPERATIONS ANALYSIS
WITH IMPROVEMENTS (YEAR 2020)

Freeway	Segment Limits	Improvement (Lanes Added)			Improved			
		GENERAL	HOV	AUX	CAPACITY	TRIPS	VOL/ CAP	LOS
I-15 Fwy. SB	Jurupa St. to SR-60 Fwy.		1		10,400	8,985	0.86	D
	SR-60 Fwy. to Galena St.		1		8,200	7,789	0.95	E
	Galena St. to Limonite Ave.	1	1		10,400	8,782	0.84	D
	Limonite Ave. to 6th St.	1	1		10,400	8,868	0.85	D
	6th St. to 2nd St.		1		8,200	7,795	0.95	E
	2nd St. to Hidden Valley Pkwy.				8,800	7,352	0.84	D
	Hidden Valley Pkwy. to SR-91 Fwy.				8,800	7,226	0.82	D
	SR-91 Fwy. to Magnolia Ave.	2	1		14,800	13,022	0.88	D
I-15 Fwy. NB	Magnolia Ave. to SR-91 Fwy.	1	1		10,400	9,064	0.87	D
	SR-91 Fwy. to Hidden Valley Pkwy.	1	1		12,600	11,690	0.93	D
	Hidden Valley Pkwy. to 2nd St.	1	1		12,600	11,971	0.95	E
	2nd St. to 6th St.	2	1		12,600	11,497	0.91	D
	6th St. to Limonite Ave.	2	1		12,600	11,689	0.93	D
	Limonite Ave. to Galena St.	2	1		12,600	11,275	0.89	D
	Galena St. to SR-60 Fwy.	2	1		12,600	11,631	0.92	D
	SR-60 Fwy. to Jurupa St.	2	1		14,800	14,496	0.98	E
SR-60 Fwy. WB	Van Buren Blvd. to I-15 Fwy.				8,200	6,401	0.78	D
	I-15 Fwy. to Milliken Ave.	1			10,400	10,113	0.97	E
	Milliken Ave. to Haven Ave.	1			12,600	10,999	0.87	D
	Haven Ave. to Archibald Ave.	1			12,600	11,388	0.90	D
	Archibald Ave. to Vineyard Ave.	1			12,600	11,258	0.89	D
	Vineyard Ave. to Grove Ave.	1			12,600	11,137	0.88	D
	Grove Ave. to Euclid Ave. (SR-83)	1			12,600	11,387	0.90	D
	Euclid Ave. (SR-83) to Mountain Ave.	1			12,600	11,070	0.88	D
	Mountain Ave. to Central Ave.	1			12,600	11,076	0.88	D
	Central Ave. to Ramona Ave.	1			12,600	11,106	0.88	D
SR-60 Fwy. EB	Ramona Ave. to Central Ave.	3			17,000	16,369	0.96	E
	Central Ave. to Mountain Ave.	3			17,000	16,383	0.96	E
	Mountain Ave. to Euclid Ave. (SR-83)	3			17,000	16,533	0.97	E
	Euclid Ave. (SR-83) to Grove Ave.	3			17,000	16,375	0.96	E
	Grove Ave. to Vineyard Ave.	3			17,000	15,730	0.93	D
	Vineyard Ave. to Archibald Ave.	3			17,000	16,025	0.94	E
	Archibald Ave. to Haven Ave.	3			17,000	15,593	0.92	D
	Haven Ave. to Milliken Ave.	3			17,000	15,861	0.93	D
	Milliken Ave. to I-15 Fwy.	3			14,800	12,792	0.86	D
	I-15 Fwy. to Van Buren Blvd.	1			10,400	10,236	0.81	D
SR-71 Fwy. SB	Chino Ave. to Grand Ave.				8,200	7,218	0.88	D
	Grand Ave. to Chino Hills Pkwy. (SR-142)				8,200	6,415	0.78	D
	Chino Hills Pkwy. (SR-142) to Ramona Ave.				8,200	5,121	0.62	C
	Ramona Ave. to Soquel Canyon Pkwy.				8,200	5,120	0.62	C
	Soquel Canyon Pkwy. to Pine Ave.				6,000	4,847	0.81	D
	Pine Ave. to Euclid Ave. (SR-83)				6,000	4,389	0.73	C
	Euclid Ave. (SR-83) to SR-91 Fwy.		1		6,000	4,016	0.91	D

[1] = Congestion on the SR-91 Freeway corridor is the subject of studies by the Counties of San Bernardino, Riverside and Orange.

TABLE 5.7-7 (Cont.)
CMP FREEWAY MAINLINE PM OPERATIONS ANALYSIS
WITH IMPROVEMENTS (YEAR 2020)

Freeway	Segment Limits	Improvement (Lanes Added)			Improved			
		GENERAL	HOV	AUX	CAPACITY	TRIPS	VOL/ CAP	LOS
SR-71 Fwy. NB	SR-91 Fwy. to Euclid Ave. (SR-83)		**1**		6,000	5,345	0.89	D
	Euclid Ave. (SR-83) to Pine Ave.				6,000	5,368	0.89	D
	Pine Ave. to Soquel Canyon Pkwy.				6,000	5,447	0.91	D
	Soquel Canyon Pkwy. to Ramona Ave.				8,200	5,093	0.62	C
	Ramona Ave. to Chino Hills Pkwy. (SR-142)				8,200	4,378	0.53	B
	Chino Hills Pkwy. (SR-142) to Grand Ave.				8,200	5,726	0.70	C
	Grand Ave. to Chino Ave.				8,200	7,156	0.87	D
SR-91 Fwy. WB	McKinley St. to I-15 Fwy.	--[1]	--		10,400	8,313	0.80	D
	I-15 Fwy. to Main St.	--	--		10,400	11,757	1.13	**F**
	Main St. to West Grand Blvd.	--	--		10,400	10,717	1.03	**F**
	West Grand Blvd. to Lincoln Ave.	--	--		10,400	10,935	1.05	**F**
	Lincoln Ave. to Maple St.	--	--		10,400	12,164	1.17	**F**
	Maple St. to Serfas Club Dr.	--	--		10,400	12,744	1.23	**F**
	Serfas Club Dr. to SR-71 Fwy.	--	--		10,400	12,836	1.23	**F**
	SR-71 Fwy. to Green River Rd.	--	--		12,000	13,152	1.10	**F**
	Green River Rd. to Coal Canyon Rd.	--	--		12,000	13,794	1.15	**F**
	Coal Canyon Rd. to Gypsum Canyon Rd.	--	--		12,000	13,773	1.15	**F**
SR-91 Fwy. EB	Gypsum Canyon Rd. to Coal Canyon Rd.	--	--		12,000	23,920	1.99	**F**
	Coal Canyon Rd. to Green River Rd.	--	--		12,000	22,895	1.91	**F**
	Green River Rd. to SR-71 Fwy.	--	--		12,000	21,602	1.80	**F**
	SR-71 Fwy. to Serfas Club Dr.	--	--		10,400	20,762	2.00	**F**
	Serfas Club Dr. to Maple St.	--	--		10,400	19,804	1.90	**F**
	Maple St. to Lincoln Ave.	--	--		10,400	17,208	1.65	**F**
	Lincoln Ave. to West Grand Blvd.	--	--		10,400	16,771	1.61	**F**
	West Grand Blvd. to Main St.	--	--		10,400	14,913	1.43	**F**
	Main St. to I-15 Fwy.	--	--		10,400	16,228	1.56	**F**
	I-15 Fwy. to McKinley St.	--	--		10,400	13,835	1.33	**F**

[1] = Congestion on the SR-91 Freeway corridor is the subject of studies by the Counties of San Bernardino, Riverside and Orange.

5.7.5 CUMULATIVE IMPACTS

The cumulative impacts were previously identified for the Buildout with Project traffic conditions analysis that combined future traffic without the project with traffic generated by the proposed project. The proposed project will contribute to significant and cumulative adverse traffic conditions at Buildout.

5.7.6 MITIGATION MEASURES

T-1 Notification: Since the project contributes significant traffic to a State Highway (I-15 Freeway, SR-71 Freeway, SR-60 Freeway, and SR-91 Freeway), and it also contributes significant traffic to roadway segments serving CMP intersections within the jurisdictions of the City of Chino Hills, City of Ontario, County of San Bernardino, City of Norco, City of Corona, and the County of Riverside, the City of Chino shall notify the Congestion Management Agency (SANBAG), the California Department of Transportation (Caltrans), the City of Chino Hills, City of Ontario, County of San Bernardino, City of Norco, City of Corona, and the County of Riverside in accordance with CMP requirements. Each of these agencies must be provided with a copy of the CMP traffic study, once the document is accepted by the City of Chino.

T-2 The proposed project shall construct or otherwise provide for all internal roadway improvements. The provision of such improvements shall be phased to address the incremental impacts of individual development projects.

T-3 The City of Chino shall work cooperatively through SCAG and SANBAG to develop regional/subregional projects and identify regional transportation funding needed to minimize future freeway deficiencies. The City will actively participate in other future regional and/or subregional efforts to reduce freeway congestion.

T-4 The City of Chino shall participate in planning efforts to develop subregional and/or regional transportation facilities based on equitable cost sharing programs among cities and counties.

T-5 The City of Chino shall provide traffic operations and traffic systems management (TSM) improvements, including signal system coordination, automated traffic control, Smart Corridors, intelligent transportation systems, and other measures.

T-6 Individual development projects shall be reviewed by the City for integration of trip reduction measures, travel demand management (TDM) strategies and alternative transportation modes, consistent with the Specific Plan.

T-7 In the initial phases of development, the City of Chino shall require that a Transit Feasibility Study be prepared of the proposed project transit system. The feasibility study should address the timing of transit development vis-a-vis development phasing, and the interface with future regional transit works. To respond to potential issues related to the development of such a system, the following actions must be undertaken:

- Identify the various funding mechanisms associated with the construction and operation of the system.
- Require each proposed project to provide adequate right of way for such a system and construct the required infrastructure.
- Establish design criteria and an evaluation process for determining transit stop locations that ensure pedestrian access prior to tentative map approval.
- Operational issues, such as the future management of the system, may be deferred until the appropriate time, based upon discussions with current regional transit providers.

T-8 The City of Chino shall contact appropriate transit agencies to encourage an expansion of transit services up to and within the project area.

T-9 Traffic studies shall be required as deemed necessary by the City Engineer. Each study will identify the timing, and extent of required improvements to adequately evaluate future traffic impacts of individual projects needed to mitigate the impacts of such development.

5.7.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Outside of state and federal funding sources, and application of San Bernardino County's Proposition "A" half-cent sales tax, no mechanisms are currently in place for local contributions to needed freeway improvements on a project-by-project basis. Similarly, no mechanisms or interagency agreements exist to address full funding and construction of offsite intersection improvements needed by cumulative projects and regional growth. The project will provide for the full cost or in-lieu construction of road improvements within the boundaries of the plan area, including the proportionate share of costs associated with impacts of other regional traffic. With implementation of the identified mitigation measures, cumulative traffic impacts will be reduced, but not to less than significant levels.

5.8 NOISE

5.8.1 INTRODUCTION

This section describes the existing sources and baseline conditions of noise, and the City of Chino's noise ordinance. It also assesses potential project impacts on noise in and surrounding the project area up to buildout of the proposed *project*.

The technical report upon which this section is founded was provided by Giroux & Associates, is included in its entirety in Appendix D.

5.8.2 EXISTING CONDITIONS

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally defined as unwanted sound. Sound is characterized by various parameters which describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound wave. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level.

The unit of sound pressure ratioed to the faintest sound detectable by a keen human ear is called a decibel (dB). Because sound or noise can vary in intensity by over one million times within the range of human hearing, a logarithmic decibel scale is used to keep sound intensity numbers at a convenient and manageable level. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, noise levels at maximum human sensitivity (middle A and its higher harmonics) are factored more heavily into sound descriptions in a process called "A-weighting" written as dB(A). Any further reference to decibels written as "dB"should be understood to be A-weighted.

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called Leq), or, alternately, as a statistical description of the sound pressure level that is exceeded over some fraction of a given observation period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, State law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL).

An interior CNEL of 45 dB(A) is mandated by the State of California Noise Insulation Standards (CCR, Title 24, Part 6, Section T25-28) for multiple family dwellings and hotel and motel rooms. A weighted noise exposure to 45 dB CNEL is also the guideline level for single-family interiors used in

most California jurisdictions. Since normal noise attenuation within residential structures with closed windows is about 20-25 dB, an exterior noise exposure of 65 dB CNEL is generally the noise land use compatibility guideline for new residential dwellings in California. Because commercial or industrial uses are not occupied on a 24-hour basis, the exterior noise exposure standard for less sensitive land uses generally is somewhat less stringent.

In many communities where a quiet environment is considered an important asset that enhances the natural scenic values, a somewhat more stringent land use compatibility guideline has often been adopted. In the Noise Element of the City of Chino General Plan, a noise exposure of 50 dB by day and 45 dB at night is shown as most desirable for noise sensitive uses. The City's Noise Element was adopted verbatim from the San Bernardino County Element in effect in 1975. The City's element is outdated. Current noise/land use planning within the City of Chino uses more realistic nose/land use compatibility standards less stringent than the noise standards shown above. Current/recent noise impact assessments use the State of California Office of Noise Control model element guidelines. Figure 5.8-1 shows the recommended State of California noise/land use compatibility guidelines for land use planning.

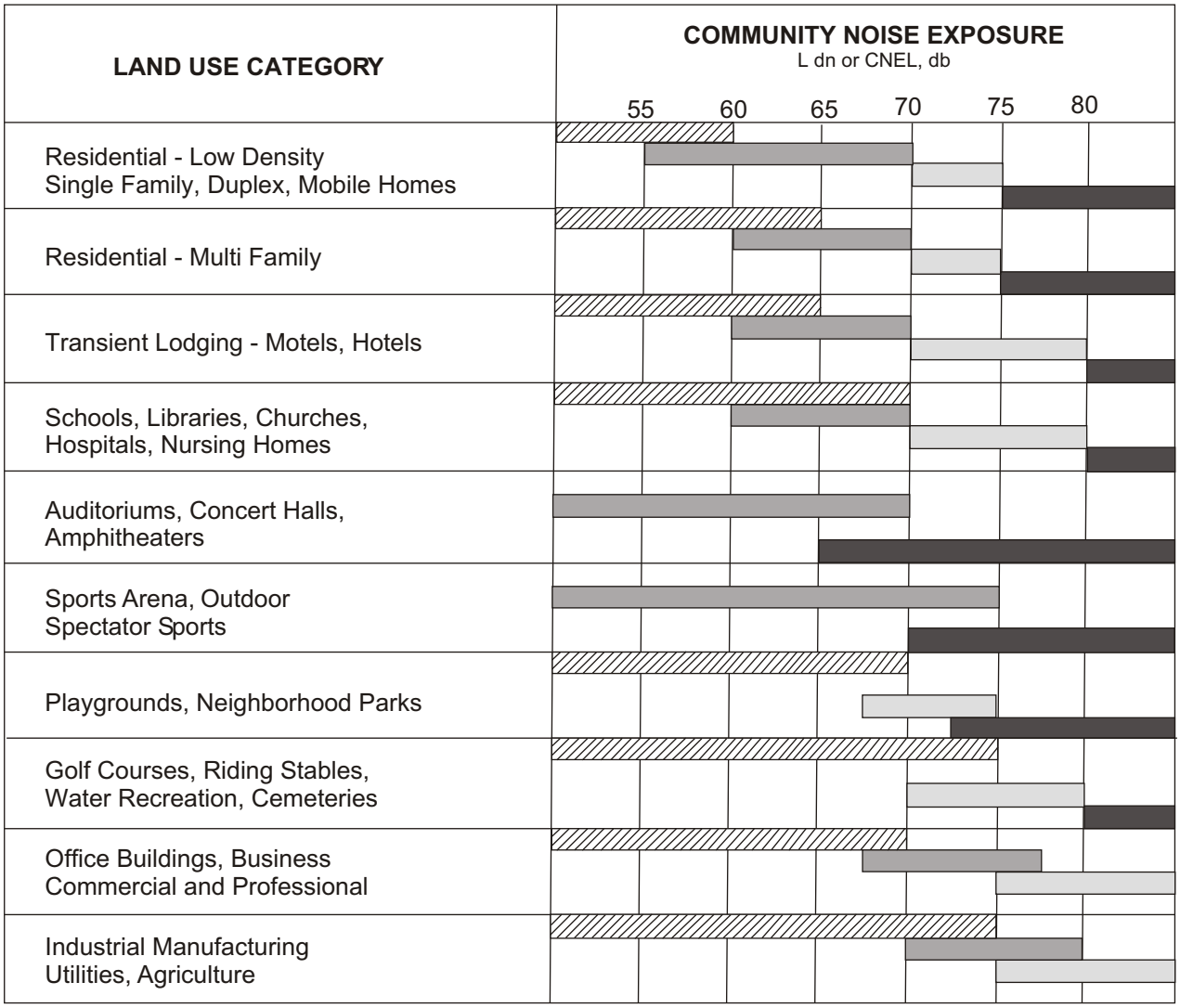
Exhibit 5.8-1 shows a range of noise compatibility from "normally acceptable" to "clearly unacceptable." Because there is often too much discretion/interpretation in these ranges (with some overlap), the tendency in many noise level standards has been to assign a more clear-cut threshold of acceptability. Exhibit 5.8-2 shows the current San Bernardino County Interior/Exterior Noise Level Standards—Mobile Noise Sources. Exterior standards for noise-sensitive land uses are 60 dB CNEL, with a possible maximum exposure of 65 dB CNEL if optimal mitigation has been implemented. These levels are consistent with standards used in most other communities in Southern California.

Airport Noise

Aircraft noise is a concern because of the proximity of Subarea 2 to Chino Airport. Aircraft noise concerns are similar to traffic noise impacts except:

- Title 21 of the California Code of Regulations contains specific prohibitions against development within noise impact areas that allows for no discretionary variance on the part of any land use planning agency.

- Aircraft noise propagates downward rather than more horizontally as does traffic noise. Perimeter noise walls to mitigate exterior areas are therefore not effective in noise impacted areas.



INTERPRETATION

NORMALLY ACCEPTABLE
Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

NORMALLY UNACCEPTABLE
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

CLEARLY UNACCEPTABLE
New construction or development should generally not be undertaken.

SOURCE: State of California, Governor's Office of Planning and Research, *General Plan Guidelines*, 1990

Exhibit **5.8-1**

Land Use Compatibility for Community Noise Environments

Michael Brandman Associates

LAND USE		Ldn (or CNEL), dB	
Categories	**Uses**	**Interior***	**Exterior ****
Residential	Single and multi-family, duplex, mobile homes	45	60***
Commercial	Hotel, motel, transient lodging	45	60***
	Commercial retail, bank, restaurant	50	n/a
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	n/a
Institutional/Public	Hospital, nursing home, school classroom, church, library	45	65
Open Space	Park	n/a	65

*Indoor environmental excluding: bathrooms, kitchens, toilets, closets and corridors.

**Outdoor environment limited to:
Private yard of single-family dwellings
Multi-family private patios or balconies
Mobile home parks
Hospital/office building patios
Park picnic areas
School playgrounds
Hotel and motel recreation areas

***An exterior noise level of up to 65 dB (or CNEL) will be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB Ldn (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level will necessitate the use of air conditioning or mechanical ventilation.

Exhibit **5.8-2**

Current San Bernardino County Interior/Exterior Noise Level Standards - Mobile Noise Sources

Michael Brandman Associates

Title 21 at Section 5012 defines a noise impact area as one where noise sensitive land uses have more than a 65 dB annual average CNEL noise exposure. Noise sensitive uses which are prohibited inside a 65 dB CNEL airport noise contour include:

- Residences (except for certain limitations)
- Public and private schools
- Hospitals and convalescent homes
- Churches and other places of worship

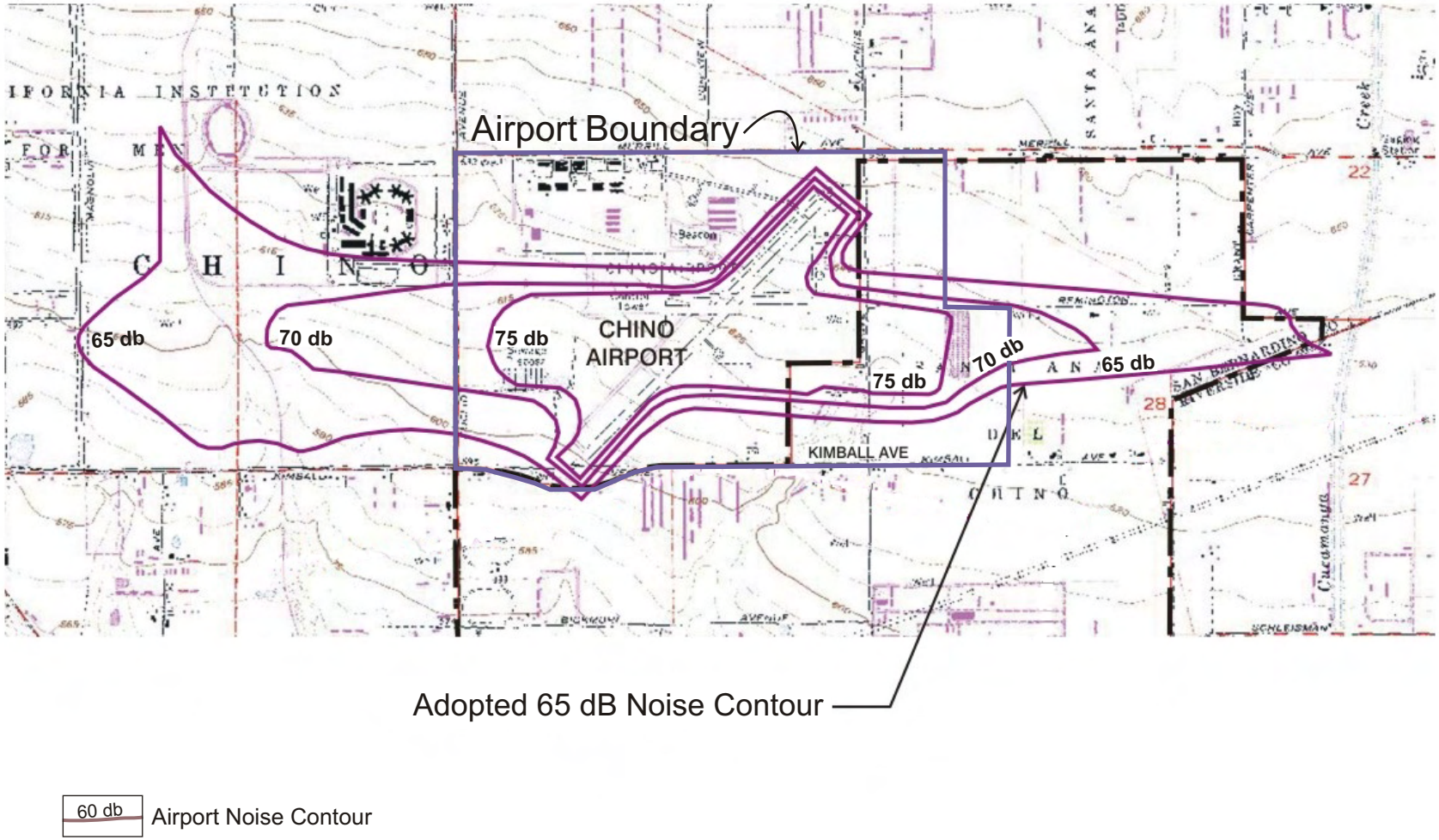
The 65 dB CNEL contour has been calculated for future Chino Airport air traffic projections. The current airport noise "footprint" as a basis for future development planning decisions is for the year 2005. Figure 5.8-2 shows the 65 dB CNEL contour as shown in the Chino Airport Comprehensive Land Use Plan (ACLUP; 1991).

Mapping of noise contours in Exhibit 5.8-3 indicates that Subarea 2 is not noise-constrained by State law. However, the ACLUP points out that the single-event character of aircraft noise can result in noise complaints at levels well below 65 dB CNEL. The complaint area extends as far as the 55 dB CNEL contour. Extrapolation of the contours in Exhibit 5.8-3 suggests that noise complaints could extend to almost two miles from the airport if noise sensitive uses are built within the primary flight tracks.

The aircraft fleet mix and associated "noise footprint" from Chino Airport have been changing in conjunction with the addition of more business jets and the extension of Runway 8R-26L. An Airport Master Plan update, due to start later this year, will evaluate airport expansion, use of surplus airport properties, projected changes in fleet mix, and potential growth in flight and passenger activity. A revision of the adopted noise and safety "exclusion" contours is likely to result from this study.

Airport noise contour changes could result in a future noise constraint to noise-sensitive uses planned in the northernmost portion of Subarea 2. However, in the absence of any definitive information on the extent of any possible future constraint, the adopted airport noise contours provide the only appropriate measure of potential airport noise impacts upon planned development in the northern portion of Subarea 2.

Mobile (aircraft and vehicular traffic) noise generation discussed above is generally preempted from local control. Discretionary actions to control such impacts are in terms of land use decisions. Stationary sources (industrial plants, etc.) are governed by local ordinance. The City of Chino does have specific noise standards in its municipal code that regulate non-preempted (stationary equipment, off-road traffic, commercial activities, etc.) noise sources. The noise ordinance governs the noise exposure of any residentially zoned properties. Ordinance criteria are stated in terms of allowable noise for a given period of time. Noise standards at night, and those consisting of impulse,



SOURCE: The Planning Center

MAP NOT TO SCALE

Michael Brandman Associates

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Exhibit **5.8-3**

Adopted Airport Noise Contours

THE PRESERVE • CHINO SUBAREA 2

simple tone, music or speech noises are more heavily penalized. Table 5.8-1 shows the acceptable levels at residential land uses during the daytime and nighttime. If the ambient noise level exceeds the Table 5.8-1 standards, the ambient becomes the standard for that exposure period.

Existing Noise Levels

Existing noise levels throughout Subarea 2 derive mainly from vehicular sources on the highways and secondary roads in the area. Chino Airport aircraft noises constitute an occasional short-term noise intrusion, but the integrated contribution of aircraft flight activities over a 24-hour CNEL exposure period is small except in close proximity to the airport. Agricultural activity noise and dairy operations sometimes have audible noise, but again only in close proximity to each individual activity. Large swarms of birds near dairy farms can be unusually noisy, but their noise generation seems less intrusive than mechanical equipment such as cars, planes or tractors.

Short-term noise level measurements were conducted on April 25, 2000 at four locations in the project area. Table 5.8-2 summarizes the results of these measurements. Although the data in Table 5.8-2 are short-term (20 minute) Leq's while the noise compatibility standard is for CNEL, daytime Leq and weighted 24-hour CNEL are often seen in measurement data to be almost identical. Table 5.8-2 shows that roadway noise is in the mid-60 dB range at the edge of several area roadways. Increase in noise is to be expected from anticipated growth. Some offset will occur as the number of trucks declines, and travel speeds become constrained from signalized intersections and greater volumes. Almost no aircraft activity was observed during these measurements. Any constraints on development imposed by the current noise environment are confined to a fairly narrow corridor near local roadways. Traffic growth and a change in flight activities at the airport may expand the noise incompatibility zone in the future.

TABLE 5.8-1
CITY OF CHINO EXTERIOR NOISE ORDINANCE
Criteria for Residential Properties

Maximum Time of Exposure	Noise Metric	Noise Levels Not To Exceed	
		7 AM–10 PM	10 PM–7 AM
30 min/hr	L50	55 dBA	50 dBA
15 min/hr	L25	60 dBA	55 dBA
5 min/hr	L8.3	65 dBA	60 dBA
1 min/hr	L1.7	70 dBA	65 dBA
Any period of time	Lmax	75 dBA	70 dBA
Source: Ordinance 95-10, Section 9.40.040			

TABLE 5.8-2
ON-SITE NOISE MONITORING SURVEY

	LEQ	LMax	LMin	L10	L50	L90
Correctional Institution for Women	68	75	49	72	58	50
Kimball Avenue/Sultana	66	82	50	68	62	56
Bickmore/Grove	64	80	50	62	54	52
Pine/Hellman	58	74	50	64	52	49
Source: Larsen-Davis Labs Model 700B Noise Dosimeter; April 25, 2000, 1430-1635 (20 minutes/site)						

The noise measurements were conducted in April, 2000. Although close to two years has passed since the measurements were taken, no substantial growth has occurred during that time that would have measurably changed the existing noise environment. Noise is logarithmically proportional to source activity (cars, airplanes, etc.). A clearly perceptible noise increase for humans is around +3 dB. It requires a doubling of noise generators to create a +3 dB increase. There has been no development activity that would have caused such a doubling since the noise data were taken.

Three of the four measurement sites were near existing dairy operations. The low noise levels generally found in agricultural areas of Chino are reflected in the generally low 'L50' or 'L90' levels. Dairies are not substantial noise generators except for early morning truck activities to deliver feed or haul away milk. Noise from dairies is generally not a constraint to siting residential uses near ongoing dairies. Mitigation of traffic noise from residential uses is generally a greater issue in developing residential communities in formerly semi-rural environments.

5.8.3 THRESHOLDS OF SIGNIFICANCE

Noise impacts are significant if:

- they cause noise standards to be exceeded where they are currently met, or,
- they cause noise levels to measurably worsen in an environment already exceeding standards.

"Measurably worsen" is not defined in CEQA guidelines. Most people cannot distinguish noise level differences of less than 3 dB. However, because of the logarithmic nature of noise, it requires a doubling of traffic volumes to increase noise levels by 3 dB. Few projects of themselves would cause traffic volumes to double where existing volumes are already high enough to cause elevated noise levels. The threshold of accuracy for monitoring or modeling of ambient noise is ±1 dB. A 1 dB

increase in noise levels, even if not perceptible by people under ambient conditions, is therefore a more appropriate significance threshold if noise levels already exceed established compatibility guideline levels and noise-sensitive land uses are directly exposed to project-related impacts.

5.8.4 PROJECT IMPACTS

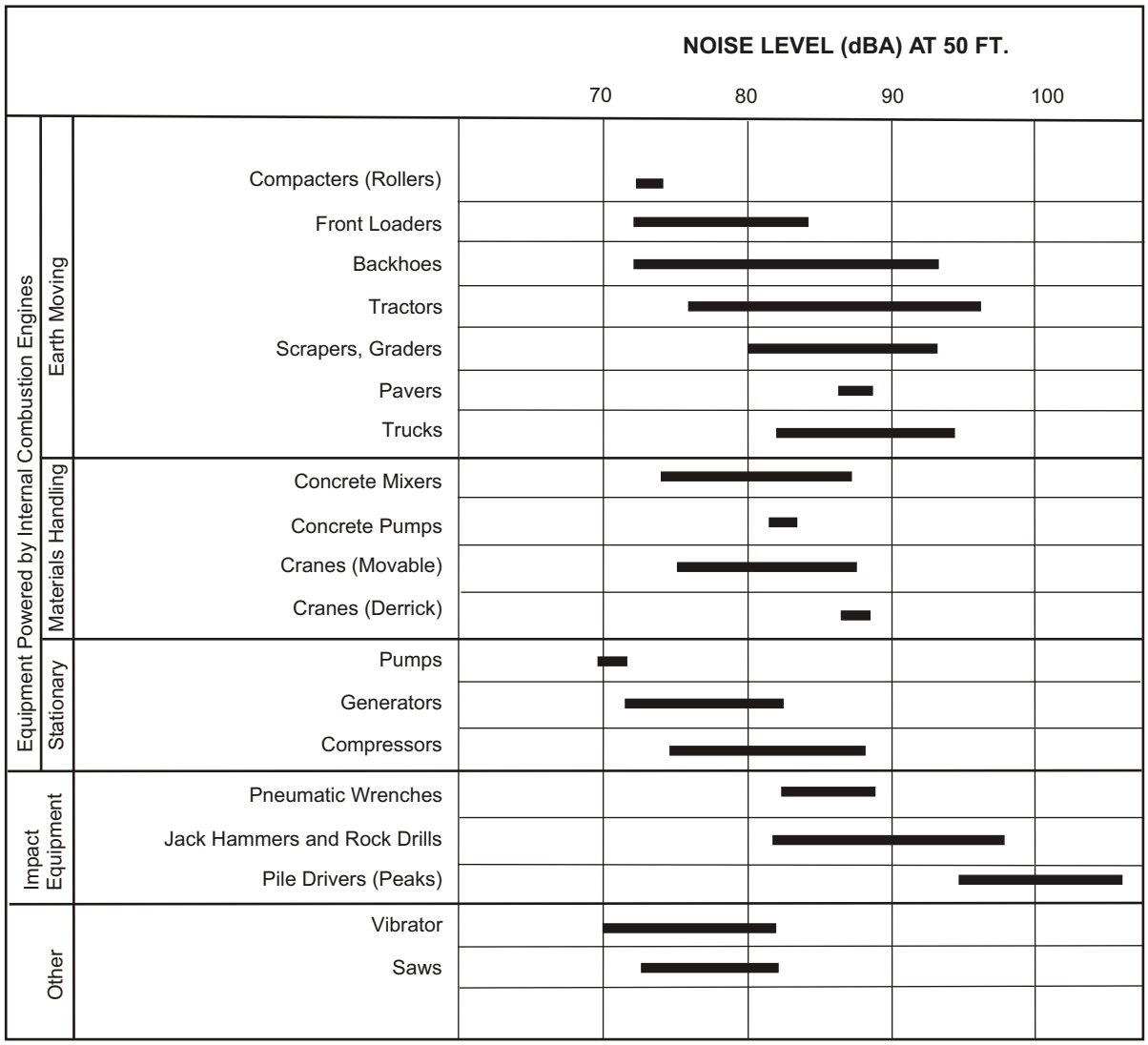
Two characteristic noise sources are typically identified with land use intensification such as that proposed for Subarea 2. Construction activities, especially heavy equipment, will create short-term noise increases near the project site. Such impacts may be important if project development occurs near the interface with an off-site, noise-sensitive land use.

Upon completion, project-related traffic will cause an incremental increase in area-wide noise levels throughout western San Bernardino County. Traffic noise impacts are generally analyzed both to insure that the project will not adversely impact the acoustic environment of the surrounding community, as well as to insure that the project site is not exposed to an unacceptable level of noise resulting from the ambient noise environment acting upon the project.

The adopted airport land use compatibility plan shows no airport activity noise constraint upon Subarea 2, but that plan is subject to future revision. The land use development plan places least noise-sensitive land uses closest to the airport even though residential use is currently not prohibited anywhere within the developable area because of noise. Creation of a noise overlay within the area of possible noise constraint is recommended so that noise issues are revisited in the future if/when specific development proposals are finalized.

Construction Noise Impacts

Temporary construction noise impacts vary markedly because the noise strength of construction equipment ranges widely as a function of the equipment used and its activity level. Short-term construction noise impacts tend to occur in discrete phases dominated initially by earth-moving sources, then by foundation and roadway construction, and finally by finish construction. Exhibit 5.8-4 shows the typical range of construction activity noise generation as a function of equipment used in various building phases. The earth moving sources are seen to be the noisiest with equipment noise ranging up to about 90 dB(A) at 50 feet from the source.



SOURCE: EPA PB 207717, Environmental Protection Agency, Dec. 31, 1071, "Noise from Construction Equipment & Operations"

Exhibit **5.8-4**

Typical Construction Equipment Noise Generation Levels

Michael Brandman Associates

Spherically radiating point sources of noise emissions are atmospherically attenuated by a factor of 6 dB per doubling of distance, or about 25 dB in 1000' of propagation. The loudest earth-moving noise sources will therefore sometimes be as high as 65 dB(A) out to a distance of 1000' from the construction area. A detectability radius of 1000' or more pre-supposes no other machinery or equipment noise that would mask project construction noise. As intensification of the project vicinity increases, the assumption of a "clean" baseline may not be realized. An extensive noise impact envelope also requires a clear line of sight from source to receiver that will not be realized as various project parcels have completed structures. Both the masking effects of other noise sources (cars and trucks or Chino Airport aircraft) and screening effects of completed structures will reduce the zone of construction noise audibility. Construction noise could at times be perceivable at sensitive receptors at an adjacent parcel to a given construction project, but the noise envelope around any construction site will generally be confined to the immediate vicinity of any individual construction area. Any construction activity noise nuisance potential is therefore generally localized and temporary.

Construction noise sources are not strictly relatable to a noise standard because they occur only during selected times and the source strength varies sharply with time. Further, noise-intensive construction of any individual development is limited in duration to a period of a few months. If construction activities occurred at night, they could create a short-term significant impact because of sleep disturbance at sensitive receivers beyond the construction site. If noise-sensitive uses are located near a construction area, then time limits on grading and other equipment operations are established to minimize nuisance potential. For construction near (within 500') of scattered existing residences, the hours from 7 A.M. to 7 P.M. on weekdays should be the times allowed for construction activities. With such time limits, and with the relatively low noise sensitivity of proposed project development most likely exposed to construction noise on an adjacent parcel, construction activity noise impacts are anticipated to be less than significant.

Vehicular Noise Impacts

Long term noise concerns from the increased urbanization of the project area center primarily on mobile source emissions on area roadways. These concerns were addressed using the California Specific vehicle noise curves (CALVENO) in the federal roadway noise model (the FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108). The model calculates the LEQ noise level for a particular reference set of input conditions, and then makes a series of adjustments for site-specific traffic volumes, distances, speeds, or noise barriers.

Traffic noise levels will change substantially for future conditions versus existing levels of several roadways. These changes are due to cumulative growth independent of development within Subarea 2. This same growth of traffic and associated noise will generally mask any project-related

contributions except within Subarea 2 itself where traffic growth would not occur without project implementation.

Traffic noise was calculated along 137 roadway segments throughout the City of Chino, within and surrounding Subarea 2 for existing and interim years 2010 and 2020, no-project and future with-project conditions. The additional post-2020 traffic growth of 27 percent will increase noise levels by an additional 1.0 dB. Such a difference is imperceptible from Year 2020 data. The results of the traffic noise analysis are included in Appendix D to this report. Potential significance was previously defined as noise increase that was clearly perceptible (+3 dB) in an area of noise sensitive land uses (see Table 5.8-3), or a +1 dB increase if there were noise sensitive uses adjacent to the roadway and "no project" exposures already exceeded 65 dB CNEL without the proposed action (see Table 5.8-4). Because of substantial forecast area growth, a large number of area roadways will experience a potentially significant noise level increase from existing conditions. Such increases are primarily due to cumulative growth, especially outside Subarea 2. Increases of +3 dB CNEL are forecast to occur along 17 roadways, with another 8 experiencing a measurable (+1 dB CNEL) increase where existing levels already exceed 65 dB CNEL as far away as 100 feet from the roadway centerline.

However, these substantial increases from existing conditions are primarily due to cumulative growth (2020 no-project versus existing), except within Subarea 2 or near the planning area perimeter. Potentially significant noise level differences between the no-project and project are predicted to occur along the following roadway links:

TABLE 5.8-3
PERCEPTIBLE INCREASES IN NOISE LEVELS (> 3 dB CNEL)
ALONG CHINO ROADWAY LINKS – WITH PROJECT

Merrill Avenue:	E of Euclid Avenue Hellman Avenue – Eucalyptus
Kimball Avenue:	E of Prado Road Prado Road – Archibald Avenue
Cloverdale Road:	Archibald Avenue – Milliken Avenue
Bickmore Avenue:	E of Euclid Avenue W of Grove Avenue
Pine Avenue:	SR-71 – W of Archibald Avenue
Schliesman Road:	Archibald Avenue – Haven Avenue
Chandler Street:	Hellman Avenue – Archibald Avenue
Euclid Avenue:	Eucalyptus Avenue – Kimball Avenue
Grove Avenue:	Schaefer Avenue – Edison Avenue Eucalyptus – Pine Avenue
Walker Avenue:	Edison Avenue – Cloverdale Road
Hellman Avenue:	Cloverdale Road – S of Chandler Street
Archibald Avenue:	Edison Avenue – Eucalyptus Avenue
River Road:	N of Archibald Avenue – Corydon Street

TABLE 5.8-4
MEASURABLE INCREASES IN NOISE LEVELS
(>1 dB if CNEL already >65 dB) ALONG CHINO ROADWAY LINKS—WITH PROJECT

Edison Avenue:	W of Mountain Archibald-Haven Avenue
Cloverdale Road:	Milliken Avenue – I-15
Euclid Avenue:	SR-60 – Eucalyptus Avenue N of SR-71
Grove Avenue:	SR-60 – Walnut Avenue
River Road:	Corydon Street – 2nd Street
Haven Avenue:	SR-60 – Riverside Drive

Aircraft Noise Exposure

The proposed Specific Plan includes a Chino Airport Overlay (CAO) zone that conforms to the airport limits, based on the 1991 ACLUP adopted noise contours and safety zones. Expansion of airport operations and flight activity pursuant to a proposed Chino Airport Master Plan Update would have the potential to adversely impact proposed residential development in the plan area south of Kimball Avenue. This potential impact would need to be addressed in any revision of the Chino ACLUP.

Near airports, even at noise exposures well outside the 65 dB CNEL contour, there may be single flyover events that are perceived as intrusive even if the 65 dB CNEL standard is met with a large margin of safety. Even though the airport pre-dates future development, the complaint frequency will rise as more homes are developed. Buyer/resident awareness through notification during real estate transactions (purchase or lease) can reduce future noise complaints, but is not likely to eliminate them. Buyer notification of the airport is suggested for any project homes within one mile of the airport boundary. Notification should indicate an airport is nearby and that aircraft may occasionally be audible even though the property is well outside the airport noise impact zone as defined by the State of California.

5.8.5 CUMULATIVE IMPACTS

The above analysis of traffic noise within and surrounding the project area followed a cumulative methodology with traffic noise calculations made in 37 roadways throughout the City of Chino in and surrounding Subarea 2 for existing, interim year (2010) and future buildout (2020), no-project and future with project conditions. The cumulative impact from other developments and the project combined is reflected in the “with project” column. The cumulative impacts are significant (+3 dB CNEL) at most locations analyzed. Mitigation measures will be required to meet Chino’s noise ordinance.

5.8.6 MITIGATION MEASURES

N-1. **Construction Noise**. Construction noise nuisance was identified as a potential adverse impact. This impact will be mitigated to a less than significant impact as follows:

- All construction activities conducted within 500 feet of any occupied dwelling shall not occur from 7 P.M. to 7 A.M. the following day, and at any time on Sundays or universally observed holidays
- All construction equipment will use properly operating mufflers.
- All staging areas shall be located away from occupied dwellings and schools where feasible.
- The City of Chino will approve construction truck access routes that minimize noise intrusion into sensitive areas, such as neighborhoods, schools, and parks.

Roadway noise may exceed 65 dB CNEL along a number of area roadways in usable exterior spaces such as yards or patios. If exterior levels exceed 65 dB CNEL, then typical structural attenuation of 10 dB with open windows or 20 dB with windows closed would be insufficient to meet interior standards of 45 dB CNEL in habitable rooms.

N-2. **Roadway Noise**. The developer/applicant shall submit acoustical studies to the City of Chino for subsequent tentative maps and noise-sensitive uses (e.g. residences, schools, medical facilities) adjacent the principal area roadways. Such studies shall assure that:

- Usable exterior space meets noise standards of 65 dB CNEL through a combination of setback or barriers.
- Habitable interior rooms along any project perimeter near noise-impacted roadways meet the interior standard of 45 dB CNEL through dual-paned windows, central air conditioning and other structural upgrades.

Future aircraft noise exposure is currently uncertain because the adopted airport land-use compatibility plan is outdated, and no new plan has been adopted. A revised plan will likely be adopted in the future. The project places less noise-sensitive land uses close to the airport as a buffer use for residential and other sensitive uses farther away from the airport boundary.

N-3. **Airport Noise**. In order to ensure that noise exposure is considered in review of subsequent development projects within the plan area, and in acknowledgement of possible single-event audibility even if standards are not exceeded, the following mitigation measures are recommended:

- The City of Chino shall provide notice of development applications within adopted airport noise and safety zones to the Airport Land Use Commission (ALUC), in

compliance with the Airport Comprehensive Land Use Plan (ACLUP). The City will coordinate with the ALUC to assure the compatibility of specific development projects with Chino Airport Operations (same as Mitigation Measure LU-1).

- All real estate transactions within Subarea 2 within 1.0 mile of the airport boundary will contain advisory language that aircraft may be periodically audible even though the subject property is exposed to noise levels due to aviation activities that are well within State guidelines.

5.8.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Project impacts to noise levels will be less than significant with implementation of the identified-mentioned mitigation measures.

5.9 AIR QUALITY

5.9.1 INTRODUCTION

This section describes the existing meteorological climate setting and associated regulatory environment of the project area, as well as an assessment of potential project-related impacts on air quality up to buildout of the proposed project area.

The technical report upon which this section is based was provided by Giroux & Associates and is included in it entirety in Appendix E.

5.9.2 ENVIRONMENTAL SETTING

Meteorology/Climate

The climate of the Chino area, as with all of Southern California, is governed largely by the strength and location of the semi-permanent high pressure center over the Pacific Ocean and the moderating effects of the nearby vast oceanic heat reservoir. Local climatic conditions are characterized by very warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and comfortable humidities. Unfortunately, the same climatic conditions that create such a desirable living climate combine to severely restrict the ability of the local atmosphere to disperse the large volumes of air pollution generated by the population and industry attracted in part by the climate.

Chino is situated in an area where the pollutants generated in coastal portions of the Los Angeles basin undergo photochemical reactions and then move inland across the project site during the daily sea breeze cycle. The resulting smog at times gives western San Bernardino County some of the worst air quality in all of California. Despite dramatic improvement in air quality in the local area throughout the 1980's, the project site is, nevertheless, expected to continue to experience some unhealthful air quality for at least two more decades.

Temperatures average 62 degrees Fahrenheit annually with summer afternoons in the low 90's and winter mornings in the low 40's. Temperatures much above 100 or below 30 degrees occur infrequently only under unusual weather conditions and even then these limits are not far exceeded.

In contrast to the slow annual variation of temperature, precipitation is highly variable seasonally. Rainfall in the far western portions of San Bernardino County averages 17 inches annually and falls almost exclusively from late October to early April. Summers are almost completely dry with frequent periods of 4-5 months of no rain at all. Because much of the rainfall comes from the fringes

of mid-latitude storms, a shift in the storm track of a few hundred miles can mean the difference between a very wet year and a year with drought conditions.

Winds across the project area are an important meteorological parameter because they control both the initial rate of dilution of locally generated air pollutant emissions as well as their regional trajectory. Wind across Chino, as determined from long-term wind data at Ontario Airport, show a very unidirectional daytime onshore flow from the SW-NW with a very weak offshore return flow from the NE that is strongest on winter nights when the land is cooler than the ocean. The onshore winds during the day average 6-8 mph, while the offshore flow is often calm or drifts slowly westward at 1-3 mph.

During the daytime, any locally generated air emissions are thus transported eastward toward San Bernardino and Cajon Pass without generating any localized air quality impacts. The drainage winds, which move slowly across the area, have some potential for localized stagnation. Fortunately, these winds have their origin in the San Gabriel Mountains where background pollution levels are low such that any localized contributions do not create any unhealthful impacts. The wind distribution is such that nominal project-related air quality impacts occur more on a regional scale rather than in the immediate Chino area.

One other important wind condition occurs when a high-pressure center forms over the western United States with sinking air forced seaward through local canyons and mountain passes. The air warms by compression and relative humidities drop dramatically. The dry, gusty winds from the N-NE create dust nuisance potential around areas of soil disturbance such as construction sites and sometimes create serious visibility and safety problems for vehicles on area freeways.

In conjunction with the two dominant wind regimes that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. The summer on-shore flow is capped by a massive dome of warm, sinking air which caps a shallow layer of cooler ocean air. These marine/subsidence inversions act like a giant lid over the basin. They allow for local mixing of emissions, but they confine the entire polluted air mass within the basin until it escapes into the desert or along the thermal chimneys formed along heated mountain slopes.

In winter, when the air near the ground cools while the air aloft remains warm, radiation inversions are formed that trap low-level emissions such as automobile exhaust near their source. As background levels of primary vehicular exhaust rise during the seaward return flow, the combination of rising non-local baseline levels plus emissions trapped locally by these radiation inversions creates microscale air pollution “hot spots” near freeways, shopping centers and other traffic concentrations. Because the incoming air draining off the mountains during nocturnal radiation inversion conditions

is relatively clean, the summer subsidence inversions are a far more critical factor in determining Chino area air quality than the winter time local trapping inversions.

Ambient Air Quality Standards (AAQS)

In order to gauge the significance of the air quality impacts of the proposed Subarea 2 development, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality levels, must be compared to the applicable ambient air quality standards. These standards are the level of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease, or illness and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations somewhat above these minimal standards before adverse effects are observed. Recent research has shown, however, that there may even be adverse respiratory effects from chronic exposure to ozone at levels that only marginally exceed or even meet national clean air standards.

National Ambient Air Quality Standards (NAAQS) and those standards currently in effect in California are shown in Tables 5.9-1. Because California established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards.

Planning and enforcement of the new federal standards for PM-2.5 and for ozone (8-hour) were put on hold through a decision by the U.S. Court of Appeals. A California statewide standard for PM-2.5, more stringent than its federal counterpart, was adopted on June 20, 2002. Where the federal clean air standard operates as a specific attainment planning requirement, the State PM-2.5 standard acts as more of a goal to serve as a reminder that major progress is needed regarding small-diameter particulate pollution.

TABLE 5.9-1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	0.12 ppm (235 µg/m^3)	Same as Primary Standard	Ethylene Chemiluminescence
	8 Hour	—		0.08 ppm (157 µg/m^3)		
Respirable Particulate Matter (PM_{10})	Annual Geometric Mean	30 µg/m^3	Size Selective Inlet Sampler ARB Method P (8/22/85)	—	Same as Primary Standard	Inertial Separation and Gravimetic Analysis
	24 Hour	50 µg/m^3		150 µg/m^3		
	Annual Arithmetic Mean	—		50 µg/m^3		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard		65 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetic Analysis
	Annual Arithmetic Mean			15 µg/m^3		
Carbon Monoxide (CO)	8 hour	9.0 ppm (10 mg/m^3)	Non-dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	None	Non-dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—		
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	—	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.25 ppm (470 µg/m^3)		—		
Lead	30 Days average	1.5 µg/m^3	AIHL Method 54 (12/74) Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3	Same as Primary Standard	

TABLE 5.9-1 (Cont.)
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	—	Fluorescence	0.030 ppm (80 µg/m^3)	—	Pararosoaniline
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (365 µg/m^3)	—	
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	1 Hour	0.25 ppm (655 µg/m^3)		—	—	
Visibility Reducing Particles	8 Hour (10 am to 6 pm PST)	In sufficient amount to produce an extinction coefficient of 0.23 per kilometer – visibility of ten miles or more (0.07 – 30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70 percent. Method: ARB Method V (8/18/89).		**No Federal Standards**		
Sulfates	24 Hour	25 µg/m^3	Turbidimetric Barium Sulfate (AIHL Method 61 (2/76)			
Hydrogen Sulfide	2 Hour	0.03 ppm (42 µg/m^3)	Cadmium Hydroxide STRactan			

Baseline Air Quality

Existing levels of ambient air quality and historical trends and projections in the Chino area are well documented from measurements made by the South Coast Air Quality Management District (SCAQMD). Although there are no measurements made in Chino, measurements are made at nearby monitoring stations in Pomona, Upland and Ontario Airport. From these data, one can readily infer that baseline air quality levels near the project site are occasionally very unhealthful, but there are some encouraging signs that the air is slowly, but surely, getting better. Attainment may still be many years away but the frequency of smog alerts, especially those considered unhealthy for all people, has dropped dramatically in the last decade. Available SCAQMD monitoring data around Chino shows a fairly similar air quality pattern. In terms of Chino's relationship to weather and air pollution patterns in the local area, the data from Pomona are likely most representative of the Subarea 2 project site. Tables 5.9-2 summarizes the monitoring history from the Pomona monitoring station for the last seven years of published data. Ozone, the primary ingredient in photochemical smog, is obviously the biggest pollution problem in the area. Since 1995, about one-eighth of all days of the year experience a violation of the State hourly ozone standard. There have been no first-stage smog alerts since 1995. No second-stage alert levels of 0.35 ppm for one hour have been called in the last ten years near the project site.

Throughout the last decade, there has been a marked trend in lower maximum concentrations and a significant reduction in the frequency of standard violations. Some of that improvement may be due, in part, to year-to-year variations in weather patterns that affect smog levels but a good portion of that trend is due to reductions in emissions from stationary sources and from smog control equipment on cars. In particular, the noticeable decrease in first-stage smog alerts in the Pomona area from 30 days per year at mid-decade to only 10 per year by the end of the 1980's and none since 1995 is dramatic evidence of the benefits of aggressive pollution control programs. Violations of the State one-hour ozone standard have declined from over 100 days per year in 1993-94 to an average of less than 30 per year in 1997-99. Violations of the federal one-hour ozone standard have declined from near 50 per year during this time period to an average of 2 per year over the last three years of reported data.

TABLE 5.9-2
CHINO AREA AIR QUALITY MONITORING SUMMARY 1994-2000
(Days Standards Were Exceeded and Maximum Observed Levels)

Pollutant/Standard	1995	1996	1997	1998	1999	2000	2001
Ozone							
1-Hour>0.09 ppm	87	44	30	41	19	18	12
1-Hour>0.12 ppm	47	16	7	18	2	3	1
1-Hour>0.20 ppm	2	0	0	0	0	0	0
8-Hour>0.08 ppm	55	22	10	20	8	5	3
Max 1-Hour Conc. (ppm)	0.22	0.19	0.16	0.18	0.14	0.15	0.14
Carbon Monoxide							
1-Hour>20 ppm	0	0	0	0	0	0	0
8-Hour>9 ppm	0	0	0	0	0	0	0
Max 1-Hour Conc. (ppm)	8	8	8	10	10	7	5
Max 8-Hour Conc. (ppm)	6.1	5.0	5.1	7.3	6.7	4.9	3.4
Nitrogen Dioxide							
1-Hour>0.25 ppm	0	0	0	0	0	0	0
Max 1-Hour Conc. (ppm)	0.18	0.18	0.15	0.15	0.16	0.14	0.13
Particulate Sulfate	—	—	—	—	—	—	—
24-Hour≥25. $\mu g/m^3$	0/59	0/58	0/61	0/62	—	0/56	0/60
Max 24-Hour Conc. ($\mu g/m^3$)	12.5	13.6	9.7	10.1	—	11.5	10.7
Inhalable Particulates: (PM-10)							
24-Hour>50 $\mu g/m^3$	31/62	34/64	21/59	20/59	32/57	26/58	34/60
24-Hour>150 $\mu g/m^3$	3/62	0/64	1/59	0/59	0/57	0/58	0/60
Max 24-Hour Conc. ($\mu g/m^3$)	167	129	208	92	112	124	106
Ultra-fine Particulates (PM-2.5)							
24-Hour> $\mu g/m^3$	—	—	—	—	2/96	2/111	4/114
Max 24-Hour Conc.	—	—	—	—	86.9	73.4	74.8

Source: South Coast AQMD – Pomona Air Monitoring Station Data Summaries, supplemented by Ontario and/or Upland data for particulate species.

While the secondary pollution levels of ozone and to a certain extent particulates are high from transport of pollution into the area, the primary vehicular pollution levels of such species as carbon monoxide (CO) and nitrogen oxides (NO_x) are quite low. Standards for these species are violated infrequently in Pomona and by inference in Chino. The levels of CO and NO_x at or below allowable standards suggest that there is adequate dispersive capacity to accommodate the additional vehicular emissions to be generated by the proposed Subarea 2 development without any significant local air quality degradation.

Dairy Industry Impacts on Air Quality

The dairy industry has been identified as a major contributor to elevated levels of particulates (PM10) in air basins where dairy activities are prevalent (e.g. San Joaquin Valley). In addition, studies by the Radian Corporation have identified the dairy and poultry industries as major ammonia sources in the South Coast Air Basin (SCAB), of which Subarea 2 is a part[1]

The types of air pollutants generated by dairy operations in and surrounding Chino include:

- PM-10 emissions from cattle movement on unpaved surfaces,
- Reactive organic gases, ammonia, hydrogen sulfide and methane generated by manure decomposition,
- Methane generated during digestion in multi-chamber cattle stomachs,
- Equipment exhaust used in dairy operations (tractors, etc.),
- On-road vehicle exhaust from dairy-related traffic (feed, milk, cattle and support trucks and dairy worker commuting).

Existing Dairy-Related Emissions—Subarea 2

Existing emissions from the 31 dairies in Chino Subarea 2 were calculated based upon generally accepted emission factors. Current emissions data was used, where available. Many emission factors associated with the operation of a dairy are not precisely known. For those dairy activities with ambiguous or poorly defined emissions data, regulatory agency (SCAQMD or CARB) estimation data were generally used.

A recent extensive review of air pollution estimation from concentrated animal feeding operations (CAFO) was published by the U.S. Dept. of Agriculture (USDA "White Paper," June 19, 2000). This document was used, where feasible, to estimate air pollution emissions from the 28,730 existing milking cows (51,300 total herd size), and 940 acres of croplands within the Subarea 2 site.

Emissions calculations include the following:

[1] South Coast Air Basin PM10 Task Force Meeting Minutes; pp. 1-3 (August 4, 1995).

TABLE 5.9-3
ESTIMATED DAILY EMISSIONS FROM AGRICULTURAL ACTIVITIES—SUBAREA 2

Pollutant/Source	Factor/Unit Calculation		Daily Emissions
PM-10:			
Corrals:	4.0 lb/1000 head/day X 51,300 head		205 lb/day
Unpaved Roads:	10 mi/day X 4.54 LB		45 lb/day
Cropland:	940 acres X 0.0044 lb/ac/day		4 lb/day
Windblown:	940 acres X 0.0039 lb/ac/day		4 lb/day
	Total		258 lb/day
Methane:			
Digestion:	28,730 mature cows X 0.72 lb/animal day 11,285 yearlings X 0.13 lb/animal/day 11,285 non-milkers X 0.37 lb/animal/day		20,686 lb/day 1,467 lb/day 4,175 lb/day
Manure:	51,300 animals X 0.38 lb/animal/day		19,454 lb/day
	Total		45,822 lb/day
Ammonia:	51,300 animals X 0.0822 lb/animal/day		4,216 lb/day
On-Site Equipment:	10,000 BHP-HR/day	CO ROG NO_x PM-10	19 lb/day 6 lb/day 86 lb/day 3 lb/day
Off-Site Trucks:	5,000 mi/day	CO ROG NO_x PM-10	123 lb/day 32 lb/day 137 lb/day 25 lb/day

Total daily air emissions from existing Chino Subarea 2 dairy activities are estimated as follows:

TABLE 5.9-4
ESTIMATED TOTAL DAIRY-RELATED EMISSIONS—SUBAREA 2

Source	Emissions (lb/day)			
	CO	**ROG**	**NO_x**	**PM-10**
Operational Dust	---	---	---	258
Digestion & Manure	---	4,582*	---	---
Ammonia	---	---	---	4,216**
On-Site Equipment	19	6	86	3
Off-Site Trucks	123	32	137	25
Total	142	4,620	223	4,502

* Assume 10 percent of total organic gases (mainly methane) is reactive
** Assume all ammonia gas is converted to microscopic particles

Air Quality Management Planning

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards by December 31, 1987. The South Coast Air Basin (SCAB) could not meet the deadline for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the Governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times subsequently as earlier attainment forecasts were shown to be overly optimistic.

In 1988, because of uncertainty in federal Clean Air Act reauthorization, the California Legislature enacted the California Clean Air Act (CCAA). The CCAA requires that regional emissions be reduced by 5 percent per year, averaged over 3-year periods, until attainment can be demonstrated. Each area that did not meet a national or state ambient air quality standard was required to prepare a plan which demonstrated how the 5 percent reductions were to be achieved. In July 1991, the SCAQMD adopted a revised AQMP which was designed to meet the CCAA requirements. The 1991 AQMP deferred the attainment date to 2010, consistent with the 1990 federal Clean Air Act.

The 1990 federal Clean Air Act Amendments (CAAA) required that all states with airsheds with "serious" or worse ozone problems submit a revision to the State Implementation Plan (SIP). The 1991 AQMP was modified/adapted and submitted as the South Coast Air Basin (SCAB) portion of the SIP. The 1991 SIP submittal estimated that an 85% basin-wide reduction in volatile organic compound (VOC) emissions and a 59% reduction in oxides of nitrogen (NO_x) between 1990 to 2010 was needed to meet federal clean air standards. About 40% of these reductions were to come from existing pollution control programs. The rest would come from new rules, technologies, or other reduction programs.

In 1996, EPA approved the 1994 submittal of the SCAB portion of the SIP. The plan was finally approved after considerable debate on the contingency measures that should be implemented if progress is not as rapid as anticipated in the 1994 SIP. The federal Clean Air Act required that an updated plan be submitted by February 8, 1997, which included attainment plans for all pollutants exceeding federal standards. The CCAA requires an update of the State-mandated clean air plan every three years. The last update was due December 31, 1997.

An updated 1997 AQMP was locally adopted. The California Air Resources Board (ARB) forwarded this plan on to EPA for its consideration and recommended approval. The 1997 AQMP was designed to meet both federal (EPA) and State (ARB) air quality planning guidelines. Components of the 1997 plan update included:

- Demonstration of attainment for ozone, CO, and PM-10
- Updated emissions inventories (1993 base year) of VOC, NO_x, CO, SO_x and PM-10
- Emissions budgets for future years of the inventoried compounds
- An updated pollution control strategy
- Contingency measures if the plan as presently proposed fails to meet stated timetables.

Additional research and photochemical computer modeling, as well as improved emissions estimates, now suggest that formerly predicted emissions reductions required to meet standards need not be quite as severe as thought earlier. Table 5.9-5 summarizes the currently proposed regional attainment planning for ozone (VOC and NO_x) and for carbon monoxide (CO). Emissions reductions of around 66 percent for VOC, 56 percent for NO_x and 66 percent for CO are anticipated from the currently proposed AQMP update. Within the plan, some measures considered "long-term reductions" require additional technological development whose development schedule is uncertain. There is therefore no clear scientific consensus that the 1997 AQMP update will be able to achieve its mandatory clean air objectives by the end of 2010.

TABLE 5.9-5
SOUTH COAST AIR BASIN ATTAINMENT PLAN
(Emissions in tons/day)

	VOC*	NO_x*	CO**
Current Inventory ([a])			
Stationary + Area Sources	410	144	363
On-Road Mobile	562	761	5,826
Off-Road Mobile	120	303	1,008
Total	1,092	1,208	7,197
2010 Forecast([b])			
Stationary + Area Sources	531	98	337
On-Road Mobile	163	360	1,913
Off-Road Mobile	144	269	1,643
Total	838	727	3,893
Short-term + Intermediate			
Reductions	<221>	<120>	<1,468>
Long-Term Reductions	<204>	<77>	<0>
2010 Remaining	413	530	2,425

([a]) Year 2000 Estimate
([b]) With current emissions reduction programs and adopted growth forecasts.
([c]) Levels at which all federal air quality standards will be met
Source: California Air Resources Board, "2001, California Almanac of Emission & Air Quality," and SCAQMD Draft Final 1997 AQMP (October 1996)
* summer ozone precursors
** winter CO "hot spot" precursors

The Draft 1997 AQMP was challenged by several environmental organizations as not being consistent with the 1990 federal CAAA on rates of progress toward attaining the ozone standard. The Ninth Circuit Court found for these organizations. A 1999 Amendment to the proposed SIP Revisions was developed that accelerates the schedule for a number of new SCAQMD rules and regulations. The 1999 SIP Amendment is believed to meet the court-ordered acceleration of the rate of progress. The 1999 Amendments were approved by the California ARB on January 27, 2000. EPA staff has proposed approval of the amendments with additional minor changes. Formal EPA approval of the 1999 SIP Amendment is expected in the next few months.

A large-planned development such as Subarea 2 relates to the AQMP through the land use and growth assumptions used to forecast automotive air pollution emissions. The basinwide AQMP is based on the designated land use for the project site contained in the City of Chino and San Bernardino County General Plans. To the extent that the proposed development represents a level of growth anticipated in these general plans, it is, by inference, consistent with the AQMP. Implementation of planned growth will not delay the timely attainment of regional clean air standards. However, SCAQMD's position is that consistency with the AQMP alone is not a sufficient basis for a finding of an insignificant air quality impact. Impact significance is therefore determined by a direct project analysis.

5.9.3 THRESHOLD OF SIGNIFICANCE

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources, such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Such pollutants are called primary pollutants. Carbon monoxide (CO) is an example of such a pollutant.

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. These are called secondary pollutants and their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual project basis and cannot be quantified except through complex photochemical computer models. Analysis of the significance of such emissions is thus based on a specified amount of emissions (pounds, tons, etc.) even though there is no way to explicitly translate those emissions into a corresponding ambient air quality impact.

The South Coast AQMD[2] recommends that projects in the SCAB with daily emissions that exceed any of the following emission thresholds should be considered to be significant:

[2] Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

55 lbs per day of ROC	(75 lbs per day during construction)
55 lbs per day of NO_x	(100 lbs per day during construction)
550 lbs per day of CO	
150 lbs per day of PM-10	
150 lbs per day of SO_x	

The South Coast AQMD, however, only has an advisory capacity relative to general development and its associated air pollution emissions. Responsibility for a finding of air quality impact (in) significance rests with the Lead Agency.

Besides the emissions magnitude, the SCAQMD recommends that other indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. These additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation.

- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP for the project's build-out year.

- Project could generate vehicle trips that cause a CO hot spot.

5.9.4 PROJECT IMPACTS

Residential, institutional, commercial, business, light industrial, recreational, as well as limited continuation of agricultural activities in Subarea 2 potentially impact air quality largely through increased automotive emissions. Any single project typically does not cause enough traffic and associated air pollutants to be generated as to individually threaten clean air standards. It is the cumulative effect of hundreds of such developments that causes the small incremental impact from any one development to become cumulatively significant. Minor secondary emissions during construction, from increased fossil-fueled energy utilization and from small miscellaneous sources will also be generated, but these are usually much smaller in both duration and volume than the mobile source emissions.

With implementation of the proposed plan, dairy operations in Subarea 2 will eventually be phased out. Until then, the dairy operations may be perceived as a nuisance because of air emissions and odors. These are existing emissions and are not an impact created by the project. However, existing dust and especially odor may create an impact upon the project. Manure odor may reduce the attractiveness of the area for residential and other nuisance-sensitive land uses. Airborne ammonia which is a chemical by product of manure reacts to form very tiny light-scattering particulates that are linked to adverse health effects. Nonetheless, the actual dairy industry impact to human health is

minimal, yet the perceived impact from odor and/or large diameter soiling nuisance dust may be a temporary impediment in attracting highly desirable development within the planning area.

Construction Activity Impacts

Project development will create temporary emissions of fugitive dust from soil disturbance and combustion emissions from on-site construction equipment and from off-site trucks moving dirt, delivering construction materials, and from worker travel. Emissions from such activities are difficult to estimate because project-specific emission characteristics vary from site to site within the project area. In general, the most significant source of air pollution from project construction will be the dust generated during clearing, excavation and site preparation.

The average uncontrolled dust emission rate during construction is about 1.2 tons per acre per month of disturbance. This factor is for total suspended particulates (TSP). The SCAQMD "CEQA Air Quality Handbook" (1993) states that the PM-10 fraction of TSP is about one-half, or 55 pounds of PM-10 per workday in the absence of any dust control. This is a universal factor that may not necessarily be completely applicable to specific soil conditions at the Subarea 2 project site. Because there is no way to accurately estimate site-specific modification to the generic dust generation factor, the approach by most air pollution regulatory jurisdictions has been to require a very aggressive program of dust control during construction to compensate for any uncertainty in the possible particulate air quality impact from project construction. Dust control measures required by the South Coast AQMD under its nuisance abatement and fugitive dust rules (Rules 402 and 403) can reduce dust emissions from 50-80 percent of their uncontrolled rate. An additional dust control rule regulating unpaved roads and sweeping of paved roads was adopted in 1997 (Rule 1186).

Project emissions were calculated by assuming that, at worst case, five percent (5%) of the 2448.7 acres that are proposed for development would be under simultaneous heavy construction during the buildout lifetime of the project. While the actual daily rate will depend on individual project phasing, the total PM-10 generation could be as high as 3.37 tons per day for the assumed 122-acre daily disturbance area. Dust control as required by SCAQMD Rule 403 will reduce PM-10 emissions by around 50 percent using water or similar dust palliatives. A more successful dust control program using multiple techniques (chip sealing access roads, hydroseeding exposed surfaces, adding chemical binders or surfactants to the water) may achieve up to a 80 percent reduction.

At 50 percent ("standard") control, daily dust emissions during an intensive disturbance event would be around 3,220 pounds per day. With maximally effective measures (up to 80 percent control), daily PM-10 emissions could be reduced to 1280 pounds per day compared to the daily emissions significance threshold of 150 pounds per day. Daily PM-10 emissions would exceed the significance threshold by a wide margin. In order to achieve a less-than-significant emission, it will require

maintaining the individual daily disturbance area at a reasonably small level (approximately 15 acres/day).

In addition to fine particles that remain suspended in the atmosphere semi-indefinitely, construction activities generate many larger particles with shorter atmospheric residence times. This dust is comprised mainly of large diameter inert silicates that are chemically non-reactive and are further readily filtered out by human breathing passages. These fugitive dust particles are therefore more of a potential soiling nuisance as they settle out on parked cars or landscape foliage rather than any adverse health hazard. With a low current population density in and around Subarea 2, dust nuisance potential for this project is not considered individually significant.

Exhaust emissions will result from on and off-site heavy equipment. The types and numbers of equipment will vary among contractors such that these emissions cannot be quantified with certainty. Typical emission rates for a single diesel powered scraper were obtained from the SCAQMD Air Quality Handbook and were utilized to estimate construction equipment emissions in Table 5.9-6." Diesel scrapers are the most common equipment used for grading activities. A typical large project in Subarea 2 may utilize 20-30 pieces of heavy equipment at any one time during mass grading operations. Assuming that 25 pieces of heavy equipment were operated an average of eight hours per day, the emissions that would be anticipated are also shown in Table 5.9-6.

TABLE 5.9-6
CONSTRUCTION ACTIVITY EMISSIONS (lbs/day)

	ROG	NOx	CO	PM-10	SOx
Construction Equipment*	54	768	250	82	92
Worker Commuting	1	1	8	3	<1
Grading Dust	—	—	—	3220	—
Total	**55**	**769**	**258**	**3305**	**92**
SCAQMD Threshold	75	100	550	150	150

* Estimates based on 25 pieces of equipment, 8 hrs/day, utilizing emission rates from SCAQMD Air Quality Handbook, Table A9-8-A.

Construction activities involve mobile source emissions from construction workers. The number of workers commuting to Chino on any given day 10-20 years from now is highly speculative. As an approximation of the addition of this emissions increment, approximately 400 worker trips were assumed to be driven in 2020. As seen in Table 5.9-6, the inclusion of this small emissions increment does not change any conclusions regarding impact significance.

Although the NO_x emissions exceed the SCAQMD significance threshold, the mobile nature of the on-site construction equipment and off-site trucks will prevent any localized violation of the NO_x or other standards. There may be localized instances when the characteristic diesel exhaust odor is noticeable from passing trucks or nearby heavy equipment, but such transitory exposure is a brief nuisance and will not threaten air quality standards. Truck exhaust impacts can be minimized by controlling construction routes to reduce interference with non-project traffic patterns and to preclude truck queuing or idling near sensitive receptor sites.

Some mitigation in the form of anticipated future emission standards for heavy, off-road equipment have been passed by the California ARB to be phased in later in this decade. Until such mandatory standards are promulgated, the South Coast AQMD urges the inclusion of control measures for construction activities as part of any local discretionary actions that are comparably effective as the future mandatory measures. Recommended measures abstracted from the AQMD "menu" of possible control options are detailed in the mitigation selection of this report. With mitigation to keep equipment in good tune (low-NO_x tune-ups), average daily construction equipment emissions can be reduced, but not to less than significant levels during maximum grading activity days.

Construction activity air quality impacts occur mainly in close proximity to individual disturbance areas. There may, however, be some "spill-over" into the surrounding community. That spill-over may be physical as vehicles drop or carry out dirt or silt which is washed into public streets. Passing non-project vehicles then pulverize the dirt to create off-site dust impacts. Spill-over may also occur via congestion effects. Construction may entail roadway encroachment, detours, lane closures and competition between construction vehicles (trucks and contractor employee commuting) and ambient traffic for available roadway capacity. Emissions controls require good housekeeping procedures and a construction traffic management plan that maintains such "spill-over" effects at a less-than-significant level.

Operational Impacts

By far, the greatest project-related air quality concern centers on vehicle trips. In 2010 (interim analysis year), there will be 71,500 vehicle trips per day. By 2020 (project build-out) there will be 192,500 daily trips generated. For typical western San Bernardino County trip lengths of 10 miles per trip, additional vehicle travel from project implementation will be about 766,000 vehicle miles traveled (VMT) at the 2010 interim analysis year, and at project completion in 2020 there will be about 2.4 million VMT per day.

Secondary impact potential will derive from energy consumption in power plants or on-site heaters, stoves, water heaters, etc. Although individual sources will generate emissions at well below significance threshold levels, combined emissions from all Subarea 2 development could be substantial. In the absence of specific development proposals, anticipating the magnitude of such

emissions would be speculative. Except for more readily quantifiable energy consumption, small miscellaneous sources are typically not quantified on a single project basis. Because of electricity deregulation, there is no direct linkage between the locations of power generation and power consumption. This lack of a direct energy consumption/generation relationship precludes providing an accurate stationary source emissions estimate. Because the mobile source emissions from over two million VMT per day far exceed the SCAQMD's threshold of significance for all pollutants analyzed, the omission of power consumption emissions does not affect the project impact findings.

The California Air Resources Board has developed a land use and air pollution emissions computer model that allows one to reliably calculate the daily emissions increase associated with the proposed project. This model, called URBEMIS7G, was run for interim years of 2010 and 2020, and a post-2020 buildout year. The project-related emissions burden, along with a comparison of SCAQMD recommended significance thresholds, are shown in Table 5.9-7.

TABLE 5.9-7
PROJECT-RELATED EMISSIONS BURDEN (pounds/day)

Pollutant	Analysis Year			SCAQMD Threshold
	2010	2020	Buildout	
ROG	788	1,358	305	55
NOx	611	1,021	240	55
CO	8,618	17,209	4,016	550
PM-10	493	1,357	1,613	150
SOx	4	11	29	150
Source: URBEMIS-2001 (Version. 6.2.2). Output in Appendix.				

Displacement of Dairy Operations

Eventual replacement of dairy operations with the proposed urban development will cause some emissions to increase, and some to decline, as indicated in Table 5.9-8.

TABLE 5.9-8
EMISSIONS COMPARISON

Source	Emissions Comparison (lbs/day)			
	CO	ROG	NO_x	PM-10
Existing Dairies	142	4620	223	4502
Proposed Plan Mobile-Sources (Subarea 2 Traffic *2020*)	17,209	1,358	1,021	1,357
Net Change:	+17,067	-3,262	+ 798	-3245
SCAQMD Threshold	550	55	55	150

Project implementation will thus create significant increases in CO and NO_x levels due to traffic exhaust emissions. However, displacement of dairy operations will cause a significant reduction in reactive organic gases and in particulates. There is no basis for comparing pollutants as one type being better or worse than another. However, the basin is in attainment for CO, but not for ozone (created by ROG + NO_x + sunlight), or for particulates. The net effect of project implementation is that two non-attainment pollutants or precursors (ROG and PM-10) will be significantly reduced, while one non-attainment precursor (NO_x) and one attainment pollutant (CO) will be increased significantly. The ROG fraction of dairy-related gaseous emissions contains a number of complex organic molecules that are detectable in very low concentration.

Organic nitrates and sulfides from manure, plus ammonia from urea, and hydrogen sulfide (rotten egg) gases give dairy operations a characteristic pungent odor. Odors would be dramatically reduced with the gradual displacement of dairy operations within Subarea 2 and other existing dairy operations in the Chino/Norco area. Odor exposure for new developments downwind of on-going dairy operations may be temporarily adverse unless a large block of land develops simultaneously to reduce the patchwork quilt of individual new tracts surrounded by dairies that have not yet relocated. This represents an impact of the environment upon the project, and not of the project upon the ambient environment. Although simultaneous development of larger sub-tracts is encouraged to minimize local odor nuisance potential, odor impacts on sensitive uses (e.g. residential, schools) are anticipated to be significant during the transition period to urban use.

Development of Subarea 2 assumes the relocation of the existing IEUA Co-Composting Facility from its current location just east of the California Institution for Women—Chino (CIW-Chino), to a new location outside Subarea 2. IEUA has initiated a relocation feasibility study. The IEUA Co-Composting Facility is expected to relocate prior to adjacent residential development, from such a facility. Residential development in the vicinity of this facility (i.e. within 0.5 mile) may be affected by facility-generated odor prior to facility relocation.

The Subarea 2 Specific Plan establishes a 300-foot overlay zone around the perimeter of the existing composting plant in case the facility is not relocated prior to nearby residential phasing. The adequacy of this distance buffer in minimizing possible odor nuisance is unknown because daytime winds from the west and nocturnal winds from the northeast do not currently blow toward any substantial number of people as a basis for judging odor from the current operation.

The current siting study for a replacement facility establishes 500 feet (0.1 mile) as the minimum desirable separation from residences, and does not consider the buffer distance to be completely optimal until it reaches two miles. The use of 300 feet as an overlay distance is an indication of possible odor nuisance conflict if residential development occurs in close proximity to the IEUA Co-Composting Facility. The transition zone between an unacceptable versus acceptable buffer distance is not precisely defined, but occurs somewhere between the 0.1 mile probable odor impact and a 2 mile probable no odor impact source-receiver separation. For purposes of analysis, residential development within 0.5 mile of the IEUA Co-Composting Facility is considered likely to have a potentially significant odor exposure.

This odor exposure to the Co-Composting Facility could be further reduced with the potential enclosure of the facility by IEUA. Odors, particulates (PM10) and other emissions from composting facilities would be substantially reduced with implementation of South Coast Air Quality Management District (SCAQMD) Proposed Rule 1133—'Emission Reductions from Composting Facilities and Related Operations'. The objective of this pending rule is to reduce ammonia (NH3), volatile organic compounds (VOC), and particulate matter (PM10) emissions from composting and related operations through enclosure, aerated static or in-vessel compost pile, biofilter or equivalent emission control equipment and compliance plans. Odor reductions would be a related benefit of these control strategies. PR 1133 would require enclosure of all compost feedstock preparation, curing and storage areas, and is scheduled for implementation as early as January 1, 2003.

The project clearly contributes to the regional inability to attain the ozone standard based on SCAQMD's recommended significance levels. Project-related emission levels for the three primary exhaust pollutants (CO, NO_x and ROG) for a 2020 buildout exceed the SCAQMD threshold up to almost 3000 percent for NO_x, and over 1000 percent for CO and ROG.

As previously noted, the question of impact significance from growth-associated emissions should not be solely related to the size of a project or the magnitude of its emissions, but rather whether such growth has been properly anticipated in the air quality planning process. The growth assumptions for the most recent update of the 1994 Regional Comprehensive Plan (RCP) calls for an increase of over 1,000,000 residents in western San Bernardino County between 2000-2025 housed in 365,000 new homes, along with an increase of 520,000 jobs. The conversion of agricultural/ranch land to more transportation-intensive land use is therefore anticipated. Subarea 2 will provide a measurable fraction of the forecast job and housing growth. Project size alone and its associated emissions should

therefore not be the sole basis for a finding of a significant impact because the growth-related impact from hundreds of small projects at sub-threshold levels is not different than from one large development such as Subarea 2.

The basic conclusion from the above discussion is that regional air quality impact significance from general development cannot be properly evaluated on any single project basis. Subarea 2 emissions substantially exceed the SCAQMD's significance thresholds, but the project contributes positively to jobs/housing (J/H) or vehicle miles traveled/vehicle trips (VMT/VT) goals. The regional air quality management plan has concluded that this planned level of growth can be accommodated while clean air standards will be met, though the project's air quality impacts will be significant.

The regional jobs/housing ratio is 1.4 jobs per residence. Western San Bernardino is housing rich and jobs poor. Subarea 2 is estimated to create approximately 13,500 jobs in approximately ten million square feet of industrial, office, business park and retail space. The project includes 9,779 homes. The J/H ratio for the proposed plan is therefore 1.36 or higher (with airport, prison, schools, and indirect employment, etc. included). Therefore, project implementation is considered consistent with regional jobs/housing balance and air quality goals, and is superior to the no-project alternative in this regard.

In addition to regional air quality concerns which focus on the photochemical conversion of air pollution emissions to more harmful forms, vehicular exhaust may impact air quality immediately adjacent to the roadway travel lanes. Such impacts occur during periods of maximum traffic congestion and minimum atmospheric dispersion.

In order to determine whether any possible traffic congestion may contribute to localized air pollution standard violations, a screening procedure based upon the California roadway dispersion model CALINE4 was run on a large number of roadways surrounding Subarea 2. Carbon monoxide (CO) was used as an indicator pollutant to determine "hot spot" potential. Rush hour traffic was combined with minimum dispersion conditions in order to create a theoretical worst-case impact estimate for existing conditions, the near-term future (2010), and an "ultimate" buildout year of 2020. Because CO emissions data is less reliable beyond the year 2020, emissions data from 2020 were assigned to buildout conditions even though buildout would occur somewhat later than 2020. The results of these calculations are shown in Table 5.9-9. Because the formation of possible CO "hot spots" requires heavy local congestion, only those intersections operating at a level of service (LOS) of "D" or worse were analyzed. Of the 63 intersections evaluated in the project traffic study, 49 intersections operate at LOS=D or worse during either the A.M. or P.M. peak traffic hour now or in the future.

TABLE 5.9-9
MICROSCALE AIR QUALITY IMPACT ANALYSIS
(Hourly CO Concentration (ppm) Above Background)

Intersection	Exist. 2001	Interim Year 2010			Buildout Year		
		No Proj.	With Proj.	With Project With Improvements	No Proj.	With Proj.	With Project With Improvements
A.M. Peak Traffic Hour							
Pipeline Avenue/Chino Hills Pkwy.	4.6	2.3	2.3	2.3	2.4	2.6	1.9
SR-71 Fwy SB Ramps/Pine Avenue	—	—	—	—	—	—	—
SR-71 Fwy NB Ramps/Pine Avenue	—	—	—	—	0.6	2.1	—
Central Avenue/Edison Avenue	—	2.0	2.0	2.2	1.8	1.9	1.9
Central Avenue/El Prado Road	—	1.9	2.0	—	1.9	2.3	—
El Prado Road/Kimball Avenue	—	—	0.8	—	1.1	1.7	—
El Prado Road/Pine Avenue	—	—	—	—	—	2.1	—
Mountain Avenue/SR-60 Fwy WB Ramps	4.8	2.4	2.4	2.4	1.8	1.8	—
Mountain Avenue/SR-60 Fwy EB Ramps	—	—	2.2	—	—	1.7	—
Mountain Avenue/Walnut Avenue	6.7	4.5	4.6	2.6	3.3	3.5	2.0
Mountain Avenue/Riverside Drive	—	—	2.1	—	—	1.7	1.6
Euclid Avenue/SR-60 Fwy WB Ramps	4.0	2.0	2.1	2.1	2.5	3.0	1.7
Euclid Avenue/SR-60 Fwy EB Ramps	—	—	—	—	—	3.2	—
Euclid Avenue/Walnut Avenue	—	—	—	—	—	—	—
Euclid Avenue/Riverside Drive	—	—	—	—	—	2.2	2.1
Euclid Avenue/Edison Street	—	—	2.1	—	1.5	4.0	2.3
Euclid Avenue/Merrill Avenue	—	—	—	—	—	3.6	2.1
Euclid Avenue/Kimball Avenue	—	—	2.0	—	—	4.7	—
Euclid Avenue/Bickmore Avenue	—	—	2.5	1.6	—	3.7	—

TABLE 5.9-9 (Cont.)
MICROSCALE AIR QUALITY IMPACT ANALYSIS
(Hourly CO Concentration (ppm) Above Background)

Intersection	Exist. 2001	Interim Year 2010			Buildout Year		
		No Proj.	With Proj.	With Project With Improvements	No Proj.	With Proj.	With Project With Improvements
A.M. Peak Traffic Hour							
Euclid Avenue/Pine Avenue	—	—	2.1	2.1	—	5.1	3.0
Grove Avenue/SR-60 Fwy WB Ramps	—	2.1	2.2	2.2	1.6	3.3	—
Grove Avenue/SR-60 Fwy EB Ramps	—	—	1.9	—	1.3	1.7	—
Grove Avenue/Edison Street	—	2.0	2.1	—	2.0	2.5	1.4
Grove Avenue/Merrill Avenue	—	—	—	—	—	—	—
Grove Avenue/Kimball Avenue	—	—	1.8	—	—	2.2	—
Grove Avenue/Bickmore Avenue	—	—	1.0	—	—	1.1	—
Grove Avenue/Pine Avenue	—	—	1.9	—	—	3.3	—
Walker Avenue/Edison Avenue	—	2.1	2.0	—	2.0	2.6	—
Hellman Avenue/Merrill Avenue	—	—	0.9	—	—	2.2	1.4
Hellman Avenue/Kimball Avenue	—	—	1.1	—	—	3.0	1.7
Hellman Avenue/Pine Avenue	—	1.5	3.0	—	1.4	3.2	2.0
Hellman Avenue/Chandler Street	—	—	1.6	—	0.4	2.4	—
Vineyard Avenue/SR-60 Fwy WB Ramps	—	—	—	—	—	1.5	—
Vineyard Avenue/SR-60 Fwy EB Ramps	—	—	—	—	—	—	—
Archibald Avenue/Riverside Drive	—	1.4	1.4	1.5	1.4	1.2	1.2
Archibald Avenue/Edison Avenue	—	1.0	1.3	1.2	1.2	2.9	1.6
Archibald Avenue/Merrill Avenue	—	—	1.6	—	1.2	1.8	—
Archibald Avenue/Cloverdale Road	—	—	—	—	—	2.2	1.3
Archibald Avenue/Pine Avenue	—	—	1.6	1.3	0.8	1.9	1.2

TABLE 5.9-9 (Cont.)
MICROSCALE AIR QUALITY IMPACT ANALYSIS
(Hourly CO Concentration (ppm) Above Background)

Intersection	Exist. 2001	Interim Year 2010			Buildout Year		
		No Proj.	With Proj.	With Project With Improvements	No Proj.	With Proj.	With Project With Improvements
A.M. Peak Traffic Hour							
Archibald Avenue/River Road	—	2.2	2.7	1.7	1.6	2.9	1.8
River Road/Corydon Street	—	1.4	1.4	1.6	1.0	1.9	1.5
River Road/Second Street	2.6	1.5	—	1.7	1.2	1.6	1.7
Haven Avenue/SR-60 Fwy. EB Ramps	—	—	—	—	—	2.3	—
Hamner Avenue/Cloverdale Road	—	1.1	1.8	1.3	1.1	2.8	—
Hamner Avenue/Schleisman Road	2.8	2.2	2.3	—	2.2	2.5	—
I-15 Fwy SB Ramps/Galena Street	—	—	0.7	—	—	1.1	—
I-15 Fwy SB Ramps/Limonite Avenue	—	—	1.5	—	—	1.3	1.2
I-15 Fwy SB Ramps/Second Street	—	—	1.8	—	2.4	2.1	—
I-15 Fwy NB Ramps/Second Street	2.6	2.4	2.5	1.4	1.9	2.1	1.2
P.M. Peak Traffic Hour							
Pipeline Avenue/Chino Hills Pkwy.	6.8	5.4	5.5	3.3	3.7	3.9	2.3
SR-71 Fwy SB Ramps/Pine Avenue	—	—	—	—	—	—	1.1
SR-71 Fwy NB Ramps/Pine Avenue	—	—	—	—	—	2.2	—
Central Avenue/Edison Avenue	—	2.3	2.3	2.4	3.9	4.0	2.3
Central Avenue/El Prado Road	—	2.1	2.4	—	1.7	2.4	—
El Prado Road/Kimball Avenue	—	—	1.4	—	1.0	1.7	—
El Prado Road/Pine Avenue	—	—	1.2	—	—	2.0	—
Mountain Avenue/SR-60 Fwy WB Ramps	—	—	2.6	—	—	1.9	—
Mountain Avenue/SR-60 Fwy EB Ramps	6.5	2.2	4.3	2.6	3.3	3.6	2.1

TABLE 5.9-9 (Cont.)
MICROSCALE AIR QUALITY IMPACT ANALYSIS
(Hourly CO Concentration (ppm) Above Background)

Intersection	Exist. 2001	Interim Year 2010			Buildout Year		
		No Proj.	With Proj.	With Project With Improvements	No Proj.	With Proj.	With Project With Improvements
P.M. Peak Traffic Hour							
Mountain Avenue/Walnut Avenue	—	—	—	2.2	—	—	1.8
Mountain Avenue/Riverside Drive	—	—	2.3	2.3	1.9	3.5	2.0
Euclid Avenue/SR-60 Fwy WB Ramps	—	—	2.3	2.3	1.5	3.4	2.0
Euclid Avenue/SR-60 Fwy EB Ramps	4.6	—	3.5	3.0	3.4	3.8	—
Euclid Avenue/Walnut Avenue	—	—	—	—	1.5	—	2.4
Euclid Avenue/Riverside Drive	—	—	2.5	2.5	1.7	2.1	2.6
Euclid Avenue/Edison Street	—	—	2.5	2.5	3.2	5.2	3.1
Euclid Avenue/Merrill Avenue	—	—	—	—	—	4.9	—
Euclid Avenue/Kimball Avenue	—	—	3.7	—	—	5.6	3.3
Euclid Avenue/Bickmore Avenue	—	—	3.1	—	—	5.2	3.1
Euclid Avenue/Pine Avenue	—	—	2.2	2.2	—	6.6	3.9
Grove Avenue/SR-60 Fwy WB Ramps	—	—	—	—	—	3.4	2.0
Grove Avenue/SR-60 Fwy EB Ramps	—	2.2	2.4	2.4	2.9	3.5	2.0
Grove Avenue/Edison Street	—	2.4	2.6	—	2.5	2.8	1.7
Grove Avenue/Merrill Avenue	—	—	1.3	—	—	0.6	—
Grove Avenue/Kimball Avenue	—	—	2.2	—	—	2.9	1.7
Grove Avenue/Bickmore Avenue	—	—	1.3	—	—	1.3	—
Grove Avenue/Pine Avenue	—	—	2.2	—	—	3.7	—
Walker Avenue/Edison Avenue	—	2.3	2.0	—	2.3	2.7	1.7
Hellman Avenue/Merrill Avenue	—	—	1.3	—	—	3.7	2.2

TABLE 5.9-9 (Cont.)
MICROSCALE AIR QUALITY IMPACT ANALYSIS
(Hourly CO Concentration (ppm) Above Background)

Intersection	Exist. 2001	Interim Year 2010			Buildout Year		
		No Proj.	With Proj.	With Project With Improvements	No Proj.	With Proj.	With Project With Improvements
P.M. Peak Traffic Hour							
Hellman Avenue/Kimball Avenue	—	—	2.3	1.6	—	4.1	2.7
Hellman Avenue/Pine Avenue	—	1.2	3.7	2.2	1.1	4.4	2.6
Hellman Avenue/Chandler Street	—	—	2.2	—	—	3.4	—
Vineyard Avenue/SR-60 Fwy WB Ramps	—	—	—	—	—	1.4	1.4
Vineyard Avenue/SR-60 Fwy EB Ramps	—	2.0	2.0	2.0	2.9	3.0	1.8
Archibald Avenue/Riverside Drive	3.0	2.2	1.7	2.2	2.8	2.4	2.1
Archibald Avenue/Edison Avenue	—	—	1.7	1.7	1.8	3.7	2.1
Archibald Avenue/Merrill Avenue	—	1.0	2.2	—	1.3	2.3	—
Archibald Avenue/Cloverdale Road	—	—	—	—	—	2.7	1.9
Archibald Avenue/Pine Avenue	—	—	2.1	1.6	0.7	2.7	1.6
Archibald Avenue/River Road	—	1.5	2.4	—	0.9	3.0	—
River Road/Corydon Street	—	1.3	1.8	1.7	1.0	3.0	1.8
River Road/Second Street	—	—	—	—	—	1.9	—
Haven Avenue/SR-60 Fwy. EB Ramps	—	—	—	—	4.4	4.6	2.7
Hamner Avenue/Cloverdale Road	—	1.3	2.4	1.4	2.4	2.6	1.6
Hamner Avenue/Schleisman Road	1.9	2.0	2.2	—	2.5	2.6	—
I-15 Fwy SB Ramps/Galena Street	—	—	—	—	3.0	3.4	—
I-15 Fwy SB Ramps/Limonite Avenue	—	—	1.3	—	—	1.3	—
I-15 Fwy SB Ramps/Second Street	—	4.0	4.1	—	3.2	3.7	—

TABLE 5.9-9 (Cont.)
MICROSCALE AIR QUALITY IMPACT ANALYSIS
(Hourly CO Concentration (ppm) Above Background)

Intersection	Exist. 2001	Interim Year 2010			Buildout Year		
		No Proj.	With Proj.	With Project With Improvements	No Proj.	With Proj.	With Project With Improvements
P.M. Peak Traffic Hour							
I-15 Fwy NB Ramps/Galena Street	—	—	—	—	—	—	—
I-15 Fwy NB Ramps/Second Street	—	1.3	1.3	1.3	1.5	1.9	—

Localized one-hour CO contributions at 25 feet from the edge of 49 area intersections were calculated using a Caltrans roadway pollution screening model. Such local contributions must be superimposed upon any regional background level relative to meeting the ambient air quality standard. If the worst case, one-hour local exposure were to occur at the same hour as the highest non-local CO concentration, the following localized impacts would be required to equal the allowable one-hour level of 20 ppm:

Year:	2002	2010(est)	Post 2020(est)
Background (ppm)	6.4	5.1	5.1
Max. Allowable Local (ppm)	13.6	14.9	14.9
Total (1-Hr. Standard)	20.0	20.0	20.0

Maximum hourly CO levels of 6.8 ppm over background are currently found near the Pipeline and Chino Hills Parkway intersection. In 2010, the peak one-hour exposure of 3.0 ppm will occur at Euclid Avenue/SR-60 EB ramps in Norco. For ultimate area buildout, cars will be so "clean" such that peak local exposures will be less than 4.0 ppm even at the most congested intersections.

Table 5.9-9 shows that the maximum project-related CO increment (with project minus no project) is less than 2.0 ppm at any intersection if recommended roadway improvements are constructed in concert with project development. This small increment will not cause the hourly standard to be exceeded. All "with-project" CO increments are dominated by the no-project area growth of traffic and congestion. Microscale air quality impacts are not considered significant.

5.9.5 CUMULATIVE IMPACTS

The cumulative nature of air quality impacts is discussed in the analysis for the proposed project, above. Significance levels are based on regional growth and impact levels. Other development

throughout the entire region is contributing cumulatively to significant impacts on regional air quality. In the regional context, the location of industrial uses in their area contributes to goals for improving the balance between housing and job opportunities and reducing miles traveled.

The fact that the proposed development will cumulatively contribute to continued regional air quality degradation places a special responsibility on project proponents and local regulatory agencies to develop effective impact mitigation. However, since almost all the significant project impacts derive from mobile source emissions beyond the control of project sponsors, there is only a limited potential for reducing any large percentage of project impacts.

Effective emissions reduction of mobile source emissions requires a unified transportation system management (TSM) approach where a wide variety of transportation control measures (TCM's) are integrated into a comprehensive system of procedures and goals. An effective TSM program as a means for reducing vehicular traffic and its associated environmental effects (air pollution, noise, energy consumption, etc.) is difficult to achieve in practice because of the dependence on the low (mainly single) occupancy vehicle as the primary means of transportation. The difficulties inherent in TCM implementation notwithstanding, the City of Chino should identify effective and feasible tactics to improve air quality for local implementation.

5.9.6 MITIGATION MEASURES

The proposed project will employ standard mitigation measures, such as dust control measures mandated by the SCAQMD during construction , and energy efficient design practices required by Title 24 of the California Code of Regulations.

Effective emissions reduction of mobile source emissions requires a unified transportation system management (TSM) approach where a variety of transportation control measures (TCM's) are integrated into a comprehensive system of procedures and goals. The proposed project includes several important components of an effective mobile source emissions reduction program. These components include basic project design features which are consistent with air quality objectives and "smart growth" principles, and include:

- Community design to facilitate local transit (The Preserve Mobility Plan and Transit System);
- Development of park-and-ride facilities.
- Encouragement of bicycle and pedestrian circulation alternatives (The Preserve Community Paseo and Open Space System and Bicycle System.

- Encouragement of local employment-generating uses to reduce jobs-housing imbalances that promote long commutes in and out of the local area (The Preserve Land Use Development Plan, including approximately 626 acres of Business Uses).

To further reduce mobile source emissions and promote local and regional transit access, the following measure is added:

AQ-1. **Mobile Source Emissions/Transit.** The City of Chino shall contact appropriate transit agencies to encourage an expansion of transit services up to and within the project area. The City will coordinate with such agencies and other jurisdictions to promote express transit access from the Chino area to other regional employment centers.

To reduce construction activity emissions, the following measure is included:

AQ-2. **Construction Emissions.** Per SCAQMD Rule 403, the City shall enforce the following measures:

- During all construction activities, construction contractors shall use low emission mobile construction equipment where feasible to reduce the release of undesirable emissions.

- During all construction activities, construction contractors shall encourage rideshare and transit programs for project construction personnel to reduce automobile emissions.

- During all grading and site disturbance activities, construction contractors shall water active grading sites at least twice a day, and clean construction equipment in the morning and/or evening to reduce particulate emissions and fugitive dust.

- During all construction activities, construction contractors shall, as necessary, wash truck tires leaving the site to reduce the amount of particulate matter transferred to paved streets as required by SCAQMD Rule 403.

- During all construction activities, construction contractors shall sweep on and off site streets if silt is carried over to adjacent public thoroughfares, as determined by the City Engineer to reduce the amount of particulate matter on public streets.

- During all construction activities, construction contractors shall limit traffic speeds on all unpaved road surfaces to 15 miles per hour or less to reduce fugitive dust.

- During grading and all site disturbance activities, at the discretion of the City's Planning Director, construction contractors shall suspend grading operations during first and second stage smog alerts to reduce fugitive dust.

- During grading and all site disturbance activities, at the discretion of the City's Planning Director, construction contractors shall suspend all grading operations when

wind speeds (including instantaneous gusts) exceed 25 miles per hour to reduce fugitive dust.

- During all construction activities, the construction contractors shall maintain construction equipment engines by keeping them tuned.

- During all construction activities, the construction contractors shall use low sulfur fuel for stationary construction equipment as required by AQMD Rules 431.1 and 431.2 to reduce the release of undesirable emissions.

- During all construction activities, the construction contractors shall use existing on site electrical power sources to the maximum extent practicable. Where such power is not available, the Contractor shall use clean fuel generators during the early stages of construction to minimize or eliminate the use of portable generators and reduce the release of undesirable emissions.

- During all construction activities, the construction contractors shall use low emission, on site stationary equipment (e.g., clean fuels) to the maximum extent practicable to reduce emissions, as determined by the City Engineer.

- During all construction activities, the construction contractors, in conjunction with the City Engineer, shall locate construction parking to minimize traffic interference on local roads.

- During all construction activities, the construction contractors shall ensure that all trucks hauling dirt, sand, soil or other loose materials are covered or should maintain at least two feet of freeboard (i.e. minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of the California Vehicle Code Section 23114 to reduce spilling of material on area roads.

5.9.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Buildout of the proposed project will result in construction-related dust and equipment exhaust emissions phased over an approximate 20-year period. Although, these temporary but long-term impacts can be minimized if a commitment is made to aggressively pursue available impact mitigation, both PM_{10} and NOx emissions are likely to remain significant.

Although the project is consistent with regional growth projections, favorable with respect to jobs/housing balance goals, and includes a local transit system with significant potential air quality benefits, project-related emissions cannot be reduced to levels considered less than significant by the SCAQMD. Further, because the project is in a non-attainment region, any significant release of air emissions from the proposed project would contribute to a cumulatively adverse impact on required air quality. Therefore, the proposed project will have a significant project and cumulative impact on regional air quality.

Odor impacts from dairy operations and the co-composting facility to new receptors (e.g., residences, schools) during the transition phase are likely to remain significant and unavoidable.

5.10 POPULATION AND HOUSING

This section examines the potential socioeconomic implications of the proposed project, including changes in population, and housing supply. Employment generation and the relationship of the proposed project to regional housing and jobs policies of the Southern California Association of Governments (SCAG), and the Housing Element of the City of Chino are also discussed.

5.10.1 INTRODUCTION

The potential impacts of the proposed project have been evaluated in the context of the following conditions and characteristics in the area:

- Demographic characteristics including population and housing, and the relationship between growth associated with the project and overall projected growth;
- The number of jobs in the area and the types of jobs;
- Potential impacts on the supply of affordable housing located within the vicinity of the proposed project;
- Potential impacts on population growth in the vicinity of the proposed project;
- Potential impacts on the growth of employment in the vicinity of the proposed project; and
- Potential impacts on jobs/housing balance in the vicinity of the proposed project.

5.10.2 EXISTING CONDITIONS

The 5,435 acre plan area is located within the unincorporated area of San Bernardino County, and is surrounded by an urbanizing region comprised of the Cities of Chino, Chino Hills, Ontario, Norco, and Corona. The plan area is also located in close proximity to major transportation corridors, with the location of State Route 60 to the north, State Route 91 to the south, Interstate 15 to the east, and State Route 71 to the west. The proposed land uses within the plan area include a variety of residential, commercial, industrial, open space, and public facilities. The proposed project area is located within an area devoted primarily to agricultural uses, although a number of public related uses are located adjacent to and within the area. It is estimated that 32 percent of the area is comprised of dairy, agriculture, and fallow and pasture lands. Also included within the plan area is the California Institution for Women (CIW-Chino) and Prado Regional Park (see Section 5.1 – Land Use).

The plan area is within census tract 19. Census tract 19 is generally bounded by Riverside Drive on the north, the San Bernardeno/Riverside county line on the south, Milliken Avenue on the east, and Euclid Avenue on the west. This tract includes a portion of the existing City limits of the City of Chino, the entire proposed plan area, and a portion of the unincorporated area of Riverside County. According to the 2000 Census, tract 19 had the following characteristics: Total population of 18,326, 4,820 dwelling units, 4,188 occupied units, and an average household size of 3.28 people per unit. Within census tract 19, 75% of the dwelling units are single family residences and the vacancy rate is 13 percent, which is the difference between the total number of units and the number of occupied units. Census tract 19 is currently characterized primarily by agriculture, dairy, and open space areas. This also characterizes the proposed plan area. The 2000 Census data for tract 19 does not reflect the demographic conditions occurring near the plan area since it is at the eastern edge of urban development represented by the City of Chino, and extends almost to the I-15 Freeway in Riverside County.

The plan area is located with the San Bernardino Dairy Preserve that has been isolated from nearby urban development due to its agricultural preserve status and County zoning.

Chino Region

The plan area is located east of the Cities of Chino and Chino Hills, south of Ontario, and west of Norco and Corona. This geographic region surrounding the plan area was identified as the Chino Market Area in an April 2000 market analysis completed by Market Profiles[1]. The report indicated the market area had grown at a rate of 4.5 percent per year since 1990, which outpaced the growth rate of 2.8 and 1.7 percent in Riverside and San Bernardino Counties, respectively. In addition, the median income in the market area was $48,382, which is 21 percent higher than the figures of $39,716 and $39,909 for Riverside and San Bernardino Counties, respectively. It also exceeded the statewide median income figure of $44,766.

City of Chino

The City of Chino grew from a population of 40,165 in 1980, to 59,682 in 1990 (approximately 49 percent). The City experienced an additional 10 percent increase between 1990 and 1999. Table 5.10-1 summarizes demographic information for the entire City.

[1] Market Analysis – Subarea 2, City of Chino, San Bernardino County, CA; Market Profiles (4/00).

TABLE 5.10-1
2000 CENSUS CHARACTERISTICS

Population Characteristics	City of Chino	Census Tract 19[2]
Population	67,600	18,326
Households	17,304	4,188
Number employed	26,981	7,883
Unemployment rate	4.3%	3.8%
Median household income	$55,401	$65,421
Percent of households living below poverty level	6.3%	3.3%
Source: 2000 U.S. Census.		

Table 5.10-2 presents a breakdown of employment characteristics for the City of Chino and project area.

TABLE 5.10-2
2000 EMPLOYMENT COMPOSITION

Job Categories	City of Chino	Census Tract 19
Managerial/Professional	7,702 (28.5%)	2,648 (33.6%)
Sales and Office Occupations	7,920 (29.4%)	2,556 (32.4%)
Service Occupations	3,649 (13.5%)	801 (10.2%)
Construction, Extraction & Maintenance	2,528 (9.4%)	593 (7.5%)
Production, Transportation & Material-Moving	4,952 (18.4%)	1,048 (13.3%)
Farming, Fishing & Forestry Occupations	230 (0.9%)	237 (3.0%)
Total	**26,981**	**7,883**
Source: 2000 U.S. Census		

Population Trends and Forecasts

The plan area and vicinity consist of a number of census tracts in San Bernardino County. Tracts 5, 6.01, and 6.02 are within the City of Chino northwest of the California Institution for Men, which comprises all of tract 7. The entire project area is within a portion of tract 19, which also includes portions of Riverside County.

According to the SCAG 2001 Regional Transportation Plan (RTP) it is projected that the City will increase its population by about 4,000, from 65,700 to 69,700 between 2000 and 2005. In the long-term SCAG projects that the City population will increase to 79,500 by the Year 2020. Included

within this projected increase is a recognition of the City's annexation of 1,810 acres to the west of the plan area and its anticipated annexation of the subject plan area. Table 5.10-3 includes population projections for the project area vicinity, City of Chino and San Bernardino County.

TABLE 5.10-3
POPULATION, HOUSING AND JOB PROJECTIONS

	Census Data	Projections	Projections	Percentage Change	
	2000	**2010**	**2020**	**2000-2010**	**2010-2020**
Population					
▪ Project area vicinity[1]	18,326	43,573[2]	83,801[2]	137.8%	92.3%
▪ City of Chino	67,600	72,069	79,473	6.6%	10.3%
▪ San Bernardino County	1,709,434	2,031,708	2,486,564	18.9%	22.4%
Households					
▪ Project area vicinity[1]	4,188	9,958[2]	19,151[2]	137.8%	92.3%
▪ City of Chino	17,304	19,324	21,389	11.7%	10.7%
▪ San Bernardino County	528,594	640,917	789,375	21.2%	23.2%
Employment					
▪ Project area vicnity[1]	7,883	16,720[2]	39,421[2]	112.1%	135.8%
▪ City of Chino	26,981	57,667	69,903	113.7%	21.2%
▪ San Bernardino County	735,589	852,025	1,007,013	15.8%	18.2%
Jobs/Household Ratio					
Project area vicinity[1]	1.88	1.68	2.06		
City of Chino	1.56	2.98	3.27		
San Bernardino County	1.39	1.33	1.28		

Source: SCAG 2001 Regional Transportation Plan (RTP); 2000 US Census; Projected Fiscal Impacts, Stanley R. Hoffman, 2001.
[1] Census Tract 19.
[2] Projections for 2010 and 2020 for Project area vicinity (Census Tract 19) utilize 2000 Census data as a base and incorporate actual growth rates experienced in Population, Households, and Employment between 1990 and 2000. Estimates developed by Stanley R. Hoffman for the proposed project have also been incorporated into Project area vicinity projections.

Due to the agricultural preserve status of the project area and other development restrictions, such as the Prado Dam inundation area, the development potential of the plan area has been severely limited. However, as noted above the growth rate within the City of Chino was approximately 49 percent between 1980 and 1990 and slowed to about 10 percent between 1990 and 1999. This compares to a SCAG projected growth rate in the *1996 Regional Comprehensive Plan and Guide* between 1990 and 2000 of about 34 percent for San Bernardino County as a whole and about 20 percent for Southern California. The Southern California region includes the counties of San Bernardino, Riverside, Imperial, Orange, Los Angeles and Ventura.

Housing Trends and Forecasts

As noted previously, various governmental restrictions have prohibited development within the project area. Therefore, the population and households within the plan area have remained relatively constant. However, between 1990 and 1999, the number of housing units in the City of Chino expanded from 16,137 to 17,454 representing an eight (8) percent growth rate. Between 1980 and 1999 the number of housing units increased by over 50 percent from 11,372 to 17,454. This compares to a SCAG projected increase for the period between 1990 and 2000, as contained in the *1996 Regional Comprehensive Plan and Guide*,[2] of 27 percent for San Bernardino County and approximately 20 percent for the Southern California Region.

Existing single family and multi-family residences within the plan area are ancillary to the dairy and agriculture operations. The 1990 Census data indicated only single family residences were located within tract 19, which encompasses an area extending beyond the plan area boundaries. By the year 2000, the percentage of single family residences had dropped to below 80% and multi-family residences comprised nearly 20%. The plan area and vicinity had higher median rent and median home value than San Bernardino County in 2000, and had a lower proportion of rentership units than the County as a whole. The 2000 median rent for census tract 19 was $811. This is higher than the City of Chino ($769) and the County-wide figure of $648. As noted previously the project area vicinity is comprised mainly of single family residences with 33 percent rentership overall. Therefore, the proportion of existing rental units will be slightly greater than the City of Chino, which had 31 percent rental units, and lower than the County-wide rate with a 34.8 percent rentership rate. Housing units in the plan area vicinity had a median value of $216,300 compared to a median value of $173,600 in the City of Chino and $131,500 for San Bernardino County as a whole. The value for census tract 5 just north and west of the California Institution for Men, an area that represents that portion of the City of Chino closest to the plan area, had a median value of $177,800, which was slightly higher than the City as a whole.

[2] Regional Comprehensive Plan and Guide, Southern California Association of Governments (SCAG); (3/96)

The Regional Housing Needs Assessment (RHNA) prepared by SCAG produces regional, subregional, and local targets for the amounts and types of housing needed over the period from 1998-2005. The City of Chino has identified future housing allocations consistent with the RHNA within its 2000-2005 Housing Element. The City's updated Housing Element was adopted by the Chino City Council on September 18, 2001, and certified in December 2001. The future housing allocations, as taken from the 2000-2005 Housing Element, are as follows:

Income Level	Number of Units
Very Low Income	375
Low Income	292
Moderate Income	418
Upper Income	1,050

Employment Trends and Forecasts

Between 1994 and 2000, employment in the Riverside and San Bernardino County area expanded each year, as shown in Table 5.10-4. In 1999 the rate reached 5.7 percent. The annual increase in San Bernardino County is estimated at 4.1%, and at 2.0% for the entire Southern California region.

TABLE 5.10-4
RIVERSIDE/SAN BERNARDINO COUNTY EMPLOYMENT RATE

Year	Percentage Rate Increase
1994	2.2
1995	3.7
1996	2.9
1997 to 1999	5.0 (average per year)

According to the 1998 SCAG RTP, employment in the City of Chino is estimated to increase by approximately 5.8% annually through the year 2010 when employment is projected to reach 66,100. Based on 2000 Census data and SCAG 2001 RTP growth forecast projections, employment in the City of Chino is expected to more than double to reach 57,700 in 2010. SCAG projects that employment in San Bernardino County is projected to increase by 1.8% and in Southern California by 1.9% annually over to approximately 852,000 by the 2000-2010 period.

Jobs and Housing Balance

The balance of jobs and housing in an area, both in terms of the total number of jobs and housing units as well as the type of jobs versus the price of housing, has implications on mobility, air quality

and the distribution of tax revenues. A major focus of SCAGs regional planning efforts has been to improve this balance. SCAG defines the jobs/housing balance as follows:

> *"Jobs and housing are in balance when an area has enough employment opportunities for most of the people who live there and enough housing opportunities for most of the people who work there. The region as a whole is, by definition, balanced…Job-rich subregions have ratios greater than the regional average; housing-rich subregions have ratios lower that the regional average."*
>
> *"Ideally, job/housing balance would…assure not only a numerical match of jobs and housing but also an economic match in type of jobs and housing." (SCAG 1989)*

In 2000, the ratio of jobs to households in the project area vicinity, which includes the proposed plan area boundaries, was 1.88, compared to a ratio of 1.39 in San Bernardino County and 1.56 in the City of Chino, as shown in Table 5.10-3. In 2010, the plan area vicinity is projected to have a jobs/housing ratio of 1.68, which represents a combination of the 2000 population and projected employment for census tract 19, with the addition of the initial development phases of the proposed project. It is recognized that this combined growth may vary depending upon the location of future development and whether it replaces existing residents and/or employees.

The projected 2010 employment for the project area does not include the ultimate jobs/housing ratio projected upon buildout of the proposed plan. At projected buildout the total number of jobs and housing units or households is 13,376 and 9,779, respectively (it is assumed that each residence within the proposed project represents a household). This equates to a ratio of 1.37, which exceeds the projected Year 2010 and 2020 ratio of 1.33 and 1.28, respectively, for San Bernardino County as a whole. However, SCAG has adopted a significantly higher goal for the City of Chino of 3.35 and 4.13 for the year 2010 and 2020, respectively. Based upon plan area buildout, the ratio of jobs to housing in the plan area will be below the 4.13 ratio projected for Year 2020 in the City of Chino, but ultimately higher than the projected Year 2020 ratio of 1.28 in San Bernardino County. As such, the implementation of the proposed plan will provide additional employment opportunities for existing and future residents, but at a ratio below existing area levels.

Journey to Work

Data from the 1990 and 2000 Census provides place of work and travel time information outlining the general distribution of employed residents and jobs located in the project area vicinity. The distribution of workers is shown in Table 5.10-5.

TABLE 5.10-5
PLACE OF WORK AND TRAVEL TIME

Place to Work[1]	City of Chino Residents	Census Tract 19 Residents
Within County of San Bernardino	11,987 (48.6%)	2,298 (54.0%)
Outside County of San Bernardino	12,703 (51.4%)	1,961 (46.0%)
Travel Time to Work[2]		
Less Than 30 Minutes	14,001 (54.4%)	3,822 (51.3%)
30 to 59 Minutes	7,504 (29.2%)	1,891 (25.4%)
60 Minutes or More	4,235 (16.4%)	1,734 (23.3%)

[1] 1990 Census data. Interpretation of the 2000 Census data regarding place of work not yet available.
[2] 2000 Census data.

Existing Policies and Regulations

Local Housing and Economic Development Policy

The City of Chino Housing Element, adopted in September 1989 and most recently updated in 2001, includes a number of goals and policies. The most relevant goal to the proposed project is:

- Housing Production, G4-2: "Encourage the construction of a range of new housing appropriate to the needs of Chino residents and the neighborhood where it will be located."

The City has identified a variety of policies and actions intended to implement the broad goals. The most applicable policy and action statements related to Goal G4-2 are listed below:

Policy

- Flexible Development Standards, P4-2.2: "Continue to use the specific plan process and planned development overly zone to permit flexible housing design where such projects result in attractive, affordable housing."

Action

- Upper Income Housing, A4-2.1.3: "Encourage the production of upper-income housing for the executives of local businesses and industry."

- Specific Plan/Planned Development, A4-2.2.1: "Permit the flexible development standards occurring in the specific plans and planned developments to encourage housing development which meet the needs of special users. Allow partial credit toward open

space requirements for including child care facilities or when the site design is accessible to the disabled. Permit shared kitchens, living rooms, and other such facilities set aside for single-parent families or the elderly."

Regional Planning Policy

The SCAG Regional Comprehensive Plan and Guide (RCPG) presents the region's forecasts and policies for dealing with anticipated growth including population, housing and employment throughout Southern California. Growth projections contained in the RCPG are based on a compilation of county and local projections. RCPG forecasts are then used in the formulation of regional plans dealing with regional air quality, housing, transportation/circulation and other infrastructure issues.

The concept of jobs/housing balance was originated in the 1989 SCAG Growth Management Plan (GMP). This concept is directed at minimizing commute distances, reducing new infrastructure needs and costs, minimizing traffic congestion, conserving energy and improving air quality. The primary objective has been to promote balanced development at the regional and sub-regional levels. Balanced development represents a mix of housing and employment opportunities expressed in the form of a ratio of jobs to housing available in a given area. A sub-region is theoretically considered to be in balance if it provides sufficient employment opportunities for population residing within a reasonable commute distance, generally considered as the same sub-region. Sub-regions with employment to housing ratios which reflect the SCAG regional average, are generally considered to be balanced. Areas whose ratios significantly exceed the regional average are considered to be job rich, while those with ratios significantly below the regional average are considered housing rich.

The *SCAG Regional Comprehensive Plan and Guide* contain a variety of goals and policies related to issues that affect the Southern California region. Outlined below are goals and policies applicable to the proposed project that are related to improving the regional standard of living and quality of life.

Among its growth management goals for an improved standard of living, the RCPG states:

- "Support local land use actions that minimize public and private development costs." (pg. 3-2)

Some of the adopted SCAG growth policies related to the goal of improving the regional standard of living that are relevant to this project, include the following:

- "SCAG shall encourage local jurisdictions' efforts to achieve a balance between the types of jobs they seek to attract and housing prices." (pg. 3-23)

- "SCAG shall encourage patterns of urban development and land use which reduce costs on infrastructure construction and make better use of existing facilities." (pg. 3-23)

- "SCAG shall encourage subregions to define an economic strategy to maintain the economic vitality of the subregion, including the development and use of marketing programs, and other economic incentives, which support attainment of subregional goals and policies." (pg. 3-23)

- "SCAG shall support local jurisdication's efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services." (pg. 3-23)

- "SCAG shall support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness." (pg. 3-24)

Among the growth management goals for maintaining the regional quality of life, the RCPG includes:

- "Support local land use actions and urban forms that preserve open space and natural resources." (pg. 3-2)

- "Support local land use actions and urban forms that attain mobility and clean air goals." (pg. 3-2)

Some of the adopted SCAG growth policies related to the goal of improving the quality of life that are relevant to this project, include the following:

- "SCAG shall support provisions and incentives created by local jurisdictions to attract housing growth in job rich subregions and job growth in housing rich subregions." (pg. 3-24)

- "SCAG shall encourage existing or proposed local jurisdictions' programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike." (pg. 3-24)

- "SCAG shall encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment." "Support local land use actions and urban forms that preserve open space and natural resources." (pg. 3-2)

- "Support local land use actions and urban forms that attain mobility and clean air goals." (pg. 3-24)

- "SCAG shall support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers." (pg. 3-24)

- "SCAG shall support local jurisdictions' strategies to establish mixed-use clusters and other transit-oriented developments around transit stations and along transit corridors." (pg. 3-24)

- "SCAG shall encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment." (pg. 3-24)

- "SCAG shall support and encourage settlement patterns, which contain a range of urban densities." (pg. 3-24)

- "SCAG shall encourage planned development in locations least likely to cause environmental impact." (pg. 3-24)

- "SCAG shall support policies and actions that preserve open space areas identified in local, state, and federal plans." (pg. 3-25)

- "Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals." (pg. 3-25)

- "SCAG shall encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites." (pg. 3-25)

- "SCAG shall discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards." (pg. 3-25)

- "SCAG shall encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans." (pg. 3-25)

The SCAG RCGP identifies regional housing goals to help provide a planning framework for cities, counties and subregions to fashion housing strategies that are responsive to regional market needs related to growth over the next two decades. The RCPG approach is intended to be flexible, broad in scope and a tool in relating housing concerns to a host of other issues identified in the RCPG. The SCAG RCPG includes the following four housing goals (pg. 6-9):

- "Decent and affordable housing choices for all people."
- "Adequate supply and availability of housing."
- "Housing stock maintenance and preservation."
- "Promote a mix of housing opportunities regionwide."

The SCAG RCGP also identifies relationships between urban forms and goals of social equity and lifestyle choice.

- "Support development of urban forms that avoid economic and social polarization." (pg. 3-2)
- "Support development of urban forms that accommodate a variety of lifestyles." (pg. 3-2)

5.10.3 THRESHOLDS OF SIGNIFICANCE

A proposed project would normally have a significant population and housing impact on the environment related to socio-economics if it would:

- Induce substantial population growth in an area, either directly or indirectly;
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

CEQA Guidelines (Section 15131) states the following:

- "Economic or social effects of the project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes."

In addition SCAG views significant impacts as those, which would:

- "Result in population, housing and employment growth inconsistent with the regional level of growth projected under the Southern California Association of Government's Regional Comprehensive Plan." (SCAG, 1993).

5.10.4 PROJECT IMPACTS

<u>Less than Significant Impacts</u>

Proposed Project Goals and Design

The proposed plan design includes regional and neighborhood elements that utilize and build upon existing land use and circulation elements, and that provide the community with an identity and focal point conducive to a vibrant urban setting. The salient features within the project plan that relate to

this vision are the major business areas around the Chino Airport, Euclid Avenue, and a Community Core. The first two elements are intended to maximize the potential of Euclid Avenue as a future transportation corridor, and take advantage of the area's proximity to the Chino Airport. The Community Core area is proposed as a major central activity area, providing a variety of commercial, retail, office, entertainment, public, and residential uses in close proximity to each other. Envisioned within the proposed plan is a potential transit system that would loop the Community Core area and provide a link to regional circulation. The proposed plans have been designed to have local transit integrated at a future date.

Higher density residential uses are proposed in close proximity to business and commercial areas at densities that are intended to reduce reliance upon the automobile for local trips, support local transit, and provide adequate patronage to stimulate business growth.

A large portion of the plan area will be utilized for open space-related uses that respect the boundaries of the existing Prado Dam inundation area, Prado Regional Park, and agricultural areas.

Employment Generation

The proposed project would generate a substantial number of new jobs. Table 5.10-6 provides estimates of jobs of various types, based on the estimated distribution of space, and standard ratios of square feet per employee. Total employment generation from the planned mix of non-residential commercial, industrial and recreation activities is estimated to be 13,376 jobs. These jobs could include both skilled and unskilled commercial retail jobs; manufacturing and assembly positions; warehouse positions and commercial office jobs.

The proposed project job generation is substantially more than that allowed under existing zoning. The geographic area previously identified as the plan area vicinity, which encompasses census tract 19, had a 2000 employment total of 7,883. The proposed project boundaries represents a portion of census tract 19 and, therefore, a portion of this employment total. However, the plan area boundaries are currently zoned and general planned for agricultural uses. As such, the employment within this area is not expected to vary to any significant degree without a change in the allowed land use. Upon buildout of the proposed plan, it is estimated 13,376 new jobs will be created. This represents a significant increase beyond that currently existing or projected under existing zoning and general plan land use.

The change to the plan area's job growth is not inconsistent with the SCAG Regional Forecasts. The impacts of project-related job generation are considered beneficial to the local economy. No adverse effect is apparent with respect to previously identified CEQA thresholds, when project related job growth is compared to regional job growth forecasts.

TABLE 5.10-6
EMPLOYMENT GENERATION

Employment Type	Proposed Project Employment
Neighborhood Employment	186
Regional Commercial	1,312
Airport Related Business Park	2,296
Airport Related Industrial	1,894
Airport Related Hotel	201
Light Industrial	2,771
Commercial (Airport and Mixed Use)	1,231
Office (Regional, Airport and Mixed Use)	3,484
Total	**13,376**
Source: Projected Fiscal Impacts, Stanley R. Hoffman, 2001	

Housing Development

Implementation of the proposed plan would result in a substantial increase in housing within the plan area. At present the plan area is regulated by the County of San Bernardino under the County General Plan and Zoning. The project area is located within a portion of the San Bernardino County Dairy Preserve. The project area is designated Agriculture-Agriculture Preserve (AG-AP) on the San Bernardino County General Plan reflecting its dairy related uses. The County AG Zone permits a minimum lot size of 10 acres.

The impact of the proposed project in terms of potential housing development will change the existing agriculture and dairy area into an urban setting with 10,238,744 square feet of commercial, office, and industrial uses and 9,780 dwelling units. All aspects of the project will result in a substantial change from the existing land uses.

Development of the proposed plan would generate approximately 13,376 jobs, replacing many of those existing under current dairy use and agricultural zoning. This would increase demand for housing in the project area vicinity. Because of the nature of the new jobs, including higher-paying manufacturing and wholesale trade jobs, the average household income associated with the project is estimated to be higher than the current estimated household income for San Bernardino County.

Based upon a household size of 3.1 persons (the average for San Bernardino County), and on the year 2000 income limits from the California Department of Housing and Community Development, the median family income is estimated at $43,125. While it is difficult to estimate the number of

households in the plan area requiring housing assistance, it is probable that this number will be greater than currently exists due to the limited number of existing residences. The composition of the proposed plan will generally reflect the City's existing urban composition, thereby maintaining the need to provide low and moderate housing identified in the RHNA.

With annexation to the City of Chino, future development in the plan area will be guided by the City's General Plan and updated Housing Element. The proposed project will include a variety of housing types and densities as noted in Table 5.10-7. Future demand for affordable housing associated with the project will be examined in the context of the City's Housing Element update. The establishment of employment opportunities around the airport and major circulation routes will take advantage of existing opportunities and facilities and allow the placement of employment centers in close proximity to higher density housing.

TABLE 5.10-7
PROPOSED RESIDENTIAL LAND USES

Housing Type	Density	Housing Unit Total
Estate	2.0 units per acre	237
Low Density	5.5 units per acre	1,659
Medium Density	10.0 units per acre	5,076
High Density	16.0 units per acre	2,021
Mixed Use	16.0 units per acre	787
	Total Units	**9,779**

The change to the housing growth in the vicinity is not inconsistent with the SCAG regional forecasts. The impacts of increased housing development are considered less than significant with respect to CEQA threshold criteria when compared to the overall job growth balance in the vicinity of the plan area.

Jobs/Housing Balance

The proposed plan buildout would effect the jobs/housing balance ratios, when compared to the projected number of housing units and employment totals for the year 2010. The proposed project will result in modifications to the existing Chino General Plan and Zoning and an increase of 2,349 jobs and an increase of 3,334 households by 2010 (if each proposed dwelling unit is assumed to equate to one household unit). Since the proposed development activity will occur within the City of Chino, these changes will represent approximately 8 percent of the projected employment growth and an increase equal to 165 percent of the households projected for the City by 2010.

"The jobs/housing ratio will be substantially less for the project area than that projected for the City of Chino. However, the projected ratio of jobs to households for the project area will exceed that projected for the County as a whole (estimated at 1.28 for 2020 using SCAG's 2001 RTP growth forecast projections). Most of the projected jobs would be created during the later phases of the proposed project, as the jobs/housing ratio would increase from .70 in 2010 to 1.36 by 2020 (derived from information presented in *Projected Fiscal Impacts*, Stanley R. Hoffman, 2001). Sub-regions with employment to housing ratios which reflect the SCAG regional average are generally considered to be balanced."

The proposed project area jobs/housing ratio in 2020 is projected to be 2.06, compared with a projected County ratio of 1.28, thus furthering subregional and regional jobs/housing balance objectives. The proximity of housing to employment areas and retail centers is considered a positive effect upon the local economy and, in general, upon the physical environment because it may contribute to reduced regional work trip commutes, with corollary air pollution and energy consumption reduction benefits. According to the 2000 Census approximately 46 percent of the employed citizens of Chino commuted 30 minutes or more to work. Approximately 16 percent of that total commuted more than 60 minutes.

Significant Impacts

There are no significant adverse impacts related to population, housing, or employment growth from the proposed project.

5.10.5 CUMULATIVE IMPACTS

As demonstrated in the preceding analysis, the proposed project will have no significant adverse impacts to population, housing or employment. Similarly, the project's incremental contributions to cumulative population, housing, and employment impacts within the SCAG region are seen as less than significant. The proposed project will have a beneficial impact on the regional jobs/housing balance.

5.10.6 MITIGATION MEASURES

No mitigation measures are necessary.

5.10.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant adverse population and housing impacts will occur.

5.11 PUBLIC SERVICES—SCHOOLS, POLICE, FIRE, LIBRARY, PARKS/RECREATION

The impacts of the proposed project on key service providers are reviewed in this section. Table 5.11-1 shows the current service providers in the City of Chino. These providers will be responsible for the provision of services to the proposed plan area.

TABLE 5.11-1
THE PRESERVE SPECIFIC PLAN—ULTIMATE SERVICE PROVIDERS

Category of Service	Provider
Transportation:	
▪ Freeways and interchanges	Caltrans
▪ Arterials and collectors	City of Chino
▪ Local roads	City of Chino
▪ Signalized intersections	City of Chino
Fire and Paramedic	Chino Valley Independent Fire District
Police	City of Chino
General Facilities	City of Chino
Domestic Water	City of Chino
Recycled Water	Inland Empire Utilities Agency (IEUA)
Wastewater	Inland Empire Utilities Agency (IEUA)
Flood Control and Drainage:	
▪ Local facilities	City of Chino
▪ Regional Facilities	San Bernardino County Flood Control District
Parks and Recreation	
▪ Local facilities	City of Chino
▪ Regional facilities	San Bernardino County Public Works Parks Division
Libraries	San Bernardino County Library System
Schools	Chino Valley Unified School District
Utilities	
▪ Cable	Adelphia Communications
▪ Electricity	Southern California Edison
▪ Telephone	Verizon
▪ Gas	The Gas Company
▪ Solid Waste Disposal	Waste Management

Source: Stanley R. Hoffman Associates, Inc.

5.11.1 SCHOOLS

Existing Conditions

The plan area is located within the Chino Valley Unified School District (CVUSD). The Chino Valley Unified School District includes 31 school sites (nineteen grades K-6, one grades K-8, five grades 7-8, three grades 9-12, and three continuation schools). The District boundaries include most

of the City of Chino, a small part of Ontario, and a portion of the unincorporated area in the County of San Bernardino.

The closest public schools to the project site include Howard Cattle Elementary, Alicia Cortez Elementary, Magnolia Junior High School, Chino High School, and Chino Hills High School (currently under construction to open 2001-02) (Table 5.11-2).

TABLE 5.11-2
CURRENT ENROLLMENTS AND CAPACITY OF SCHOOLS SERVING THE PLAN AREA

Schools	Address	Enrollment for 2000/01	Capacity*
Howard Cattle Elementary	13590 Cypress Ave., Chino	940	938
Alicia Cortez Elementary	12570 Carissa Ave., Chino	1085	875
Magnolia Junior High	13150 Mountain Ave., Chino	991	1080
Chino High School	5472 Park Place, Chino	503	503
Chino Hills High School	16150 Pomona Rincon Road, Chino Hills	To open in 2001-02	2517

*Source: SB 50, State Loading Standard

Edwin Rhodes Elementary School is projected to open by 2005 with a capacity of 750 students. This school will be located at the corner of San Antonio and Schaefer Avenues in Chino. Additionally, Chaffey College Chino Center, a community college near the plan area, serves 800 full-time students, and the construction of a new technical school, Information Technology Center in Chino, will serve 1,000 students.

With approval of Proposition 1A on November 13, 1998, the School Fee provisions of Senate Bill 50 (SB 50) became effective. Under SB 50, statutory caps have been placed on developer fees, and local governments cannot deny a project based on the adequacy of school facilities. SB 50 also permits additional developer fees to be levied in amounts up to approximately 50 percent of the cost of constructing school facilities and for land acquisition and site development (Level 2 Fees). The State is responsible for contributing the other 50 percent of the cost of construction, site acquisition, and development by providing per-pupil grants based upon State construction standards. Such State per-pupil grants are based upon the school district's funding eligibility as determined by a one-time assessment of existing capacity and unhoused students, and thereafter on a school facilities needs analysis to be conducted by the district. If, in the future, the State ceases to make apportionments of funds to school districts, then the District may levy additional amounts representing approximately 100 percent of the cost of constructing school facilities and site acquisition (Level 3 Fee).

The Level 2 and Level 3 Fees can only be levied if the school districts have met certain conditions including, but not limited to conducting a school facilities needs analysis and being deemed eligible to participate in the State Funding Program by the State Allocation Board.

As shown in Table 5.11-2, public schools within the plan area are presently operating at or near capacity. CVUSD has a district-wide school fee program. According to the District's study, entitled "Developer Fee Justification and Impact Analysis" (School Planning Services, May 2000), overcrowding in schools is a current problem. For example, in the 1999-2000 school year, student enrollment totaled 31,545. This figure represents over double the enrollment in 1980. By contrast, the District's current student capacity is 25,033, resulting in a shortfall of 6,014 seats.

Thresholds of Significance

A project can be considered to have a significant impact on public schools if the project generates more students than school facilities can sustain, leading to conditions of overcrowding and lack of resources. Classroom overcrowding, in and of itself, however, does not equate to a significant effect on the environment (Goleta Union School District v. Regents of the University of California). School impacts are typically mitigated by payment of developer fees in accordance with AB 2926.

Project Impacts

Implementation of the proposed development plan will result in 9,779 new dwelling units within the District's boundaries at plan buildout. This would result in an increase of approximately 6,063 new students within the District, based on the District student generation factor (SGF) of .62 students, on average per dwelling unit (Table 5.11-3). This represents a significant direct impact on schools and school capacity within CVUSD.

Proposed plan development of approximately 695 acres of business uses, including commercial and industrial space, is expected by the District to result in an indirect increase in the District's student population (i.e. non-resident student population). However, this indirect student enrollment impact will be mitigated by school impact fees.

TABLE 5.11-3
STUDENT GENERATION

Grades	Proposed Project Dwelling Units	Students	Students Generation Factor (SGF)
K-6	9,779	3,520	.36
7-8	9,779	1,076	.11
9-12	9,779	1,467	.15
Totals	**9,779**	**6,063**	**.62**

The District has budgeted roughly $130,000,000 to meet the school year 2004/2005 district-wide student population projection of 34,655 students, up from 1999's 31,048 level. To accommodate the expected growth in enrollment, the District has prepared a facilities plan for new construction, which will increase the District's capacity by 7,300 seats. The District plans to modernize Magnolia Junior High within the next year, but these improvements will not include expansion or otherwise increase the student capacity. Chino Hills High School 9th grade campus is currently under construction. It is scheduled to open for the 2001-2002 school year and will serve students within the project area. However, based on current projections, it is anticipated that the high school will be at or near capacity by the time The Preserve plan area will begin generating students.[1]

Recent legislation and funding agreements for new schools, authorized by the State, provide that local jurisdictions are no longer responsible for the funding and construction of school facilities. School districts are authorized to levy fees as a condition of approvals, of development projects, for capital acquisitions and improvements. Such one-time fees are paid at the time building permits are issued. The fees are paid into the general fund and may or may not be used to offset the impacts of the development generating the fees. School impact fees offset the added impact new student generation has on school facilities.

The current statutory fee for new residential construction in the District is $3.08 per square foot (Level 2 fees) and the fee for commercial/industrial projects and senior-only housing is $0.33 per square foot. These fees, however, do not adequately offset the school facility and service costs generated by new development. According to the District[2], the fee for residences represents 40 percent of the schools-related cost attributable to each new home. The fee for commercial/industrial space and senior housing represents no more than 4 percent of the impact to school facilities.

The intent of The Preserve plan is to incorporate a full diversity of supporting uses, including public school facilities within residential areas, to mitigate the adverse impact on school facilities and services caused by the plan.

Based on the projected enrollment at plan buildout of 3,520 K-6 students, and the District's standards for K-6 school enrollment, a need for two school sites is projected to serve the plan area K-6 student population. A single school site to service Grades 7-8 would be needed, and offsite capacity to service project-generated high school students (9-12) would be needed.

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[1] Source: Dr. Paul W. Anderson, Chino Valley Unified School District, March 13, 2001.

[2] Source: School Planning Services, Developer Fee Justification & Impact Analysis, Chino Valley Unified School District, May 2000.

Three school sites are identified in the proposed project Land Use Plan to accommodate the student population growth estimate by the affected school district (Exhibit 5.11-1). Two 10-acre elementary schools (K-6) and one 15-acre K-8 school are anticipated. The location, size, and configuration of the school sites are not determined at this point. The actual school sites will be determined during site plan and tract map review. Pursuant to Education Code Section 17215, a school site review of proposed school sites within two miles of the Chino Airport will be conducted to assure school safety and compatibility with the airport.

CUMULATIVE IMPACTS

Buildout of the proposed plan will generate a substantial increase in student population and contribute to a significant cumulative impact on public school facilities.

Mitigation Measures

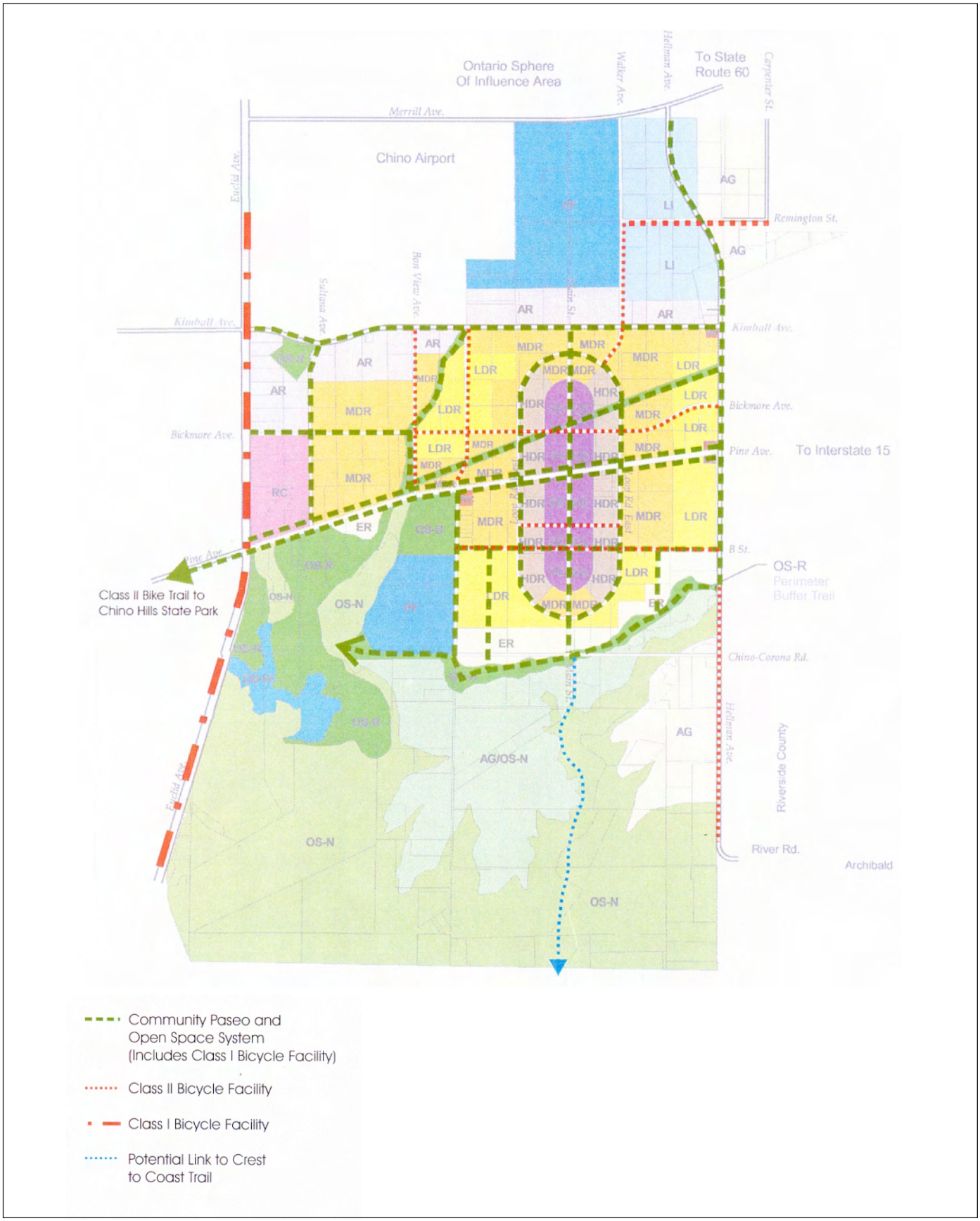
PS-S-1 Developers/builders within the plan area shall work with the CVUSD to plan school service for the proposed development.

PS-S-2 Prior to issuance of a building permit, project developers shall pay statutory developer fees to the CVUSD, form a Communities Facilities District, or provide land and improvements pursuant to the requirements established in SB 50. The amount of fees or special taxes to be paid or land and improvements to be provided will be determined based on the established state formula for determining construction costs.

PS-S-3 To reduce potential safety hazards during construction, the City shall require developer notification to Chino Valley Unified School District of pending construction activity adjacent or near operating schools. Evidence of notification shall be provided to the City prior to issuance of grading and building permits for projects within any Master Plan, Tentative Map or Site Plan inclusive of, or immediately adjacent to, an operating school site.

Level of Significance after Mitigation

With implementation of the mitigation measures, the proposed project's impacts on schools would be reduced to less than significant levels. The project design provides for two K-6 school sites plus a K-8 school site. The mitigation measures provide for development of a plan for providing sufficient capacity and funding to the extent provided by SB 50.



SOURCE: The Preserve Final Draft Specific Plan, September 2001.

NORTH

NOT TO SCALE

Michael Brandman Associates

Exhibit **5.11-1**
Bicycle Plan

5.11.2 POLICE PROTECTION

Existing Conditions

The City of Chino currently is served by the Chino Police Facility, located at 13250 Central Avenue. This law enforcement coverage includes the Subarea 2 sphere of influence (the 'plan area'). Presently, police staffing levels, facilities, and equipment are sufficient to meet demand.[3] The force consists of 87 sworn officers servicing a population of roughly 67,000 people, which equates to a ratio of 1.34-sworn police officers per one thousand population.

The City is divided into 4 patrol sectors. During periods of overlapping shift hours, typically from noon to 2:00 am, 2 patrol officers work each sector. During non-overlap hours, one officer is assigned to a sector. All available officers of the eighty-nine in the force could conceivably respond to a major incident occurring in any sector, including the project area. The average response time to emergency calls, calculated on a citywide basis, was 4 minutes 41 seconds during the year 2000. This response time meets or exceeds the City of Chino's standard for response time.

The police fleet consists of: 32 black and white sedans, 2 K-9 sedans, 7 traffic motorcycles, 14 unmarked cars, 3 undercover vehicles, 1 commercial enforcement truck, 1 gang enforcement sedan, 1 Subaru 4WD, 1 SWAT deployment/rescue vehicle, 1 mobile command post, 1 prisoner transportation van, 2 civilian report taker trucks, 1 crime scene investigation van, 2 cadet support vehicles, and 1 volunteer patrol sedan. Additionally, in the area of special equipment, the department has 12 police-equipped bicycles with a cadre of trained officers, and 4 mounted enforcement horses with partner officers. The fleet and equipment adequately meet the needs of the citizens.

Police responses to the plan area are relatively infrequent, due to the rural character and low population.

Threshold of Significance

Police services impacts are considered significant if the project increases the need of law enforcement services such that the capabilities of the Chino Police Facility are exceeded during project implementation.

[3] Sources: Written response from Stuart A. Jones, Professional Standards Sergeant, Chino Police Department, February 2001.

Project Impacts

Buildout of the proposed plan area will entail development of 9,779 dwelling units, 695 acres of business uses (Community Core, Light Industrial, Airport Related, Regional Commercial, Neighborhood Commercial) and 597 acres of Public Facilities and Right-of-Ways. Implementation of the proposed plan will significantly increased demands on police services within the plan area.

Implementation of the proposed plan will also place the resident population in proximity to the planned open space system of approximately 3,000 acres (Recreation, Agriculture and Natural Open Space). Access and use of the planned recreational areas may increase the need for police responses to these areas. Overall response time to The Preserve Specific Plan area is expected to increase by 2 to 3 minutes for emergency calls.[4]

The Chino Police Department recognizes that, as the City expands with annexation and development of the project site, it will be necessary to increase facilities, equipment, and staff. The City and the Police Department have begun a joint effort of thoroughly identifying all resources necessary to extend its current high level of service to the project area. The Department has identified needs in personnel, equipment, vehicles, and facilities.

The proposed specific plan addition of dwelling units and commercial and industrial square footage will increase the City's population by 33,249 people, thereby affecting police services. Using the existing police staffing level of 134 sworn officers per one thousand population, the Chino police force will need to grow by approximately 45 new police officers to meet the increased demand. It will also need to expand its current facility or build an additional one. One approach considered by the Police Department, and outlined in the Chino Police Master Facilities Plan[5], will be enlargement of the current police department facility at City Hall by an additional 21,888 square feet, with possible additional expansion. Currently, the department facility is 42,132 square feet.

Until expansion of the existing department or creation of a new facility, the police department plans to establish a police sub-station housed at the Chino Airport, near the proposed plan area. This temporary substation will give immediate aide to the proposed plan area and could become a permanent sub-station. Alternatively, The Preserve Plan includes a Community Core (125 acres) with areas available for civic uses, possibly including a future police substation. The City and Police Department will determine the most appropriate long-term solution for providing police services to the plan area.

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[4] Sources: Written response from Stuart A. Jones, Professional Standards Sergeant, Chino Police Department, February 2001.

[5] Source: Written response from Lt. Mike Johnson, Chino Police Department, August 2001.

To mitigate the short-term need for additional police resources in the plan area, the City of Chino and the Police Department have implemented long-term budgetary strategies to ensure availability of necessary resources, as the project area develops. Capital costs to provide additional facilities and improvements to serve The Preserve Specific Plan area will be funded by impact fees and have been estimated as part of the Draft Financing Plan for the project. Operations and maintenance costs are the responsibility of the City. The fiscal analysis indicated that additional police services would be covered by General Fund revenues accruing to the General Fund as a result of the proposed development. Therefore, with implementation of specific service plans pursuant to these strategies, the proposed plan impact on police resources will be less than significant.

Pursuant to City requirements and standard conditions, the Chino Police Department will be consulted during site planning and design to ensure that adequate provisions for law enforcement protection/prevention are designed into the project. No significant security impacts are anticipated.

Cumulative Impacts

Buildout of the project area, by increments of development, will contribute to a significant cumulative impact on police services.

Mitigation Measures

PS-P-1 Police impact fees shall be paid to cover capital costs associated with the creation of additional facilities and improvements to service The Preserve area. The City of Chino may allow credit toward impact fees for any police facilities constructed by the developer.

Levels of Significance after Mitigation

Provided that impact fees are paid to cover police facilities and improvement costs and adequate funding is made available to increase existing law enforcement services in the City, buildout of the proposed plan will result in a less than significant impact to police services.

5.11.3 FIRE SERVICE/EMERGENCY MEDICAL SERVICE

Existing Conditions

Fire Services

The Chino Valley Independent Fire (CVIF) District currently serves the City of Chino, including surrounding Subarea 2. Service includes fire suppression, paramedic/EMS, urban search and rescue

(USAR), hazardous materials emergency response, and fire prevention services. The headquarters is located at 2005 Grand Avenue in Chino Hills. There are currently no stations within the project area.

Fire service is currently provided to the project area by Station 2, located at 5551 Butterfield Ranch Road, Chino Hills, and Station 3, located at 7000 Merrill Avenue at the Chino Airport. Both stations are within 5 miles from the site. At any time, 6 fire stations, 3 in Chino and 3 in Chino Hills, staffed with a total of 27 firefighters and 3-4 staff per unit may provide service to the project area. Station 2 is staffed with 4 firefighters and equipped with 1 paramedic engine, and Station 3 is staffed with 4 firefighters, and equipped with 1 paramedic engine and 1 water tender. Because Subarea 2 currently has no water supply infrastructure for fire protection, a water tender, dispatched from Station 3, provides the supply. Table 5.11-4 lists the station number, locations, equipment, and current personnel per 24-hour shift for the two stations nearest the plan area.

TABLE 5.11-4
FIRE DEPARTMENT RESOURCES IN THE VICINITY OF THE PROJECT AREA

Station No.	Address	No. of Staff	Equipment
2	5551 Butterfield Ranch Rd, Chino Hills	4	1 Paramedic-Engine, 1 Water Tender
3	7000 Merrill Ave, Chino	3	1 Engine

The Fire District has not adopted a "population to fire department personnel" standard, though its staffing level is below the state standard of .35 on-duty firefighters per 1000 population.

Portions of the plan area below the old El Prado Dam inundation line (approximately the lower 1/3 of the plan area) are contained within unincorporated San Bernardino County lands designated as a State Responsibility Area (SRA) for wildland fire protection (as mapped by the California Department of Forestry and Fire Protection for the San Bernardino Unit; 6/2000). Property within an SRA that is annexed into an incorporated city transitions from State to local jurisdiction. Historically, the State has retained responsibility for wildland fire protection, but the affected city is required to pay fees to the State Department of Forestry & Fire Protection for providing continued protection.

Emergency Medical Services

The Chino Valley Independent Fire (CVIF) District currently provides emergency medical services (EMS) to the Chino Preserve. The closest station with EMS capabilities is Station 3, located at 7000 Merrill Avenue, Chino.

Average driving response times from Station 2 and 3 to the intersection of Pine Avenue and Grove Avenue, within the proposed project site at Chino Preserve, is 6:40 and 5:20 minutes, respectively.

All fire stations that may serve the Preserve Specific Plan Area are listed in Table 5.11-5. The Fire District Master Plan aims to achieve a driving response time of under 4 minutes. A mutual aid agreement is established with the City of Ontario's fire department in the event that resources are needed, if resources are available.

TABLE 5.11-5
CITY OF CHINO
THE PRESERVE CVIFD FIRE STATIONS AND RESPONSE TIMES

Station No.	Location/Cross Street	Status	To Pine Ave/Grove Ave. Response Time (min.)[1]
61	13251 Central Ave, Chino	Existing	N/A
62	Butterfield, Chino Hills 5551 Butterfield Rand Rd	Existing	6:40
63	7000 Merrill Ave, Chino Chino Airport	Existing	5:20
64	16231 Canon Ln, Chino Hills	Existing	N/A
65	12220 Ramona Ave, Chino	Existing	N/A
66	13707 Peyton Dr, Chino Hills	Existing	N/A

[1] The CVIFD Master Plan provides for a 4 -minute response (driving) time.
Source: Stanley R. Hoffman Associates, Inc., June 2001; Chino Valley Independent Fire District.

Threshold of Significance

The impacts of the proposed project will create an adverse significant impact if fire suppression, fire protection, and emergency medical service demands exceed the capabilities of the Chino Valley Independent Fire District (CVIFD).

Project Impacts

Buildout of the proposed project will entail development of 9,779 dwelling units; 10,238,744 square feet of business use (Community Core, Light Industrial, Airport Related, Regional Commercial, and Neighborhood Commercial); 597 acres of Public Facilities and Right-of-Ways; and approximately 3,000 acres of Open Space (Recreation, Agriculture, and Natural Open Space).

This new development and associated increased activity in the plan area will create additional fire service needs, and will place a significant burden on the Fire District to maintain sufficient resources and response times for all fire and medical emergency calls. In accordance with the Fire District's Master Plan, the District maintains that the addition of 1 new fire station containing adequate equipment and personnel to meet demand, will be needed to reduce fire safety impacts to less than significant levels.

Additionally, according to the CVIFD, the relocation of Station 3 closer to the project area should be be undertaken to accommodate development of the Preserve Specific Plan area, before commencement of development in the plan area.

Chino Valley Independent Fire District charges construction fees for projects based on square footage of commercial and industrial developments and number of residential dwelling units. The City of Chino currently assesses development impact fees to help pay for new fire facilities and equipment. The fees under the 2001 rate schedule, are 626.93 per acre per residential property, $1,567.81 per acres per industrial property, and $1,568.72 per acre per commercial property.[6] Development impact fees for the project area are currently being evaluated.

The portion of the plan area designated as a State Responsibility Area (SRA) for wildland fire protection will transition from State to local jurisdiction upon annexation into the City of Chino. The City of Chino would then contract with the State Department of Forestry & Fire Protection to maintain existing levels of wildland fire protection through the continuing availability of specialized equipment and resources such as fire crews and aircraft. No significant wildland fire protection impact is anticipated.

Operations and Maintenance Costs

The CVIFD is responsible for ongoing O & M costs related to the operation of all fire stations. The CVIFD receives a 15.2 percent share of the basic 1 percent property tax levy in The Preserve Specific Plan area that will be used to pay for annual O & M costs. The CVIFD would continue to receive this share of the growth in property tax revenues upon annexation of The Preserve.

"A possible fire station location is north of Kimball Avenue on the Chino Airport property. Providing a fire facility, apparatus and equipment, and payment of City fees will offset impacts on fire resources and services such that project impacts will be less than significant."

Recycled water will not be used as a source of water for fire protection services. The proposed potable distribution system is designed for the conditions of maximum day demand with fire flow and peak hour demand. The update to the Water Master Plan (WMP) indicated that an emergency storage of 6.1 MG and fire protection of 0.5 MG were incorporated into the plan for future distribution system and facilities. These sources will be maintained in potable water reservoirs.

[6] Source: Public Works Department Fee Schedule, City of Chino, 2001.

Cumulative Impacts

Chino Valley Independent Fire District will be expanding fire service capabilities to meet cumulative demands, consistent with its fire services master plan. With payment of fire fees and provisions for a new fire facility, apparatus and equipment, the plan area's incremental contributions to cumulative fire impact will be mitigated to a less than significant level.

Mitigation Measures

PS-F-1 Developer impact fees shall be paid to contribute to the cost of new fire facilities, apparatus, and equipment, to offset the increase in fire services demand created by the project.

PS-F-2 The City of Chino shall coordinate with the Fire District to assure construction of a new fire station to serve the proposed project. The fire station shall be constructed and ready for Fire District occupancy prior to the issuance of the 1,350th building permit for the proposed project. The station location may either be within the project site or at Chino Airport, subject to agreement by San Bernardino County Department of Airports. The station shall be adequately attenuated from noise effects of airport operations.

PS-F-3 Prior to construction, the developer shall contact the Fire District for verification of current fire protection development requirements. All new construction shall comply with all applicable statutes, codes, ordinances, and/or Fire District standards.

PS-F-4 Water lines within the project site shall be designed to meet the fire requirements.

PS-F-5 Fire hydrants shall be designed and placement specified by the Fire District at the time water lines to the project area are built or as a condition of development project approval.

PS-F-6 Upon annexation of the plan area, the City will be responsible for payment of services to the State Department of Forestry & Fire Protection rules and standards for wild land fire areas still receiving State protection.

Level of Significance after Mitigation

The implementation of the aforementioned mitigation measures for fire facilities and services will result in a less than significant impact.

5.11.4 LIBRARY SERVICES

Existing Conditions

The City of Chino is currently serviced by the Chino Branch Library facility located at 13180 Central Avenue. The Chino Branch Library is owned by the City of Chino with library services provided by

San Bernardino County Library. The San Bernardino County Public Library provides library service to all unincorporated areas of the County and 19 cities, including Chino. Currently, library service is provided at 28 existing branch libraries, including the Chino facility. The Chino Branch is open 56 hours per week and houses approximately 60,000 materials in its collection, including books, cassettes, CDs, and periodicals. According to The County, based on population records from the California Department of Finance, January 2000, the Chino Library serves a citywide population of 66,700.

The Division of Library Development Services of the State of California currently uses the state average of .35 square feet of library facility per capita and 1.5 volumes per capita as standard. Chino Branch Library encompasses 10,600 square feet, serving a population of 66,700.[7] Its library space utilization thus equates to .16 square feet per capita. The current City library facility does not adequately service the current City population, and could not therefore adequately serve the additional population of The Preserve Specific Plan area at buildout.

Similarly, for books, there are an existing 60,000 volumes in the library. Based on the standard of 1.5 volumes per capita, there is enough existing capacity to serve a population of about 40,000. As with facility size, the current library volumes resources of the Chino facility do not adequately serve the current City population, and could not therefore adequately serve the additional population of The Preserve Specific Plan area at buildout.

Currently, there are no library capital requirements identified for the Preserve Specific Plan Area. Ongoing operation and maintenance (O&M) costs for existing or new libraries are covered through property taxes and library fees and charges. The County library receives a share of the basic 1 percent property tax levy that will be used to pay for annual O&M costs. This share is estimated at 1.4 percent of the basic 1 percent levy. This will reduce impacts to library services.

Threshold of Significance

A project is considered to significantly impact library services if the existing or planned facilities, resources, and services will not adequately meet future population demand.

Project Impacts

Buildout of the proposed Plan will result in approximately 9,779 new dwelling units and 33,249 new residents. As a result, Chino Library and the services it provides will be substantially affected. Based

[7] Source: Written response from Patricia Laudisio, Library Facilities Manager, San Bernardino County Library, March 2001.

on the current deficient library space utilization of .16 square feet per capita, approximately 5,319 additional square feet of library space will be needed to serve the plan area population. However, based on a minimum space standard of .35 square feet per capita, 33,249 new residents will require 11,637 additional square footage of library space. Since existing library resources and services do not meet current residential demands, buildout of the Plan will exacerbate the problem. Although the plan area community core will include approximately 10 acres for civic-related uses, including space for a potential branch library, County Library anticipates having no additional funds to provide for capital improvements to meet plan area demand, due to past property tax shifts. Therefore, the proposed project has the potential to place significant demands upon library facilities and services.

Cumulative Impacts

The proposed project will contribute to significant cumulative demands on library facilities and services within the City of Chino.

Mitigation Measures

PS-L-1 The proposed project should address the need for additional library facilities and library services, by providing space; funding or other financing mechanism for library construction.

PS-L-2 Project developers should contribute impact fees either toward expansion of existing library facilities or construction of new facilities.

Level of Significance after Mitigation

With implementation of proposed mitigation measures impacts are less than significant.

5.11.5 PARKS AND RECREATION

Existing Conditions

The City of Chino maintains 16 parks totaling 238 acres, of which 79.5 acres exist as undeveloped open space. The closest City Park to the plan area is Ayala Community Park, located at the southeast corner of Edison and Central Avenue. The City's standard for parks and recreational facilities, as per the Quimby Act, is 3 acres per 1000 residents. The City currently more than meets this standard with approximately 4 acres per 1000 population devoted to parkland.

The San Bernardino County Department of Public Works, Regional Parks Division, operates and maintains one regional park adjacent to and partially in the project area—Prado Regional Park. Prado Regional Park encompasses approximately 2,200 acres within the Prado Flood Control Basin. The

park consists of a golf course, Olympic shooting park, Prado stables, archery range, dog training facility, and air park, along with a network of recreational trails. Additionally, Prado Park offers RV and primitive camping, sports fields, an equestrian center and trails, hiking trails, kid's playgrounds, picnic facilities, and seasonal fishing.

Threshold of Significance

A significant impact would occur if the project's park and recreational demands would substantially degrade current parks and recreation facilities or if the construction or expansion of recreational facilities would have an adverse effect on the physical environment.

Project Impacts

Community Parks and Recreation

Buildout of the plan area will permit an additional 9,779 dwelling units, increasing the population by approximately 33,249 residents. Based on the City's existing parkland development standard of 3 acres per 1,000 population, the development of approximately 100-acres of local park and recreational facilities will be required to accommodate the increased population at buildout. The proposed plan accounts for this requirement by allocating 100 acres of community and neighborhood parks within the residential areas of the plan area. Therefore, no significant local park impacts will occur.

The final locations and sizes of the parks within the 100-acre proposed park system will be determined upon approval of final tract or parcel maps, and may contain some combination of public parks and private recreation facilities.

Three of the park sites may be developed jointly with two elementary schools and one K-8 Learning Center. The intent is to maximize joint use opportunities for meeting a variety of recreational and athletic program needs within The Preserve.

The proposed plan also potentially provides for an additional 2,643 acres for community and regional open space, potentially available for passive recreation opportunities (Table 5.11-6). Refer to Land Use, Section 5.1 for a description of individual land use designations.

TABLE 5.11-6
COMMUNITY AND REGIONAL OPEN SPACE ACREAGE

Open Space Designation	Acreage
Open Space-Recreation (OS-R)	423 ac
Open Space-Water	62 ac
Agricultural/Open Space-Natural (AG/OS-N)	518 ac
Open Space-Natural (OS-N)	1640 ac
Total	**2,643 ac**

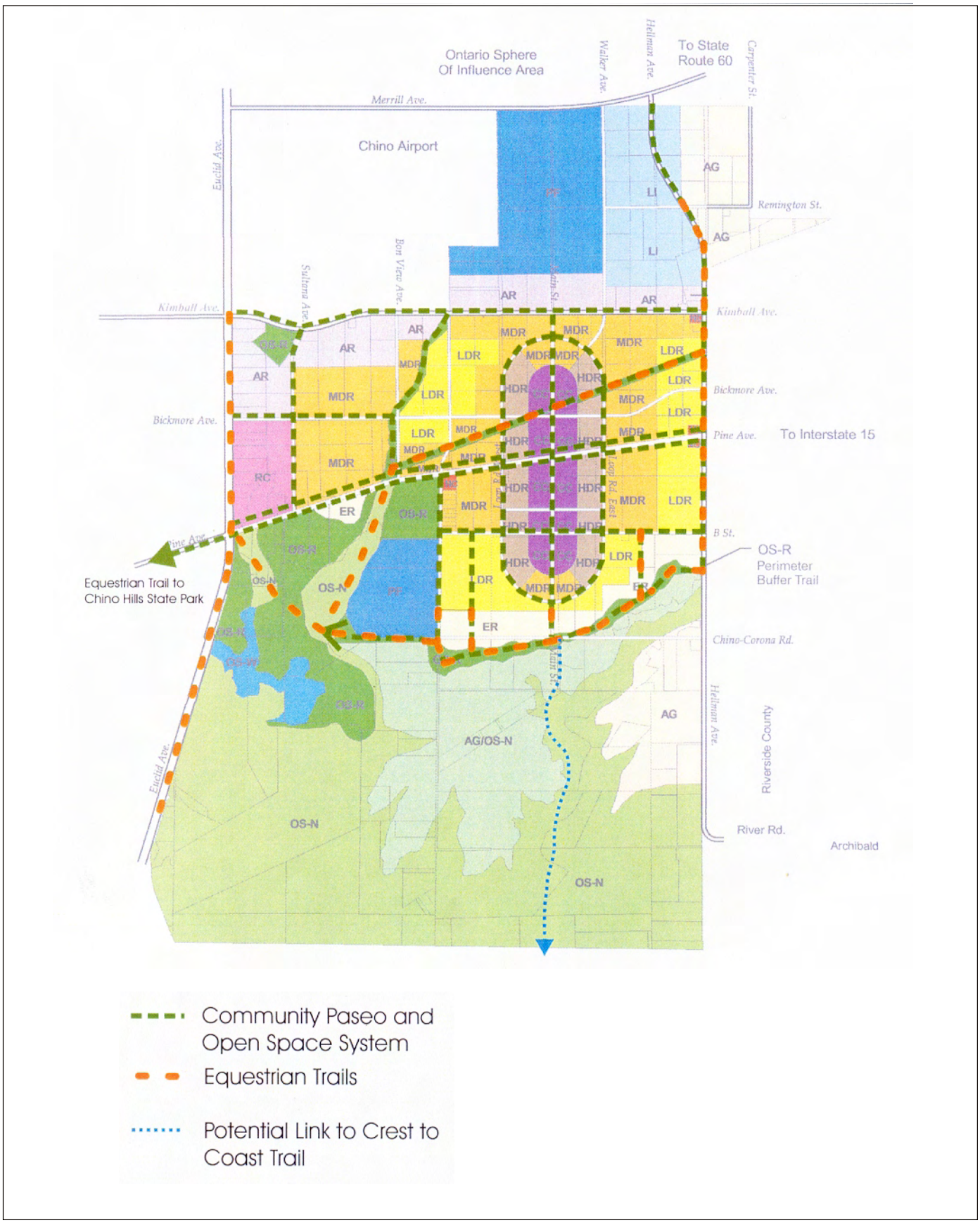
Active recreational facilities may be accommodated within the Open Space-Recreation (OS-R) designation. The Open Space Natural (OS-N) designation will allow for an urban wilderness or nature park, including habitat and passive recreational uses, in the southern area of the plan area. Facilities within any of the open space designations must be designed and located with consideration for biological and other natural resource constraints as well as constraints for development below the 566 foot elevation. Planned recreational trails (bicycle and equestrian) provide opportunities to link the major land uses above the 566-foot elevation with regional recreational facilities (e.g. Chino Hills State Park, the Crest-to-Coast Trail) ,without significant intrusion or impact on the natural open space system(see Exhibits 5.11-1 Bicycle Plan and 5.11-2 Equestrian Plan).

In addition to the park acreage provided by the plan to offset the impact associated with the development, the City charges an 'Open Space' fee of $0.09 per square foot to commercial and industrial developments. Likewise, the City charges a park fee, per the Quimby Act, for all residential developments. Currently, fees for residences are: $3499 for single family, and $2719 for multi-family homes. Payment of this fee will further offset impacts on local parks in the plan area and City of Chino.

Prado Regional Park

Recreational use of Prado Regional Park and adjacent concession areas, including El Prado Golf Course, Prado Stables, Prado Olympic Shooting Park, Oranco Bowmen Archery Range, Prado Recreational Dog Training Facility, and the Prado Air Park, will increase with the proposed project, due to the increase in the population. Recreational demands on this county facility are a potentially significant impact of the proposed project. The County of San Bernardino currently has a parkland and open space deficit of 20,583 acres, countywide, which amounts to a density of 202 people per acre of park. The County's ideal population per acre of park is 59/acre[8].

[8] Source: Written response from Phil Krause, Park Planner II, County of San Bernardino, April 2001.



SOURCE: The Preserve Final Draft Specific Plan, September 2001.

NORTH

NOT TO SCALE

Michael Brandman Associates

Exhibit **5.11-2**

Equestrian Plan

Cumulative Impacts

Buildout of the planned area and cumulative projects is expected to increase demands for parks and recreational facilities in the plan area. As individual developments are phased within the plan area, park and recreational facilities are planned to be developed to meet the future needs of area residents. However, cumulative demands on county parks and recreational facilities are likely to be significant.

Mitigation Measures

PS-PR-1 As Per the City of Chino, every residential developer or person who develops land for residential purposes shall dedicate a portion of such land, pay a fee, or a combination of both at the option of the city for the purpose of providing park and recreational facilities at the time and according to City standards outlined in Chapter 18.04, "Land Dedication Requirements Generally.

PS-PR-2 The City of Chino will coordinate with San Bernardino County to assure that traffic, access control and safety needs of Prado Regional Park are met, and that the impacts of implementation of the proposed project on Prado Regional Park facilities are minimized to the extent practical. A Traffic and Access Control plan may be a component of this collaboration. The City will also assure through subsequent development reviews, that project-related drainage does not adversely effect the park and Prado Lake.

Level of Significance after Mitigation

The proposed project will not significantly increase cumulative demands on local parks as it accommodates project-generated park space needs required by the Quimby Act. This dedication of 100 acres to community and neighborhood parks, coupled with the developer's payment of residential park fees, will reduce project impacts on park space to less-than-significant.

The project will contribute to increase cumulative demands upon Prado Regional Park and its facilities. However, plan area residents will pay park entry fees for access to and use of regional park facilities. Such fees will be used by the County to defray operations and maintenance costs at Prado Regional Park, reducing the effects of cumulative demand on Prado Regional Park.

5.12 UTILITIES—WATER, WASTEWATER, ELECTRICITY, NATURAL GAS, WASTE MANAGEMENT, TELECOMMUNICATION

5.12.1 WATER SUPPLY

Information in this section is derived from the following sources, among others:

- City of Chino, *Water Supply Assessment* (7/19/02)
- Subarea 2—Chino Sphere of Influence, *Water Master Plan,* Final Draft of Technical Memorandum (2/02)
- City of Chino, Urban Water Management Plan Update (1/02)

The Water Supply Assessment, located in EIR Appendix I, contains a detailed analysis of water supply and source reliability to the City and the proposed project, The Preserve (Subarea 2).

Analysis of water demand and supply projections for the City, including Subarea 2, demonstrates that projected supplies exceed demand through the year 2022. These projections consider land use, water development programs and projects, and water conservation. This analysis shows that desalted water and recycled water use will be increased, while groundwater and imported water use will remain stable. Also, recycled water will supply certain areas currently supplied with potable water, and desalted water will supply certain areas currently using available groundwater and imported water.

Reliability of future water supplies to the region will be ensured through continued implementation of the Optimum Basin Management Program (OBMP) by the Chino Basin Watermaster (Watermaster), an agency of the Court appointed to implement the OBMP mandated by the Court under its continuing jurisdiction and supervision, as part of the Physical Solution imposed by the Judgment in the Chino Basin adjudication suit (Judgment); implementation of local agency programs and cooperative efforts and programs of local agencies, including: all water retailers within the Chino Basin; Watermaster; Inland Empire Utilities Agency (IEUA); Metropolitan Water District of Southern California (MWD), Santa Ana Regional Water Quality Control Board, Santa Ana Watershed Project Authority, Chino Basin Water Conservation District and Chino Basin Desalter Authority.(CDA).

The following discussion summarizes existing water supply and demand in Subarea 2, identifies applicable legislation, analyzes the proposed project impacts relative to water supply and demand, and proposes mitigation measures. For a comprehensive analysis of these issues, reference the Water Supply Assessment in Appendix I.

Existing Conditions

Water Supply, Sources and Water Demand

Water Supply

The Metropolitan Water District of Southern California (MWD) provides imported water supplies to Inland Empire Utilities Agency (IEUA). MWD is the wholesale water agency that serves supplemental imported water from northern California (State Water Project) and the Colorado River to 27 member agencies located in portions of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties. IEUA is the wholesaler of imported water for MWD, and the City of Chino is a member of IEUA. IEUA wholesales the water to the City of Chino through the Water Facilities Authority-Joint Powers Agency (WFA).

The City of Chino currently receives water from the following primary water supply sources: 1) naturally recharged groundwater, 2) imported water, 3) desalted water and, 4) recycled water. The City receives approximately 38 percent of its water supply from groundwater wells accessing the groundwater of the Chino Water Basin and 40 percent of its water supply from imported water from the Metropolitan Water District of Southern California via the Water Facilities Authority-Joint Powers Agency through the Inland Empire Utilities Agency. Additionally, the City currently receives about 20 percent of its supply from desalted water from the Chino I Desalter and 2 percent of its supply from recycled water from the Carbon Canyon Wastewater Reclamation Plant. Current and planned improvements of the Chino I Desalter and Carbon Canyon Wastewater Reclamation Plant facilities, plus construction of the new Chino II Desalter facilities will increase the availability of recycled and desalted water for use by the City (see Table 5.12.4).

The City of Chino currently provides water service to an area of approximately 16.5 square miles and to approximately 14,395 customers. There are minimal portions currently not served by the City that extend beyond the westerly and southwesterly (Chino Hills) boundary of the water service area. The City currently does not supply The Preserve planning area with water, with the exception of the airport, located north of Kimball Avenue and west of Grove Avenue, and another area of approximately 220 acres. All other water in Subarea 2 is supplied by private wells.

Groundwater

The Chino Groundwater Basin provides the groundwater used to service the City of Chino. The Basin consists of about 235 square miles in the upper Santa Ana River Watershed. The Basin is a relatively flat alluvial valley from east to west and slopes from north to south at a one to two percent grade. Basin elevations range from about 2,000 feet in the foothills below the San Gabriel Mountains to about 500 feet near Prado Dam. The Chino Groundwater Basin stores approximately 5 million acre-feet (af) of groundwater and has the capability of storing an additional 1 million acre-feet. The

legally designated annual safe yield from the Basin is 140,000 acre-feet, which is the amount of groundwater that can be pumped from the Basin each year while maintaining adequate groundwater levels.

The City's current adjudicated water rights to the groundwater in the Chino Basin, based on a share of Safe Yield of the Basin, is 4,034 af per year. Additional water rights have been and will continue to be received from reallocations of Early Transfers and Land Use Conversions, pursuant to the Judgment, Peace Agreement between the producers from the Basin, and adopted Rules and Regulations of Watermaster . For fiscal year (FY) 2001/02, the total amount of water rights available to the City from these reallocations is 5,125 af. Thus, the City currently has total rights to water of 9,159 afy for FY 2001/02.

Chino Land & Water Co. Inc., a corporation formed in 1995, has asserted ownership of some undefined, unquantified and unsubstantiated prior water rights to groundwater in the Chino Basin appurtenant or incident to 35,000 acres overlying the Chino Basin, including the proposed project. However, legal counsel for the City of Chino believes such assertion is without merit.

The City of Chino currently has one connection to the MWD imported water delivery system, located in the City of Upland. At that location, MWD's Rialto Branch of the Foothill feeder delivers water to the Agua de Lejos Plant for treatment of 81 MGD of State Water Project water. The Water Facilities Authority (WFA), comprised of 5 member agencies, including the Monte Vista Water District, the cities of Upland, Ontario, Chino Hills, and Chino, then treats and delivers this water to these 5 member agencies.

The City of Chino is entitled to 5.9 percent of the WFA Agua de Lejos plant capacity (5,357 afy or 4.78 mgd). However, the City regularly takes up to 7.0 percent of the capacity, and plans to continue this level of imported supply. The City can take delivery of more than its entitlement when other WFA members are not taking delivery of their full entitlements. Historically, there always has been unused capacity available, and Chino always has had the opportunity to meet its water demands through purchase of additional WFA imported water. Development of local water supply programs has increased, and continued opportunity for purchase of an increased amount of such unused capacity is anticipated.

Water supply reliability is a primary goal of the Optimum Basin Management Program (OBMP) currently being implemented by Watermaster pursuant to court order. As a result, the amount of imported water available to the City from groundwater in the Basin, and the reliability of that supply is anticipated to be increased by the 33,000 acre-foot "dry year yield" program by Watermaster and MWD scheduled for final approval by December 31, 2002; an additional 400,000-500,000 acre-foot imported water storage and recovery program pursuant to a currently outstanding RFP of Watermaster; an additional annual 50,000 acre-foot recharge of groundwater from imported water

pursuant to the Recharge Master Plan adopted by Watermaster; and further increases of 18,000-23,000 acre-feet per year in the Safe Yield of the basin from storm water recharge and 18,000-23,000 acre-feet per year in the Safe Yield of the basin from recharge of recycled water produced in excess of the existing contract rights of effluent contributors.

Reliability of future imported water supply from MWD also is assured beyond reasonable doubt. Although the amount of imported water available to it from the Colorado River ultimately will be reduced to accommodate the rights of other states to such water, MWD has assured its ability to provide future water service by construction and operation of its East Side or Diamond Valley Lake Reservoir, and a variety of groundwater storage and recovery and other programs to reduce the demand for such imported water. *MWD has taken the lead on drought planning for the southern California region. In 1999, MWD developed the Water Surplus and Drought Management (WSDM) Plan. This plan addresses both surplus and shortage contingencies. IEUA, and the City of Chino as a member agency of IEAU, have adopted and follow the MWD WSDM Plan. Each year, MWD considers the level of supplies available and the existing levels of water in storage to determine the appropriate management stage for that year. Each stage is associated with specific resource management actions designed to avoid an Extreme Shortage to the maximum extent possible and minimize adverse impacts to retail customers should an Extreme Shortage occur. MWD's resource management will allow shortages to be mitigated without impacting municipal and industrial customers, except in severe or extreme shortages or emergencies. MWD's extensive analysis of system resources demonstrated that the expected occurrence of a Severe Shortage is four percent or less in most years and it never exceeds six percent. This equates to an expected shortage occurring once every 17 to 25 years.*

MWD tested the WSDM Plan by analyzing its ability to meet forecasted demands. The results indicated 100 percent reliability for full-service non-discounted demands through the forecast period under foreseeable hydrologic conditions. To determine the data presented in Table 5.12-1, MWD examined the hydrologic record and its impacts on the supply/demand balance to find the worst three-year sequence of 1990-1991-1992 for its service area.

TABLE 5.12-1
MWD DEMAND/SUPPLY BALANCE
MULTIPLE-DRY YEAR, SINGLE-DRY YEAR, AND AVERAGE YEAR

Scenario	Near Term			Long Term			
	2001	2002	2003	2005	2010	2015	2020
Multiple Dry Years							
Demands							
Retail	4.19	4.05	3.99	4.16	4.40	4.65	4.94
GW Replenishment	0.18	0.17	0.16	0.17	0.17	0.17	0.18
Total	**4.37**	**4.22**	**4.15**	**4.33**	**4.57**	**4.82**	**5.12**
Supply							
Local	2.05	2.04	2.06	2.13	2.32	2.46	2.55
Metropolitan	2.32	2.18	2.09	2.20	2.25	2.36	2.57
Total	**4.37**	**4.22**	**4.15**	**4.33**	**4.57**	**4.82**	**5.12**
Single Dry Year							
Demands							
Retail	4.04			4.21	4.46	4.71	5.03
GW Replenishment	0.17			0.17	0.17	0.18	0.19
Total	**4.21**			**4.38**	**4.63**	**4.89**	**5.22**
Supply							
Local	2.28			2.47	2.66	2.80	2.90
Metropolitan	1.93			1.91	1.97	2.09	2.32
Total	**4.21**			**4.38**	**4.63**	**4.89**	**5.22**
Average Year							
Demands							
Retail	3.91			4.07	4.31	4.55	4.85
GW Replenishment	0.16			0.16	0.16	0.17	0.18
Total	**4.07**			**4.23**	**4.47**	**4.72**	**5.03**
Supply							
Local	2.18			2.33	2.52	2.64	2.73
Metropolitan	1.89			1.90	1.95	2.08	2.30
Total	**4.07**			**4.23**	**4.47**	**4.72**	**5.03**

Source: The Regional Urban Water Management Plan for the Metropolitan Water District of Southern California, December 2000

Notes:
1. "GW" in table refers to Groundwater; MWD supplies include imported supplies, storage programs and transfers
2. Multiple Dry Years for 2001-2003 are based on the worst three-year sequence from the historical hydrologic record (1990-1991-1992)
3. Single Dry Year is based on the single worst year from the historical hydrologic record (1977)
4. Average Year is based on the average over all years in the historical hydrologic record (1922-1998). In average years, MWD will be adding water to storage, but the additional water supplies are not reported in this table.

Using its resource simulation model IRPSIM, MWD projected the three-year water supply situation, including climate and watershed conditions, on the projected demands for 2001-2002-2003. The model simulated the supply, demands, and the operation of MWD's system to determine its ability to meet those demands. The simulation showed that, despite using the worst three-year sequence of hydrology, MWD would meet its demands through a combination of imported supply, withdrawals from storage programs, and transfers. The same model was used for a single dry year, and again, the simulation predicts that MWD would meet its demands under the single worst dry year scenario. The simulation also showed that MWD would be able to meet all full-service, non-discounted demands during average conditions. In fact, in average years MWD would be adding water to storage, but the additional water supplies are not reported in Table 5.12-1.

To safeguard the region from a catastrophic loss of water supply, MWD and its member agencies have made and are continuing to make substantial investments in emergency storage and interconnections with adjacent water purveyors. MWD's emergency plan assumes that demands are reduced 25 percent from the 2020 baseline demand forecast through extraordinary conservation, while the local supplies are largely undisrupted. With few exceptions, MWD asserts it can deliver emergency supply from its East Side or Diamond Valley Lake Reservoir throughout its service area via gravity, thereby eliminating dependence on power sources that could also be disrupted by a major earthquake. MWD's WSDM Plan will guide management of available supplies and resources during an emergency.

IEUA recently completed its emergency response plan for its service area. IEUA expects to meet emergency demands within the region through extraordinary conservation and groundwater pumping measures. Multiple sources of power exist within the service area making any electrical shortages a temporary disruption. In addition, IEAU is pursuing additional mutual aid agreements between local retail agencies.

Recycled Water

The City of Chino recycled water supplies are received predominantly from the Carbon Canyon Water Recycling Facility (CCWRF), which has a current capacity of 10 mgd or 11,205 afy of reliable non-potable recycled water. CCWRF treats an annual average of 8 mgd or 8,964 afy. The City currently provides approximately 350 afy of recycled water to 45 customers. Total CCWRF recycled water supply use equals only 24 percent of the total effluent flow.

Based on current regional recycled water production of 65,000 afy, which is expected to increase to 89,000 afy by 2020, and current annual regional recycled water use at approximately 5,600 afy, projected to increase to 71,100 afy by 2020, the City of Chino will have sufficient opportunity to take delivery to meet their projected recycled water demand of 7,700 afy by 2022. The City has the existing contract right to purchase a portion of this additional unused recycled water capacity equal

to its contribution of effluent, plus a yet undetermined additional portion of the remainder of this unused capacity which is not used for Basin recharge. IEUA also assumes responsibility for delivery of recycled water to the Chino Groundwater Basin for recharge.

Recycled water recharge for the year 2000 was approximately 500 af. By the year 2020, it is projected that 28,000 afy of recycled water will be recharged. Recharged recycled water is credited to the signatories of the Regional Sewer Service Contract, based on the percentage of wastewater flow delivered to the Regional Reclamation Plants by the respective agencies. This provides additional groundwater pumping rights calculated annually as stored water credits. In FY 2001-02, the City of Chino received 51.1 af (1/10 of the total af recharged) of water rights as a result of recycled water recharge activity.

Desalter Water

The existing Chino I Desalter facility is located in the City of Chino and is owned and operated by the CDA, a joint powers agency comprised of the cities of Chino, Chino Hills, Ontario and Norco, the Jurupa Community Services District and the Santa Ana River Water Company, a mutual water company, as voting Members, and IEUA as a non-voting ex-officio Member.The Chino I Desalter currently is operated under 1) "take-or-pay" limited recourse agreements with the CDA voting Member purchasers of the water; payable from water service revenues; 2) an agreement with MWD subsidizing the Desalter to reduce the cost of the water from the Desalter compared to uninterruptible treated imported water; and 3) an agreement with the Watermaster, all groundwater producers, Kaiser Ventures, Inc., and the California Regional Water Quality Control Board, Santa Ana Region, regarding replenishment obligations for operating the Desalter. Construction of the Chino I Expansion facilities and the new Chino II Desalter facilities by the CDA have been fully funded with the $100 million proceeds of a bond issue on February 26, 2002 by the CDA, and $48 million of State Proposition 13 bond proceeds; and are scheduled for completion by December of 2003, and May of 2004, respectively.

The City of Chino currently is contractually committed to purchase a minimum of 3,000 afy of Desalter water from the Chino I Desalter facility. However, completion of the Chino I Expansion facility and the new Chino II Desalter facilitywill increase the City's right and obligation to purchase an additional; 2,000 af/yr, for a total of 5,000 af/y, pursuant to a limited recourse obligation of the city to purchase this future production of desalted water from water service revenues. The current contract allows the City of Chino to obtain additional Desalter water if the Chino Basin Desalter is capable of producing more water than is necessary to satisfy the requirements of the purchasers. Under this contract, Chino could also be entitled to more than its percentage of desalted Water, if it remains available after offered to all purchasers up to the percentage of their original allocation. Chino also has the opportunity to negotiate the purchase of an indeterminate amount of additional desalted water from other entities that are subject to the "take-or-pay" obligation, but have optimized

other sources of water, and therefore do not need to take their full entitlement of desalted water. Completion of construction of the Chino II Desalter, scheduled for May of 2004, also will produce another 9.4 MGD or approximately 10,400 acre-feet per year of additional desalted water supply, which will reduce demand for use of groundwater by a corresponding amount. Water Demand

The City of Chino's current average water demand is approximately 15,145 afy (13.52 mgd). Table 5.12-2 shows the historical water demands for the City of Chino as reported in the IEUA Urban Water Management Plan Year 2000 Update.

TABLE 5.12-2
CITY OF CHINO HISTORICAL WATER DEMANDS (in afy)

	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00
Groundwater	9,074	8,893	8,765	7,286	3,014	8,530	9,373	10,231	8,821	10,081	9,694
Imported	378	3,692	3,180	4,705	6,266	4,108	4,322	4,325	4,182	4,071	5,451
Recycled											100

As indicated in the table above, the City's proportionate demand on groundwater is substantial. Among the key documents that govern the adjudication and management of the Chino Basin Groundwater are: 1) the 1978 Chino Basin Judgment, 2) the Peace Agreement, 3) the Optimum Basin Management Program (OBMP), and Watermaster Rules and Regulations. In essence, these documents appropriate water rights among the cities and water companies in the region.

Historical water demands in the MWD service area have increased from 3.1 million acre-feet (maf) in 1980 to 3.9 million acre-feet (maf) in 1990. Total water use is projected to grow from a projected 3.8 maf in 2000 to 4.8 maf in 2020. For the San Bernardino County service area, demands are projected to increase 50.6 percent between 2000 and 2020.

The City of Chino introduced recycled water into its system from the Carbon Canyon Water Recycling Facility (CCWRF) in FY 1998-99. In FY 1999-2000, the City used 368 af of recycled water, and projected recycled water use is expected to climb with the planned recycled water system improvements and marketing program. The Table 5.12-3 indicates the City's recycled water demands.

TABLE 5.12-3
CITY OF CHINO
HISTORICAL AND PROJECTED RECYCLED WATER DEMANDS (in afy)

City of Chino	98-99	99-00	2005	2010	2015	2022
Recycled Water Demand	100	368	1,000	3,400	5,200	7,700
Recycled Water as % of Total Demand	0.7%	2.3%	6.1%	17.1%	24.0%	31.3%

Source: IEUA Recycled Water System Feasibility Study, Final Draft, October 2001, and Water Master Plan, Subarea 2-Chino Sphere of Influence, Chino Agricultural Preserve Area, Final Draft of Technical Memorandum, February, 2002.

Current regional recycled water production is 65,000 afy, and is expected to increase to 89,000 afy by 2020. Current annual regional recycled water use is approximately 5,600 afy, and is projected to increase to 71,100 afy by 2020. Accordingly, the City of Chino would have sufficient opportunity to take delivery to meet their projected recycled water demand (See Table 5.12.3). Additionally, the City Urban Water Mangement Plan shows that all increases in future recycled water supplied will be prioritized, so that direct use (landscape and individual users) will receive recycled water before recharge programs are implemented. Also, the City will be entitlted to its fair share of the additional 24,000 afy of recycled water, after receiving its proportionate share based on its original allocation amount.

Overall demand and supply projections consider land use, development of groundwater programs, desalter expansion and development, and connection to recycled water sources. Demand projections also consider water savings resulting from plumbing codes, price effects, and actual and projected implementation of water conservation Best Management Practices. Based on these factors, as desalted water and recycled water use are maximized within the Chino Groundwater Basin in the future, the demand for groundwater and imported water supplies is anticipated to remain stable. Recycled water will help supply areas currently supplied with potable water, and desalted water will supply areas currently using available groundwater and imported water.

<u>Recent Water Legislation</u>

Senate Bill 221 (SB 221)

Senate Bill 221 (SB 221), chaptered into law October 9, 2001 prohibits approval of a tentative map, or a parcel map, or a development agreement for a subdivision of property of more than 500 dwelling units "…unless the legislative body of a city or county or the designated advisory agency provides written verification from the applicable public water system that a sufficient water supply is available or, … a specified finding is made by the local agency that sufficient water supplies are, or will be, available prior to completion of the project". A statement of the provisions that have been made for water is satisfied by submitting a copy of the written verification of the availability of a sufficient

water supply. This is known as a Water Supply Assessment. The proposed project is subject to SB 221, in part because the project would include phased development of more than 500 dwelling units.

Senate Bill 610 (SB 610)

Senate Bill 610 (SB610), also chaptered into law on October 9, 2001 requires additional information to be included as part of an Urban Water Management Plan (UWMP), if groundwater is identified as a source of water available to the supplier. Information must include a description of all water supply projects and programs that may be undertaken to meet total projected water use. The proposed project also is subject to SB 610 since the proposed project has identified groundwater as a source of water necessary to supply the proposed project's demands. The Water Supply Assessment in Appendix I includes a description of water supply programs that will be undertaken to serve the proposed project.

Existing Water Programs and Plans

Water programs and plans in effect in the planning area are listed below and described more fully in the Water Supply Assessment (Appendix I). Such programs and plans include, but are not limited to, the following:

- City of Chino Water Shortage Contingency Plan
- MWD Water Surplus and Drought Management Plan
- MWD Catastrophic Loss Planning Measures
- Regional Best Management Practices (BMP) Programs (implemented by IEUA)
- *Chino Basin Watermaster, Implementation Plan, Optimum Basin Management Program for the Chino Basin, June 2000*
- *City of Chino, Urban Water Management Plan Update, January 2002*
- *Inland Empire Utilities Agency, Urban Water Management Plan Year 2000 Update, December 2000*
- Metropolitan Water District of Southern California, The Regional Urban Water Management Plan for the Metropolitan Water District of Southern California, December 2000

Water Quality

Total dissolved solids (TDS) and nitrates are problems in Chino Basin groundwater. Refer to *Hydrology and Water Quality*, Section 5.3 and *Dairy Waste*, Section 5.12 for further discussion.

Threshold of Significance

The following criteria are adapted from the California Environmental Quality Act (CEQA) Guidelines Section 15083.5 for use in evaluating the significance of water supply impacts resulting from the proposed project. A project would typically result in a significant adverse water supply impact if it would:

- Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

- Have insufficient water supplies available to serve the project from existing entitlements and resources, or reasonably anticipated new or expanded entitlements.

Project Impacts

Impacts on Water Supply and Demand

A dual (potable and recycled) water system is planned for The Preserve to conserve potable water and make best use of available supplies. According to the City of Chino's Water Master Plan[1], The Preserve at buildout is determined to generate a need for 4,267.5 gallons per minute (GPM) (6.1 MGD) of potable water and 2,776.5 GPM (4.0 MGD) of recycled water. These figures are derived from quantifying the various future land uses of the project site and applying a representative value of water usage (water demand factors) for each type of land use designation.[2] Water demand associated with implementation of the proposed project is illustrated in the following tables, which demonstrate that current and projected water supply and demand for the City of Chino are adequate for the next thirty five years, including the proposed development of Subarea 2.

[1] Water Master Plan, Subarea 2—Chino Sphere of Influence, Chino Agricultural Preserve Area, Final Draft of Technical Memorandum, February 2001.

[2] The water demand factors were initially developed by comparing past water master plans prepared for five cities in the vicinity of Subarea 2. These preliminary factors were then compared to the values used in the City's 1992 Water Master Plan to deduce factors that will be reflective of future conditions. The values incorporate currently mandated conservation practices for water use, including: installation of low volume-flushing toilets; low-flow showerheads and faucets; and minimization of potable water use for commercial and industrial irrigation.

TABLE 5.12-4
PROPOSED PLAN ALLOCATED WATER DEMANDS

Land Use Category	Water Duty Factor (gpd/ac)	Potable Water		Recycled Water	
		Area (acres)	Demand (gpm)	Area (acres)	Demand (gpm)
Commercial					
Core Community (CC)	5,700	70.7	279.90	55.0	217.6
Regional Commercial (RC)	3,500	49.6	120.6	36.5	88.7
Neighborhood Commercial (NC)	3,000	4.4	9.2	4.1	8.5
Airport Related (AR)	3,000	153.1	319.0	111.4	232.1
Industrial					
Light Industrial (LI)	1,250	118.4	102.8	93.7	81.3
Open Space and Recreational					
Agricultural (AG)	2,900	0.0	0.0	345.1	695.0
Open Space-Commercial (OS-CO)	2,900	6.8	13.7	6.8	13.7
Open Space-Recreational (OS-R)	2900	244.9	493.2	164.3	330.9
Open Space-Natural (OS-N)	0	1,468.0	0.0	172.1	0.0
Open Space Water (OS-W)	0	0.0	0.0	61.6	0.0
Agricultural (AG), Open space Natural (AG/OS-N)	0	342.1	0.0	176.2	0.0
Public Facilities					
Public Facilities (PF) exc. DC[1]	2,500	201.3	349.5	82.3	142.9
Detention Centers (PF-DC)	0	103.9	0.0	9.8	0.0
Schools/Parks[2]	2,400	0.0	0.0	0.0	0.0
Roads	0	185.8	0.0	0.0	0.0
Residential					
Estate Residential (ER)	1,300	97.4	87.9	23.4	21.1
Low Density Residential (LDR)	3,600	236.2	590.5	83.2	208.1
Medium Density Residential (MDR)	4,600	410.9	1,312.6	165.4	528.4
High Density Residential (HDR)	7,600	111.4	587.9	39.5	208.5
Grand Total		**3,800**	**4,267.5**	**1,630**	**2,776.5**

[1] DC = Detention Center
[2] Since there is no land use designation for schools and parks; the demand has been incorporated into the demands for the other land use designations.

As discussed, the City's current daily demand is approximately 15,145 acre-feet per year (afy) or 13.52 million gallons per day (mgd). This demand is satisfied from groundwater and imported water, with current minimal desalted and recycled water supplies. Current and planned improvements will increase the use of desalted and recycled water supplies. The annexation and buildout of Subarea 2 will generate an additional build-out need of approximately 11,317 afy or 10.1 mgd of water. This

11,317-afy demand is projected from both potable and recycled sources based on use; 6,835 afy (6.1mgd) of potable water and 4,482 afy (4.0 mgd) of recycled water.

TABLE 5.12-5
CURRENT AND PROJECTED WATER DEMAND AND SUPPLY—CITY OF CHINO
(Including Proposed Project) (afy)

Water Sources	2000	2005	2010	2015	2022
Demand					
Potable City	14,977	15,700	13,910	13,290	13,088
Subarea 2	0	1,680	2,740	3,810	5,132
Recycled City	368	350	1,750	2,500	3,060
Subarea 2	0	325	650	1,350	2,330
Total Water Demand	15,345	18,055	19,050	20,950	23,610
Supply					
Groundwater	9,694	11,557	11,557	11,557	11,557
Desalted	3,000	5,000	5,000	5,000	5,000
Imported	5,451	5,357	5,357	5,357	5,357
Recycled	368	1,000	3,400	3,910	5,534
Total Water Supply	18,513	22,914	25,314	25,824	27,448
Surplus Supply	3,168	4,859	5,264	4,814	3,838

Demand Assumptions:
1. City Potable Demand: City of Chino Urban Water Management Plan Update, January 2002, demand projections included potable, but not recycled, Subarea 2 demand projections. Through year 2020, this Assessment allocates the City's UWMP demand projections between City and Subarea 2 potable, and City recycled water projections. .
2. Subarea 2 Potable Demand: Regional Water Quality Supply Plan from OBMP for years through 2020; straight line increase through Year 2022.
3. City Recycled Demand: Year 2000 is actual use; years 2005 through Year 2022 are based on completion of the Regional Recycled Water System by 2010 and additional efforts to connect customers; .
4. Subarea 2 Recycled Demand: Assumed slower demand in earlier development years, increasing significantly by year 2010 through buildout demand of 4,482 afy.

Supply Assumptions:
1. Groundwater: Year 2000 is actual use; years 2005-2022 include assigned water rights (4,034 afy), early transfer rights (2,413 afy), and conversion rights for Subarea 2 (5,110 afy). This amount assumes additional groundwater can be produced for an additional assessment on each acre-foot overproduced, limited to the Safe Yield of the Basin; groundwater replenishment expands the opportunity to overproduce.
2. Desalted: Chino I Desalter existing contract: 3,000 afy; Chino I Expansion: 2,000 afy; total contract after expansion by December 2003: 5,000 afy; more can be purchased if unused capacity is available.
3. Imported: Entitlement to WFA production water: 5.9% of plant 81 mgd capacity = 4.78 mgd (5,357 afy); more can be purchased if unused capacity is available.
4. Recycled: Year 2000 is actual use; years 2005-2020 use demand projections from the IEUA Recycled Water System Feasibility Study, Final Draft, October 2001, adjusted in years 2015 and 2020 to more reasonable City projections. Years 2010–2022 assume development of Regional Recycled Water Systems by 2010, which merges all the recycled water plants together, creating no maximum entitlement to recycled water. Therefore, supply will meet demand.

As indicated in Table 5.12-5, despite the increased water demand created by implementation of the proposed development in Chino Subarea 2, water supply is expected to continue to exceed demand through the year 2022.

Phasing of Subarea 2 development would occur over a 20-year period, intended to minimize impacts to local areas. Development phasing will originate in the north/northwest section near Kimball Avenue and Chino Airport, and progress in a generally clockwise fashion to the northeast, southeast, and finally to the southwest sector. This phasing is consistent with a logical progression of infrastructure from surrounding developed and developing areas to the north and west, and provides for a manageable phasing of water demand. Water demands for Subarea 2 are expected to be met almost entirely from sources that are currently being planned, developed and implemented, including desalter water, recycled water, and conservation programs. Groundwater demand could remain relatively stable throughout the forecast period with maximum use of these alternative sources. Therefore, current and forecasted water supplies are anticipated to be adequate to support the level of phased development proposed in Chino Subarea 2.

Impact on Water Sources and Facilities

The City's present potable water system is divided into an upper pressure zone and a lower pressure zone. The upper pressure zone is a pumped water system. The lower zone is gravity fed by pressure reducing valves in the vicinity of Walnut Avenue and Chino Avenue from the western City boundary to the eastern City boundary. For the purposes of the plan area, Subarea 2 will become a new pressure zone at a hydraulic grade of 780 ft above mean sea level in the potable water system.

Potable Water Sources

Based on allocated water demands in Table 5.12-4, the proposed project is expected to generate an average potable water demand of 6.1 MGD at build out. The Chino I Desalter, which currently is owned and operated by the CDA, will be expanded from its existing capacity of approximately 8.0 MGD to 12.46 MGD, of which approximately 4.5 MGD will be available to the City of Chino for supplying the Project area.

The remaining 1.6 MGD must be obtained from other potable water supply sources. The City will make up this 1.6 MGD outstanding water need by purchasing additional groundwater or imported water by taking advantage of the opportunities to increase supply to meet demand through the following measures: 1) production of groundwater over entitlement based on Safe Yield limitations; 2) increasing imported water purchases; 3) purchasing additional desalted water, if more is produced than is needed to satisfy the requirements of other purchasers. Collectively, these additional options will enable water supply to exceed water demand for the City of Chino now and into the future. Therefore, as reflected in the Water Supply Assessment, there are multiple sources of sufficient water

supply available to meet the entire 6.1 MGD demand associated with the proposed project, and therefore no significant impact would result from project implementation. Exhibit 5.12-1 portrays the proposed domestic water plan for the project area.

The Water Master Plan calculates total required storage capacity for the potable water system at 9.66 MG. Determination of water storage requirements for the potable water distribution system is based on three requirements: (1) operational storage; (2) emergency storage; and (3) fire protection (Table 5.12-6).

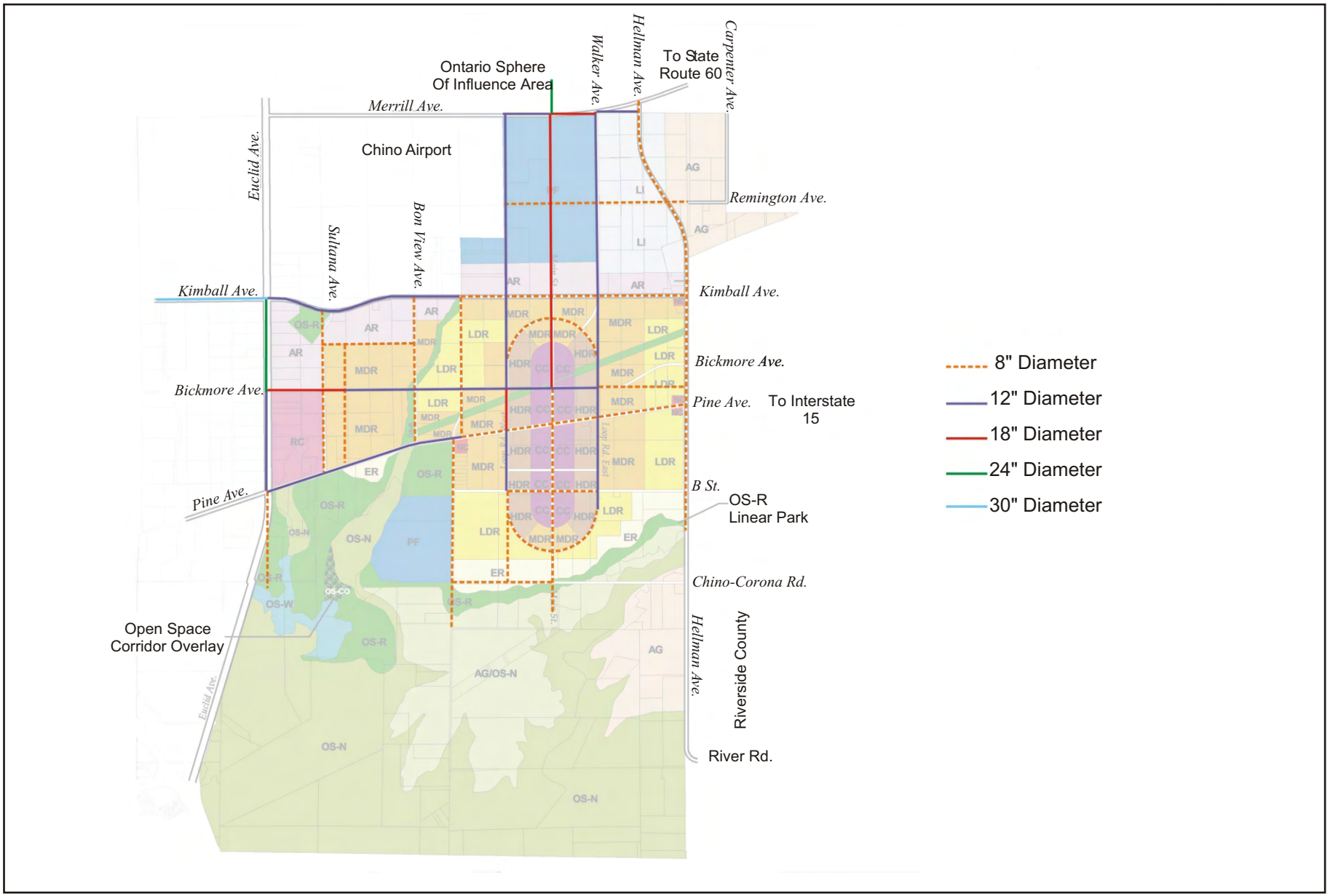
TABLE 5.12-6
DESIGN CRITERIA FOR WATER STORAGE REQUIREMENTS AND CAPACITIES

Description Table Water System	Design Criteria	Million Gallons
Operational	30% of maximum day demand	2.6
Emergency	Volume of one-day annual average demand	6.1
Fire Protection	4 hrs of 4,000 gpm	0.96
Total		**9.66**

In order to store and transport the potable water, additional facilities must be constructed. It is proposed that the total storage of 9.66 MG be maintained in two reservoirs, each with a capacity of approximately 4.8 MG. It is proposed that one storage reservoir and multi-pump station to be located in the vicinity of Kimball Avenue and Euclid Avenue. An additional pump station is proposed for the northern side of the Preserve in the proximity of the Chino airport. The location of the second reservoir depends on the additional water source, which will be determined in the citywide water supply analysis for the Water Master Plan Update. To provide a reliable water source, the second reservoir is proposed to be located at the north side of Subarea 2, because this vicinity has the best potential to tie in with the existing water system of the City of Chino. This location allows for the equal distribution of flows in Subarea 2, while maintaining a close proximity to areas of high demand and existing developments, such as Chino Airport and the southeastern portion of the City.

Recycled Water Sources

Based on the various land uses within The Preserve (see Table 5.12-4), 4.0 MGD (2776.5 gpm) are required to meet average day need and 10.4 MGD are required for the maximum day need.



SOURCE: The Planning Center

NORTH

MAP NOT TO SCALE

Michael Brandman Associates

05760012 · 06/2001

Exhibit **5.12-1**

Proposed Domestic Water Plan

THE PRESERVE • CHINO SUBAREA 2

The total required operational storage capacity for recycled water at the project site is 8.9 MG of water, based on a peak hour demand of 31.2 MG and a maximum day demand of 10.4 MGD, coupled with constant flow requirement of 2 MG at night, when wastewater flows are low. The operational storage is defined as the volume of the difference between peak hour demand and maximum day demand during an 8-hour period. Recycled water will be used for irrigation and industrial needs that do not require potable–quality water.

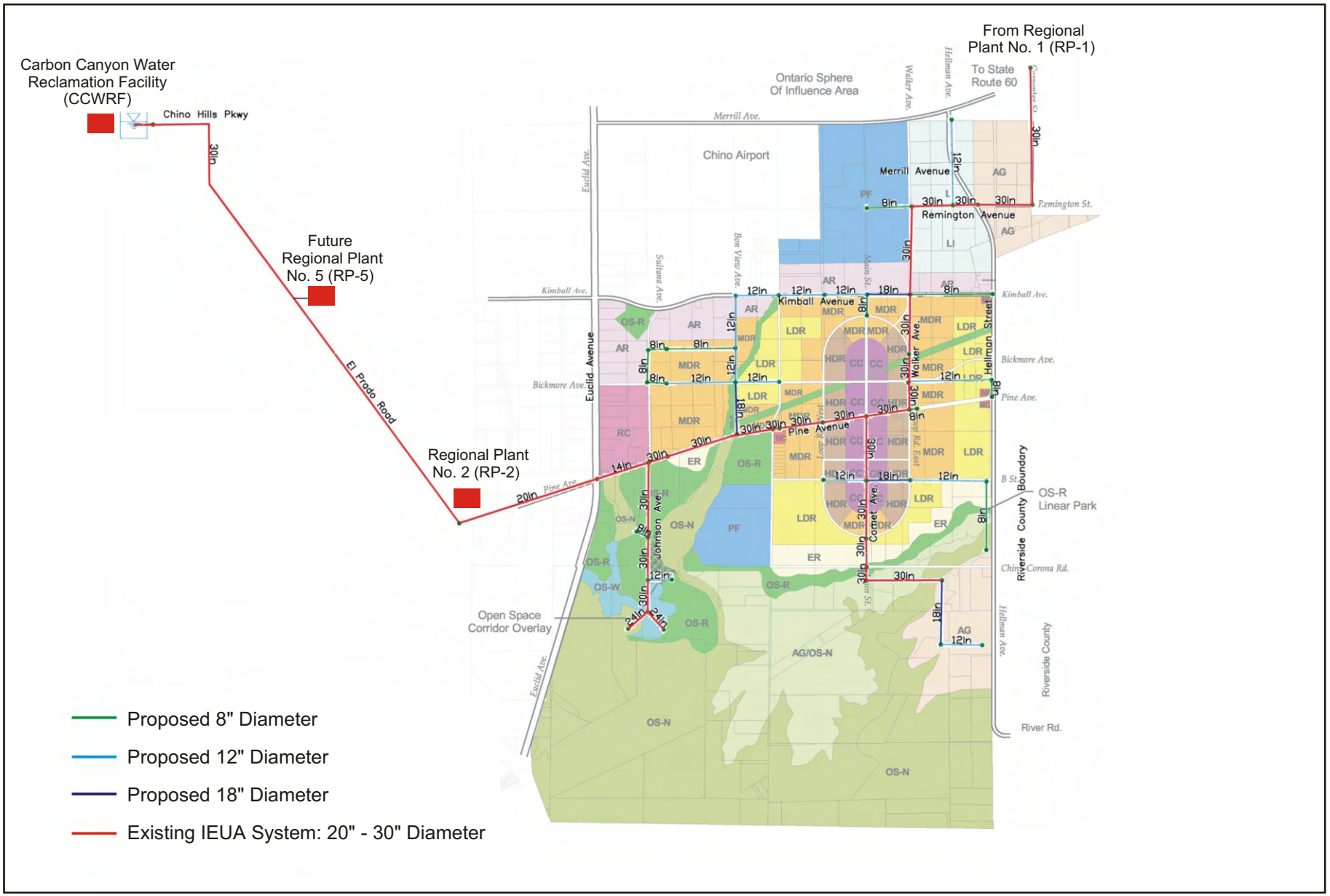
To meet the proposed project 8.9 MG requirement for recycled water storage, the City will obtain recycled water from IEUA. Potential IEUA sources are: Regional Plant 1 (RP-1), Regional Plant 2 (RP-2), Regional Plant 4 (RP-4), Regional Plant 5 (RP-5), and Carbon Canyon Water Reclamation Facility (CCWRF). At the present, IEUA is completing the interconnection of all five wastewater treatment facilities. The proposed recycled water distribution to Subarea 2 will include a redundant system, supplied, on the one hand, from RP-1/RP-4 in the north and from RP-2/RP-5/CCWRF in the west (Exhibit 5.12-2 Proposed Reclaimed Water System).

Under the Ten-Year Capital Improvement Plan of IEUA for Fiscal Years 1997-98 through 2007-08, CCWRF, RP-5 and RP-1 have the potential to expand to a capacity of 20.4 MGD, 30 MGD, and 80 MGD, respectively, over the next forty years. This multi-source supply increases the reliability of the system, and assures that an adequate supply of recycled water will be available to satisfy the future 7,700 afy recycled water demands in Subarea 2 for year 2022, and 8,476 afy demand for year 2030.

Current use of recycled water is 5,600 afy in the IEUA service area. Recycled water use is expected to increase to 100,000 afy with a total utilization of about 70,000 afy with the development of a recycled water program for landscape irrigation (29,000 af), groundwater recharge (producing 28,00 afy of increased yield from the Basin), industrial use (13,000 af) and agricultural use (100 af)[3]. As storm water recharge is increased, a greater percentage of recycled water can be recharged to the Basin through blending with the higher quality natural waters.

By the year 2020, over 70,000 afy of recycled water is expected to be available within the IEUA service area. This represents about 60 percent of the recycled flow in 2020. Over 40,000 afy would be discharged downstream into the Prado Basin flowing into the Santa Ana River to Orange County under present conditions. However, IEUA's goal is to fully utilize the recycled water supply for local beneficial uses within the Basin. When blended with storm water during wet years and with imported water in all years, the recycled water will help replenish groundwater supplies within the Basin. Maximizing the use of recycled water will reduce the dependence on imported water within the Basin by 50,000 afy at the present rate of flow, and by more than 70,000 afy within 20 years.

[3] IEUA Recycled Water System Feasibility Study, Final Draft, October 2001



SOURCE: The Planning Center

NORTH MAP NOT TO SCALE

Michael Brandman Associates

05760012 · 06/2001

Exhibit **5.12-2**

Proposed Reclaimed Water System

THE PRESERVE • CHINO SUBAREA 2

To accomplish this, IEUA has recently completed their Recycled Water System Feasibility Study of project alternatives. The feasibility study identifies that Phase 1 of the Regional Recycled Water Distribution System Program would include recharge basin upgrades/expansions, new basins, regional recycled water pipelines, pumping and storage facilities, and local recycled water pipelines.

IEUA's goal is to construct the Regional Recycled Water Distribution System within 10 years to maximize reuse. The regional system will reduce, and thereby conserve imported water to the Basin and will also conserve natural or storm water, in compliance with the existing Santa Ana River Basin Water Quality Control Plan, the OBMP, and the IEUA Urban Water Management Plan. The California State Legislature has made it mandatory for major water users to use recycled water, if the resource is readily available and complies with specific regulations.

According to IEUA Ten-Year Capital Improvement Plan (Fiscal Year 1997-98 through 2007-08) CCWRF, RP-5 and RP-1 have the potential to expand capacity significantly over the next forty years. This multi-source supply increases the reliability of the system. For the supply of recycled water demands in Subarea 2, adequate resources are available. Such reliability is important to an emergency event whereby the potable source may be rendered incapable of supplying enough water.

IEUA has been active in seeking grant funding to match the capital investment of IEUA in the construction of the Regional Water Distribution System. IEUA has been seeking funding opportunities through the following sources: 1) Proposition 13, the Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Bond Act, funds through five agencies, 2) Clean Water Act and Water Quality Planning Grants through the US Environmental Protection Agency; 3) US Bureau of Reclamation under the Southern California Initiative, Southern California Comprehensive Water Reclamation and Reuse Program; and 4) an energy conservation funding grant through the California Energy Commission under AB 970.

Cumulative Impacts

The proposed project will cumulatively increase water demands in the City of Chino and region. However, Table 5.12-5 illustrates that projected water supply and demand are anticipated to be in balance, for the City of Chino and the proposed project, well into the future. Based on the City's Final Draft of Technical Memorandum of the Water System Master Plan for Subarea 2 (2001), and the City's Water Supply Assessment (Appendix I), the City is expected to meet cumulative water demands through multiple reliable sources, including potable, desalted, groundwater and recycled water sources. The proposed project will result in a less than significant cumulative impact on water resources.

Mitigation Measures

U-W-1 Consistent with SB 221, subsequent development projects within the plan area shall be reviewed by the City to confirm the availability of sufficient water supplies to meet project water needs.

U-W-2 Consistent with requirements of AB 2838, the City shall periodically review and update its urban water management plan to ensure that adequate water supplies and facilities are available to meet future growth.

U-W-3 Subsequent development projects should be designed to incorporate features that encourage and promote groundwater replenishment.

U-W-4 Retention of precipitation and runoff on-site should be encouraged in development designs where appropriate.

U-W-5 The City shall continue to support efforts to develop the water supply and to encourage water conservation. Water conservation techniques appropriate for new and existing development include:

- Installing flow restrictors in showers.
- Repairing leaky water fixtures.
- Promoting drought resistant low maintenance vegetation.

U-W-6 The City shall coordinate its efforts with the IEUA to expand the re-use of wastewater for such uses as the irrigation of parkways, golf courses, landscaped areas, and parks, and, if feasible, for industrial processes.

U-W-7 The City shall engage in water conservation programs and activities, including but not limited to, participation in the following water conservation practices:

- Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers
- Residential Plumbing Retrofits
- System Water Audits, Leak Detectors and Repair
- Large Landscape Conservation Programs and Incentives
- High Efficiency Washing Machine Programs
- Public Information and School Education Programs
- Conservation Programs for Commercial, Industrial and Institutional Accounts

- Wholesale Agency Technical Assistance Program
- Conservation Pricing

U-W-8 Where erosion or water runoff is not a problem, encourage use of on-site water recharge, such as dry wells.

Level of Significance after Mitigation

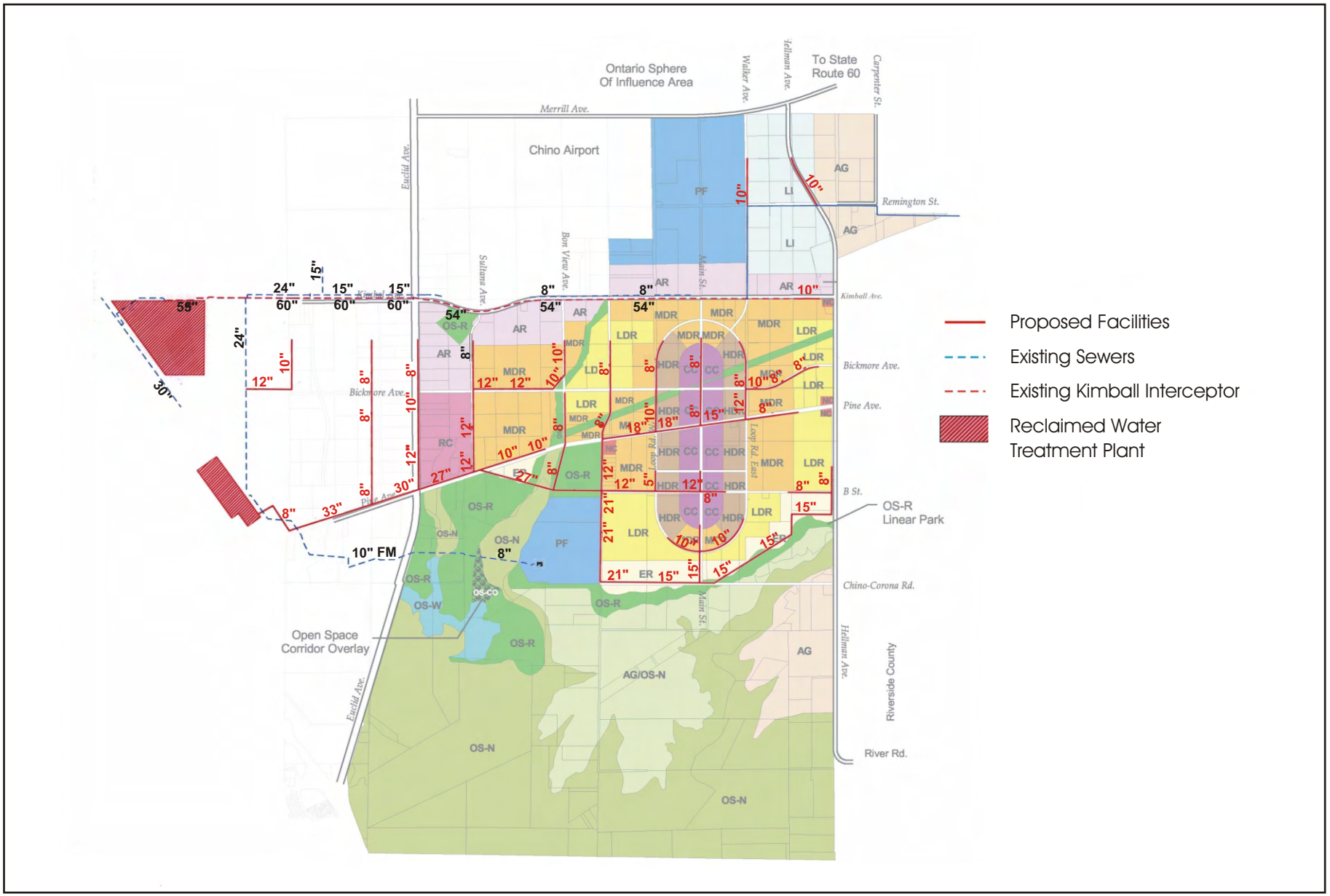
The project will create a need for new water infrastructure and an increased demand for water supplies. With implementation of the Water System Master Plan for Subarea 2, the City's Urban Water Management Plan, and the identified mitigation measures to meet future needs of the project and City, significant adverse impacts are not expected.

5.12.2 WASTEWATER

Existing Conditions

The plan area does not presently have a system for wastewater collection, treatment, and disposal. Wastewater disposal is currently accomplished with private sewage disposal systems, i.e., a septic tank and subsurface disposal fields. As the plan area is annexed to the City of Chino, sewer pipelines for the collection of wastewater will be constructed to serve new developments. This is in compliance with the existing City of Chino policy to require financing and implementation plans for sewage systems improvements as a condition of development approval. It is anticipated that the entire annexation area will be included in a contractual agreement between the City of Chino and the provider of sewage treatment and disposal, the Inland Empire Utilities Agency (IEUA).

IEUA operates a regional wastewater collection system for the delivery of sewage from member cities or water districts to treatment plants. IEUA's regional wastewater system is designed to serve as a backbone collection system, accepting flows from local collection systems, operated by member agencies, and transmitting such waste to appropriate regional treatment plants. The City of Chino has drafted a proposed sewer service area map for the project site (Exhibit 5.12-3). The City's system will feed into IEUA's regional wastewater system.



SOURCE: The Planning Center

NORTH

MAP NOT TO SCALE

Michael Brandman Associates

05760012 · 6/2001

Exhibit **5.12-3**

Sanitary Sewer Plan

THE PRESERVE • CHINO SUBAREA 2

The City of Chino receives portions of the regional Santa Ana River Interceptor Sewer Line (SARI) Project. The purpose of the SARI System is to transport groundwater of high salt, nitrate, and trichloroethylene concentration in the upper Santa Ana watershed to Orange County Sanitation District for primary sewage treatment and offshore disposal. Within the city, The western branch of the SARI line runs west along Kimball Avenue from an existing desalter plant down El Prado Road, at Euclid Avenue, and connects with the eastern branch, traveling down Pine Avenue, on its way south to the Orange County Sanitation District. Planned relocation of a portion of the SARI line directly above Prado Dam is to begin in summer 2002. The relocation is in response to the planned raising of Prado Dam. The proposed "plan area" will not affect this relocation plan.

Planned Facilities

The City of Chino, in anticipation of annexation of Subarea 2, has drafted a preliminary Sewer Master Plan for Subarea 2[4]. The report outlines all planned sewer infrastructure additions, based on flow rates and growth projections, including estimated costs for construction, to accommodate the proposed plan area.

The IEUA currently operates a wastewater treatment facility, Regional Plant #2 (RP-2), along El Prado Road near its intersection with Pine Avenue in Chino Subarea 1. Due to the age of RP-2, its location below the Prado Dam 566-foot "take-line," and site limitations for future expansion, this facility is being phased out in-lieu of a new facility. The IEUA has acquired land at the southeast corner of Kimball Avenue and El Prado Road for a regional wastewater treatment plant that is now under construction, Regional Plant #5 (RP-5). RP-5 will be required to be built and operational by December of 2003; however, IEUA has plans to have the plant on-line by July 2002. The first phase capacity of the plant will be 12 million gallons per day (MGD), while ultimate capacity is planned to be 46-48 MGD. RP-5 will handle all liquid wastes now treated at RP-2 and a portion of the solid wastes from the Carbon Canyon treatment plant, located at Chino Hills Parkway and El Prado Road.

Currently, the IEUA is completing the interconnection of all four of its treatment facilities in or affecting the City of Chino's wastewater collection system: Regional Plant # 1 (RP-1); Regional Plant #2 (RP-2); Regional Plant #5 (RP-5); and Carbon Canyon Water Reclamation Facility (CCWRF). The effluent of RP-1 and RP-2 is currently discharged into Chino Creek near RP-1 to Prado Lake in the southwest portion of the plan area. The existing discharge pipeline from RP-1 to Prado Lake (RP-1 outfall) is located within Subarea 2. The RP-1 outfall will be connected with a 20" main to the discharge pipelines on El Prado Road that connect RP-2 and CCWRF (see Exhibit 5.12-2). After RP-2 is phased out, this pipeline will be connected to RP-5. This interconnection offers the possibility to

[4] Sewer Master Plan, Subareas 1 and 2 – Chino Sphere of Influence, Chino Agricultural Preserve Area, Preliminary

supply recycled water in Subarea 2 from all four sources and from two directions, from the north (RP-1 and RP-4) and from the west (RP-2, RP-5, and CCWRF).

Thresholds of Significance

A project is considered to have a significant impact on wastewater service if existing or planned facilities and supplies are not adequate to serve proposed land uses or existing wastewater service is significantly disrupted.

Project Impacts

Increases in plan area population and commercial and industrial uses will increase wastewater treatment capacity demands upon IEUA treatment facilities. IEUA utilizes generation factors for projecting wastewater generation based upon land use. Based on unit wastewater flow generation factors used in the City's Sewer Master Plan, it is estimated that wastewater will increase by 4,816,920 gallons per day upon buildout of the plan area. See Table 5.12-7 for an estimate of wastewater generation by land use category.

TABLE 5.12-7
WASTE WATER GENERATION AT PLAN BUILDOUT

Land Use	Units (population/acres)	Generation Factor	Increased Wastewater Production
Residential	33,249 people	80 gallons/day/person	2,659,920 gpd/person
Commercial (neighborhood commercial, regional commercial, airport related business park, airport related hotel, commercial (airport & mixed use), office (regional & airport mixed use))	228 acres	2,500 gallons/day/acre	570,000 gpd/acre
Industrial	357 acres	1,000 gallons/day/acre	357,000 gpd/acre
Public facilities (airport, women's correctional facility, schools)	446 acres	2,500 gallons/day/acre	1,115,000 gpd/acre
Parks (local & community)	115 acres	100 gallons/day/acre	115,000 gpd/acre
Total	—	—	**4,816,920 gpd/acre**
Source: The Preserve: Plan for Services, June 2001.			

IEUA will continue to expand their treatment capacity consistent with growth projections, associated increased demand, and funding mechanisms. The increased use of reclaimed water will decrease the

need for treatment capacity and provide a beneficial reuse of water resources. In conclusion, sufficient capacity has been allocated by IEUA to serve the plan area through buildout. Therefore, no significant impacts to wastewater treatment and disposal to will occur.

Cumulative Impacts

IEUA provides service to a broad geographic area covering seven cities and a portion of the Chino Basin Dairy Area. As development occurs within the Agency's service area, it makes additional funds available to construct necessary facilities to provide for the growth. The Agency has allocated sufficient sewage disposal capacity in RP-5 to serve additional sewage generated within the City of Chino, throughout buildout of the plan area. Therefore, no significant cumulative impacts on wastewater treatment facilities is anticipated.

Mitigation

IEUA has indicated it will provide sufficient sewage disposal capacity in RP-5 to serve additional sewage generated within the City of Chino, and proposed plan area. The City will coordinate with the IEUA to ensure that adequate wastewater facilities are available to meet future growth. Project design will be reviewed by the City, prior to project approval, to ensure that sufficient infrastructure and capacity are available.

U-WW-1 The City shall assure that required backbone sewer lines, or an equivalent system recommended by the City Engineer are implemented pursuant to the Sewer Master Plan.

U-WW-2 Developers shall pay required sewage facilities development fees and system collection fees to cover City costs to construct master planned sewer mains.

Levels of Significance After Mitigation

With the implementation of the preceding mitigation measures and the operational and funding mechanisms established by the Inland Empire Utilities Agency, no significant wastewater impacts are anticipated.

5.12.3 ELECTRICITY

Existing Conditions

The plan area will be provided electrical service by Southern California Edison (SCE). Power distribution lines within the vicinity of Chino Subarea 2 include twelve (12) kilovolt (kv) lines in the following roadways: Kimball Avenue, Pomona Rincon Road, SR 71 Corona Expressway, and Pine Avenue. A major east-west power line corridor, including 2-200kv lines plus 2-500kv lines,

transverse Subarea 2 in the vicinity of Pine Avenue. A 66 kv line runs east west through the site below Chino-Corona Road, and another 66 kv line runs along Euclid Avenue between Kimball and Bickmore Avenue. The substation within closest proximity to the project area is SCE's "bulk power" substation, located at Edison and Benson Avenue. There are many additional substations located throughout the City of Chino.

Power from the transmission grid is delivered to the City of Chino by way of the Chino "bulk power" substation. At the "bulk power" station, power is dampened and converted from 220 kv to 66kv. From there, the Chino substation delivers 770,000 kilowatts of power to its service radius, of which the project site is included. The substation's maximum load capacity is currently 840,000 kilowatts. Additional power transmission capability, served by a new substation and planned for construction by June 2001, will considerably bolster existing transmission capacity. This "bulk power" substation is to be constructed within the Mira Loma facility. It will connect with the other 66 kv substations, providing added security during emergency shut downs of any one of the substations and expanding SCE's service capability in the project area. Additionally, there are plans to upgrade the Chino "bulk power" station by bolstering the transformer bank and adding new 12 kv circuits to accommodate new developments.

SCE has been hard pressed to meet current electrical demands in California, due to high wholesale prices of electricity and past retail price caps brought about by deregulation in 1996. The electrical crisis, though not a result of a physical shortage in electrical resources, but rather a price gouge affecting buying capability of California utility companies, may continue to result in "rolling" blackouts throughout California, becoming intensified in summer 2001.

Threshold of Significance

Southern California Edison Company (SCE) determines, in their estimation, if the demand for electricity generated by the proposed project can be adequately fulfilled. Project impacts are considered significant if the proposed project's demand for electricity exceeds SCE's ability to provide for the demand.

Project Impacts

Buildout of the proposed project will result in a total electrical demand increase of 164,547,624 mega watts per hour per year (MW/hr/yr). Approximately 33 percent, or 55,017,390 MW/hr/yr will be absorbed by residential uses; 27 percent, or 29,836,537 MW/hr/yr by industrial uses; and 40 percent, or 109,530,234 MG/hr/yr, by commercial uses. Electrical demand by open space use is not quantifiable at this time due to lack of specific square footage data. Such public uses, however, likely pose a nominal demand on electricity. The increases level of service to the project area will require

the implementation of new service lines and support facilities. However, electrical demand and electrical provision to the plan area will be phased over 20 years.

The City will provide Southern California Edison with copies of any City Council-adopted plans for Subarea 2, and will coordinate with Southern California Edison Company to identify specific facilities required related to costs, and responsibility for finalizing of services. Further, the developer will be required to consult with Southern California Edison to ensure that adequate new facilities are provided with construction of each project. New development will also be required to be in conformance with Title 24 of the California Code of Regulations regarding efficient use of energy resources, or other State and/or City Regulations, which may take precedence at the time of approval of individual projects.

SCE demonstrates confidence that it can meet the phased electrical demands, both short-term and long-term, brought about by the proposed project.[5] New services are provided by the public utility on the basis of need. Major infrastructure is paid for by user fees collected for providing the service.

New local extensions and connections are paid for by project developers. The planning process identifies needed upgrades and ensures their provision. Therefore, implementation and long-term buildout of the proposed plan will not result in significant adverse impacts related to electricity.

Cumulative Impacts

At completion, the proposed project will produce a high demand on the electrical supply and distribution capabilities. Southern California Edison (SCE) has indicated its ability to meet this high demand, provided that proper infrastructure is installed in the project area. Yet, given the current electrical energy shortfall in California and the western United States due to high wholesale costs of electricity brought about by deregulation in 1996, it is uncertain that electrical supplies will be sufficient to meet future growth demand. Therefore, the project may contribute to significant longterm impacts on electrical energy supplies.

Mitigation Measures

U-E-1 Energy efficient lighting and natural lighting should be encouraged and utilized where practical.

Levels of Significance after Development

Implementation and buildout of the project area may contribute to significant cumulative impacts on SCE's ability to generate electricity, depending on the future state of the electricity market.

[5] Source: Written response from Fred Francia, Southern California Edision, February 12, 2001.

5.12.4 NATURAL GAS

Existing Conditions

The City of Chino receives natural gas and services from The Southern California Gas Company (SCGC). SCGC's planning office in Redlands, California maintains information on existing lines; forecasts future needs, and analyzes the size and location of future service pipelines. Currently, limited gas service currently is available to the project area. SCGC is under the regulation of the California Public Utilities Commission, and can also be affected by the actions of federal regulatory agencies. If any of these agencies were to take any action affecting the gas supply, or the conditions under which service is available, gas service will be provided in accordance with revised conditions.

SCGC receives its supplies from production fields in southwestern United States, the Rocky Mountains, and western Canada. These supplies are expected to be secure and meet California demand through 2010. The following table reflects typical gas demand for residential, commercial, industrial, and public/quasi-public uses.

TABLE 5.12-8
TYPICAL DEMAND BY NATURAL GAS DEMAND FACTOR

Type of Use	(System Area Average/Use Per Meter)/Yearly
Single Family	799 thermsa/year
Multi-Family 2 to 4 units	482 therms/dwelling unit/year
Multi-Family 5 or more units	483 therms/dwelling unit/ year
Commercial	348 therms/1,000 sq. ft./year
Industrial	396 therms/1,000 sq. ft./year
Public/Quasi-Public	348 therms/1,000 sq. ft./year
[a]One therm is roughly equal to 100 cubic feet of gas	

The demand for commercial and industrial uses can vary widely due to building size and use. SCGC has demand side management programs available for providing commercial/industrial customers with the most effective applications of energy conservation techniques for each particular project.

Thresholds of Significance

A project is considered to have a significant impact on natural gas service if existing or future planned facilities and supplies are not adequate to serve proposed land uses or existing natural gas service is notably disrupted.

Project Impacts

The Gas Company is a regional supplier of natural gas. It has stated that service will be provided as needed.[6] No significant impact on the environment is anticipated with the provision of natural gas supplies to the project. As gas needs vary with the type of building constructed, service will be adjusted to meet those appropriate needs. Natural gas demand at buildout of the proposed plan is estimated at approximately 3.9 million cubic feet annually.

TABLE 5.12-9
NATURAL GAS DEMAND AT BUILDOUT OF PROPOSED PLAN

Land Use	Demand Factor	Unit Increase	Annual Gas Demand
Residential[a]	584 therms/year/unit	9,779 units	5,710,936 therms/year
Commercial	348 therms/year/sq. ft.	3,240,174 sq. ft.	1,127,580,552 therms/year
Industrial	396 therms/year/sq. ft.	6,998,571 sq. ft.	2,771,434,116 therms/year
Public/Quasi-Public	348 therms/year/sq. ft.	66,499 sq. ft.	23,141,652 therms/year
TOTAL	—	—	**3,927,867,256 therms/year**

[a]584 therms/year represents an average for all residential units.
[b]One therm is roughly equal to 100 cubic feet of gas.

The City of Chino will provide population projections to The Gas Company to ensure that they have adequate information upon which to project natural gas demands. The City and future developers within the plan area will also coordinate with The Gas Company to ensure adequate services and facilities are available to provide for future development.

Cumulative Impacts

At buildout of the plan area and other cumulative projects, significant cumulative demands will be placed on natural gas resources. The Gas Company, however, anticipates it will be able to provide the resourcse and facilities necessary to meet these additional demands. Therefore, no adverse cumulative impacts to natural gas supply and distribution are expected.

Mitigation Measures

No mitigation measures are necessary.

Levels of Significance after Mitigation

Significant impacts are not anticipated.

[6] Source: Written correspondence with Ronald Reed, The Gas Company, April 11, 2000

5.12.5 WASTE MANAGEMENT

This section separately discusses waste management from the standpoint of both municipal Solid Waste collection and disposal, and Dairy Waste Management.

Solid Waste

Existing Conditions

Residential solid waste collection and disposal in the plan area currently is based on a permit system with approximately 5 private haulers providing service to homeowners. Following annexation of the project area by the City of Chino, there will be a 5-year phase out period during which time the City's franchised hauler, Waste Management, will take over service to the area. Waste Management disposes of City waste at their El Sobrante Landfill, in unincorporated Riverside County, roughly 8 miles south of Corona. The landfill has a lifespan of 50-70 years at an average daily collection rate of 10,000 tons per day of waste. Waste Management, under a contractual agreement with the City of Chino, assures adequate capacity for waste disposal.

The City of Chino presently generates approximately 160,000,000 lbs. of solid waste per year (438,356 lbs. Per day), of which 42 percent (672,000,000 lbs/yr) comes from residential uses and 58 percent (92,800,000 lbs/yr) from commercial uses.

The City's implementation of AB 939 in 1999, resulted in a stepped-up automated collection system, supplying each residence with three 96-gallon containers for trash, yard waste, and recyclables, respectively, in an effort to reduce overall solid waste production. During the first year of implementation, the City reduced its waste production by 48 percent. Statistics for waste generation during the year 2000 have not yet been provided by the State if California, though the City believes it has met the State's requirement for a 50 percent reduction in waste generation.[7]

Threshold of Significance

The proposed project would significantly impact solid waste collection and disposal if its solid waste generation were to exceed the capacity of designated landfills.

Project Impacts

It is estimated that buildout of the proposed plan will result in the production of approximately 58,603,023 pounds (lbs) per day (29,302 tons) of residential, commercial, industrial, and public waste (Table 5.12-10). Waste Management, the sole provider of waste collection and disposal to the City,

[7] Source: Phone interview with Rod Butler, City of Chino, Solid Waste Manager, March 2001.

indicates that the proposed Plan will not adversely affect El Sobrante Landfill's disposal capacity. The landfill can accommodate growth in waste generation for the next 50-70 years and owns 6 other landfills that could offer services as well.

In reviewing subsequent development projects within the plan area, the city will continue to implement solid waste reduction procedures pursuant of AB 939.

TABLE 5.12-10
SOLID WASTE GENERATION AT BUILDOUT OF PROPOSED PLAN AREA

Land Use	Solid Waste Generation Factor by Area	Proposed Land Use	Solid Waste Generation
Residential	8 lbs/day/unit	9,779 units	78,232 lbs/day
Commercial	5 lbs/day/sq. ft.	3,240,174 sq. ft	16,200,870 lbs/day
Industrial	6 lbs/day/sq. ft.	6,998,571 sq. ft.	41,991,426 lbs/day
Public	5 lbs/day/sq. ft	66,499 sq. ft	332,495 lbs/day
		Total Generation	**58,603,023 lbs/day**

Cumulative Impacts

Buildout of cumulative projects within and outside of the plan area will increase daily solid waste production and place demands upon Waste Management's landfills. The City of Chino had implemented waste recycling consistent with AB 939 requirements, and such requirements will be applied to the plan. Such requirements will be applied to the plan area to reduce its incremental contributions to solid waste generation. Increased solid waste generation from cumulative sources is not projected to exceed the tonnage ceiling of El Sobrante Landfill, and consequently, cumulative impacts are not significant.

Mitigation Measures

Although no significant impacts to solid waste disposal are anticipated as a part of the project, the following measure is recommended to minimize waste disposal and assist the City of Chino in compliance with AB 939:

U-SW-1 Future developments should have outside building space to accommodate the storage of 3- 96-gallon containers. This system reduces waste production by encouraging recycling of material.

Level of Significance after Mitigation

Less than significant impacts to solid waste disposal and treatment will result from the project.

Dairy Waste

Existing Conditions

Waste Production and Management

Currently there are three options within the Chino Basin Dairy Area (CBDA) for the disposal of manure. These options include agricultural application, transportation outside of the CBDA to the San Joaquin, Blythe, or Imperial Valleys, or composting. The application of manure on agricultural lands is becoming increasingly difficult due to the lack of available lands and increasing regulatory constraints. While there are several dairy operators that contract to have feed hauled in and manure hauled out, this is a costly practice, and therefore not an attractive alternative for many dairy operators. The third option is composting; there are approximately 9 composting facilities operating within the CBDA. However, these facilities with a total capacity of 674,000 tons per year cannot meet the full demands of the dairy operators.

The CBDA is home to one of the largest dairy herd populations in the world with a current dairy cow population of approximately 360,000, which generates over 1 million tons of manure annually.[8] In contrast, a decade earlier it was reported that the CBDA was home to 289,600 cows producing 460,000 tons of manure annually.[9] While a decade ago it was reported that there was 16,500 tons of manure stockpiled, presently it is reported that there is now more than 2-million tons of manure stockpiled. This dramatic increase is a factor of two elements (1) agricultural land used for manure disposal is being converted to urban uses, and (2) to remain competitive, individual dairy herd sizes are increasing while there is an actual decline in the number of dairy farms. The result is that while an unprecedented amount of manure is being generated in the CBDA, there is less available land to spread the manure produced from the increased dairy cow population.

The rising land values coupled with the mechanized feeding and milking practices have favored the managing of larger herd populations on smaller acreage. The conversion of agricultural lands to urban uses has had a dual effect upon dairy operators. Less land is now available to dispose of manure and recent urbanization upslope of the CBDA has created drainage problems for the dairies. As urbanization has occurred the CBDA has not made flood control and containment improvements. The consequence was that the increase in rainfall surface runoff from the urbanized areas led to routine flooding in the dairy areas located on the CBDA/urbanized interface. Flooding is frequent during mild storms and extensive flooding is reported to occur during less frequent but more severe storms. These two impacts, waste containment and inadequate drainage, result in further degradations in both surface and groundwater quality.

[8] Manure Management Strategy Report for the Chino Basin, Santa Ana River Watershed; SARWG (9/99)

[9] Subarea 1 Chino Sphere of Influence – Chino Valley Dairy Preserve Project Area Description Study and Environmental Setting; City of Chino Community Development Department (10/95)

TABLE 5.12-11
AGGREGATE MANURE PRODUCTION IN CHINO BASIN

	Milk Cows	Support Stock (Calves And Heifers)	Total
Number of Animals	280,000	80,000	360,000
Manure excreted at 14% solids (Tons/year)	6,132,000	511,200	6,643,400
Corral Manure at 67% solids (Tons/year)	1,282,400	107,200	1,389,600
Collectable Corral Manure at 67% solids (Tons/year)	1,153,600	96,800	1,250,000
Collectable Dry Manure at 100% solids (Tons/year)	793,800	64,800	840,000
Source: SARWG, 1999			

According to data compiled by the Milk Producer's Council for the City of Chino, the 31 dairies operating within the proposed plan area produce approximately 263,540 dry tons of manure annually.[10] This represents almost one-third (1/3) of the total collectable dry manure tonnage with the CBDA.

Total Dissolved Solids (TDS) and Nitrogen (Salt) Management in the Chino Basin

The deterioration of the water quality in the Chino Basin and the Santa Ana River has been attributed to the increase in TDS (primarily magnesium and calcium) and nitrate. TDS are mineral salts dissolved in the water that concentrate as the water is reused. Within the CBDA, an increase in TDS in groundwater is a result of the increased intensity of agricultural and urban activities.

It has been estimated by the Santa Ana Regional Water Quality Control Board (SARWQCB) that over 13 million tons of manure have been applied to the Chino Basin since the mid 1950's when dairy farmers relocated to the basin. As a result of this 13 million tons of manure spread across the CBDA, 1.4 millions tons of salt have reached, or will reach groundwater. Salt may have an adverse effect upon human health, increase costs of urban infrastructure and facilities, and increase the cost and decrease the effectiveness of reclaiming wastewater. It is estimated by the SARWQCB that the current application of manure and wash water to land in the Chino Basin is resulting in 34,000 tons of salt that will reach the groundwater each year.[11] Of that 34,000 tons per year, about 30,000 tons per year is from the application of manure and the remaining 4,200 tons per year is from the discharge of wash water. In addition, the Board staff has estimated that approximately an additional 3,800 tons of

[10] Source: Dairy Information for The Chino Preserve, City of Chino; compiled from Milk Producer's Council 1998 reporting list

[11] General Waste Discharge Requirements for Concentrated Animal Feeding Operations within the Santa Ana Region, Order 99-11, NPDES No. CAG018001; SARWQCB (8/99)

salt are discharged to groundwater through the percolation of rainfall runoff from corrals and drainage of manure stockpiles.

The Optimum Basin Management Plan (OBMP),[12] prepared under the auspices of the Chino Basin Watermaster, provides a strategy to minimize the levels of TDS and nitrate in the basin. Recognizing the high levels of TDS and nitrates attributed to the functions of dairy operations, the OBMP calls for the minimization of TDS and nitrogen additions to fertilizers and dairy wastes, desalting the groundwater in the southern portion of the Basin, and the artificial recharge of stormwater.

Pursuant to the OBMP and the Santa Ana Watershed Project Authority (SAWPA), a desalter facility has been constructed in Chino Subarea 1 at Kimball and Euclid Avenues, very near the proposed project. The facility's function is to remove and treat groundwater high in TDS and salt content, thereby alleviating a portion of the salt burden that is presently being discharged into the basin's groundwater by the dairies and other sources. Additional desalter facilities have been developed within the Chino Basin, and more are planned by SAWPA.

Composting Facilities

One method of reliably recycling and processing dairy manure is through composting. There are nine composting facilities within the CBDA with an annual permitted capacity of 674,000 tons per year as of 1997 (see Table 5.12-8). However, due to the inability to identify adequate markets for the recycled manure, the only facility accepting manure presently is the IEUA Co-Composting facility, along Chino-Corona road in the proposed plan area.

Inland Empire Utilities Agency Co-Composting Facility

The Inland Empire Utilities Agency (IEUA) operates a Co-Composting facility for both dairy manure and wastewater sludge within the proposed plan area. The total permitted capacity of the IEUA facility is 400,000 wets tons/year and the estimated annual operating tonnage of manure (1997) is 80,400 dry tons/year and 120,000 wet tons/year (see Table 5.12-8). During its several years of operation (since June 1995) the facility has had difficulty in marketing soil amendment products due to the high salinity of the compost. This is true of both the 100% manure based compost and the 12:1 ratio of manure to sludge blend.

Most soil amendments containing manure, biosolids, or other sources of organic nutrients are blended with a bulking agent to proportionately reduce the salt content. Such blendable products are more marketable in the wholesale and retail fertilizer markets. However at present, the Co-Composting

[12] Optimum Basin Management Program Phase 1 Report; prepared for Chino Basin Watermaster (8/19/99)

facility does not use bulking materials. Table 5.12-12 below details the capacities of the composting facilities within the Chino area.

TABLE 5.12-12
CHINO AREA COMPOSTING FACILITIES

Compost Facility	Permitted Capacity	Estimated Annual Tonnage Of Manure (1997)	
	Wet tons per year	Dry tons per year	Wet tons per year
IEUA – Eko Compost and Earthwise Organics	400,000	80,400	120,000
Kellogg Supply	112,500	13,400	20,000
Farmer's Fertilizer	45,000	12.060	18,000
Scott's Hyponex	18,000	43,550	65,000
Red Star	45,000	6,700	10,000
Partida Fertilizer	30,000	20,1000	30,000
Mushegain	19,000	12,060	18,000
Wolfinbarger	3,000	402	600
Corona Fertilizer	1,500	—	—
Total	674,000	188,672	281,600
Source: SARWG, 1999			

IEUA is conducting a feasibility study and developing a business plan for relocating the existing Co-Composting Facility. The proposed Organics Management Facilities will be located at various sites within the Chino Basin. One proposed site is within the CIM property north of Kimball Avenue and east of RP-5. This concept presents an opportunity to develop 'state-of-the-art' facilities for research and development of technologies and marketable products for bio-solids, dairy cow manure, green material and other organic waste material. Various options for a relocated Co-Composting Facility are under study, including replacing the existing facility, developing enclosed composting facilities, and utilizing biogas digesters and co-composting in an enclosed building. Co-Composting Facility relocation is part of a larger strategy to develop a comprehensive solution to the CBDA's organic recycling needs and infrastructure. With the relocation of the Co-Composting Facility, there is the opportunity to blend waste to produce a product with a lower salt content that would be more marketable, thereby creating a demand for manure and an opportunity to recycle a portion of the dairy waste in a manner that would not be harmful to the basin's groundwater.

Vector Control

A secondary impact of the application and stockpile of manure is the attraction of flies to these operations. The West Valley Mosquito and Vector Control District is the agency entrusted with the

control of flies. Of particular concern is that large numbers of flies can occur when control measures are not initiated. As development encroaches upon the agricultural borders, flies disperse into surrounding residential areas. The dispersal is usually limited to less than one-half mile in controlled situations; in uncontrolled situations, flies may travel up to a distance of two miles. However, proper composting has proven to be the most effective method of controlling immature flies in sources containing high volumes of organic materials.

While most dairy farmers stockpile varying amounts of manure on their property this practice is increasingly subject to regulations as set forth by the SARWQCB. Likewise, restrictions limit the amount of manure that can be applied to various types of land. As the dairy herd population increases and the amount of land available for proper composting decreases, the problem of managing dairy waste becomes amplified. The Co-Composting Facility alleviates a portion of the waste problem and its expansion as part of a larger Organics Management Center would aid in further reducing the manure stockpiles. Yet, much of the waste will still need to be hauled to other counties or disposed of in an alternative manner.

In the past, dairy operators have managed to control the fly populations with the application of adulticiding chemicals. However, the continued use of adulticiding chemicals has resulted in a minor to severe resistance in the adult fly populations. According to WVMVCD, to retain viable fly control, it is imperative that mechanical measures are primary and chemical controls are secondary.

In theory, the optimum fly control would be for manure and other vegetative waste to be properly composted and removed from the property on a weekly basis. If unacceptable volumes of flies were attracted to the manure, even if it were not producing flies, the immediate area would be adulticided. Maintaining a buffer zone between agricultural and non-agricultural areas would also lessen the impact of flies. However, presently there is a stockpile of approximately 2 million tons of manure and a lack of agricultural land to spread the manure. Moreover, removal of manure to areas outside of the CBDA is costly, at approximately $15.00/ton as compared to transportation costs of $2.50/ton for local disbursement.

Policies and Regulations

The Federal Clean Water Act (CWA) states that all concentrated animal feeding operations (CAFOs) are point sources and are subject to NPDES permitting requirements. All dairies within the CBDA have been designated as CAFOs and therefore are required to comply with NPDES.

Additionally, as required by the State's Porter Cologne Water Pollution Control Act and CWA, dairy operators must retain any on-site storm runoff generated within the dairy up to a 25-year, 24-hour storm event. For the CBDA the 24-hour, 25-year storm is a storm with the intensity of 4.5 inches per

day. Historically, the SARWQCB has regulated compliance of both Porter Cologne and CWA through the issuance of a general area-wide permit.

In August of 1999 the SARWQCB adopted additional manure handling regulations designed to impede manure waste from further degradation of the Santa Ana River. As adopted these regulations include the following:

- All dairies, heifer ranches, and calf nurseries in the Region were designated CAFOs[13]
- All dairies are required to develop Engineered Waste Management Plans acceptable to the Executive Officer in accordance with established guidelines and construct containment structures to contain the 24-hour, 25-year storm. The cease and desist order was modified in February 2000 by the State RWQCB to enact the schedule for the waste management plans.
- Disposal of manure to land is prohibited except the use of manure on land that is currently being farmed (not pasture). This disposal must be in agriculturally recognized amounts and is contingent upon the installation of a new groundwater desalter in the basin.
- Removal of the approximately 2 million tons of manure stockpiled in the CBDA by December 31, 2001.
- Ship manure out of the basin within 180 days of scraping the corrals.

Manure Management Strategy

The problem of dairy waste management within the CBDA is multifaceted, with the need for timely solutions driven by factors such as the Water Board Order, the need to preserve and enhance water resources for beneficial use, the changing economics of dairying within the CBDA, and the transition to urban use.

In 1999, the Santa Ana Watershed Group (SARWG) prepared a Manure Management Strategy for the Chino Basin[14] that outlined an approach to dairy waste management involving agency collaborations and broad initiatives. The Strategy suggested the following initiatives to address manure management in a comprehensive manner: 1) A CBDA-wide "Residuals Management Program"; 2) establishment of a National Center for Management of Organic Materials; 3) utilization of "Smart Growth"

[13] The CWA defines a CAFO as any AFO that has more than 1,000 animal units (i.e. dairy cattle are considered 1.4 animal units). Additionally, the CWA states that smaller facilities can be designated as CAFOs by a permitting authority (Regional Board) after considering certain criteria. These criteria include in part, the location of the AFO relative to surface waters, the slope, rainfall, and other factors that increase the likelihood of frequency of discharges and the impact of the aggregate amount of waste from any small operations in a watershed that exceed that of larger operations. The SARWQCB staff has determined that all dairies, heifer ranches, and calf nurseries in the Region meet one or more of these criteria, and therefore shall be designated a CAFO under the CWA.

[14] Manure Management Strategy Report for the Chino Basin, Santa Ana River Watershed; SARWG (10/99)

principles in plans for the conversion of the CBDA; and 4) development of an agricultural, wildlife, wetlands and open space conservation program for the Lower CBDA.

Initiatives that have emerged include the proposed Organics Management Facilities, pilot programs to sewer the dairies, a planned SARI line relocation, support to dairies in on-site residuals management and stormwater containment, and the integration of Smart Growth principles in development plans for the transition area. The Strategy identified an orderly transition of the dairylands to urban use, rather than a precipitous one, as essential to the ability to successfully manage dairy wastes in the CBDA.

Thresholds of Significance

Specific thresholds to address the significance of a project's impacts on dairy waste management have not been developed. CEQA Guidelines Environmental Checklist criteria applied to solid waste and wastewater treatment impacts are adapted as follows to apply to dairy wastes.

A project would be expected to have a potentially significant impact on dairy waste management if it would:

- Exceed the wastewater treatment requirements of the applicable Regional Water Quality Control Board;

- Result in non-compliance with federal, state and local statutes and regulations related to solid waste.

Project Impacts

The problems associated with stockpiled manure, high TDS and salts in groundwater, and degradation of surface waters from dairy runoff are existing conditions that have resulted in promulgation of regulations by the Regional Water Quality Control Board to protect water resources. In most respects, the proposed project represents a beneficial impact on waste management in that it provides an economic incentive to remove, recycle or otherwise dispose of manure within the basin. Deadlines for removal of stockpiled manure from the basin have been imposed irrespective of the proposed project. Various initiatives to respond to the challenges imposed by these deadlines have either been proposed or are underway, including the Organics Management Facilities and plans to sewer the dairies.

It has been suggested by the Chino Basin Watermaster that a rapid departure of the dairies in the CBDA would result in a rapid decline in groundwater production in the southern part of the Basin and a subsequent increase in poor quality water.[15] The rising groundwater would have the potential to degrade the Santa Ana River. However, the conversion of the agricultural area in the southern part of

[15] Optimum Basin Management Program, Phase 1 Report; page 4-31; (8/19/99)

the Chino Basin to urban uses will occur over the next 20 years, and in the long term the waste management and water quality challenges associated with the dairies will go away.[16] As implementation of the proposed development plan for The Preserve is anticipated to occur over approximately 20 years, the project is not anticipated to exacerbate the existing waste management impact associated with dairy use.

Urban and agricultural use conflicts are addressed in EIR Section 5.1, Land Use. Features of the proposed Specific Plan and mitigation measures to reduce nuisance aspects of such conflicts are included in that section.

Cumulative Impacts

The proposed project is not anticipated to contribute to cumulative impacts on dairy waste management. Requirements for manure removal and management have been imposed irrespective of the proposed project and other related projects.

Mitigation Measures

No mitigation measures are necessary.

Level of Significance After Mitigation

No significant dairy waste management impacts will occur from implementation of proposed project plans.

5.12.6 TELECOMMUNICATIONS

Existing Conditions

Telephone

Telephone service to The Preserve Specific Plan area can be provided by Verizon. The area would require the installation of cable wiring from a backbone facility out to the site.

Cable Television

Adelphia Communication Services provides cable television service, Internet services, and standard telephone service to the project area. These services are all delivered via a single broadband network

[16] ibid OBMP; page 4-30

of coaxial and fiber-optic cable. The Preserve Specific Plan area would require the extension of cable wiring from a backbone facility out to the site either before or after construction of the project.

Funding of the regional telephone and cable television facilities is provided to the project by the Utility. The developer is responsible for the costs of extending utilities from the backbone facilities to the project site. Similarly, funding of the operations for general utilities is the responsibility of the individual utility through user charges.

Although connections to The Preserve Specific Plan area are not currently installed, the utility companies have indicated that they have the capability to provide the necessary services to the area. Generally, the necessary facilities are constructed either prior to or in parallel with the development projected.

Threshold of Significance

The proposed project would be considered to result in a significant impact relative to telecommunications if development of the Plan exceeds the existing or planned distribution and supply capabilities of telephone or cable television service providers who serve the plan area.

Project Impacts

Telephone

The proposed project would result in increased demand on the existing telephone service provider Verizon. Verizon has plans for locating future wire centers to distribute telephone services to customers in the plan area. Verizon plans its services provision to accommodate growth in service areas. Therefore, existing and planned distribution and supply of telephone service is expected to accommodate the proposed plan implementation and buildout.

Cable Television

The plan would most certainly pose the need for a new provision of cable service to the project area. Adelphia Communication Services is prepared to distribute cable service to the project area with buildout. Planned distribution and supply of cable services is expected to accommodate the proposed plan implementation and buildout. Therefore, project impact on cable services is not anticipated to be significant.

Cumulative Impacts

Buildout of the cumulative projects would result in additional demand relative to both telephone and cable television service provision in the areas of the cumulative projects. However, existing and planned service in these areas is expected to be sufficient by the service providers.

Mitigation Measures

No mitigation measures are proposed.

Level of Significance After Mitigation

Implementation and buildout of the proposed project is not expected to adversely impact telecommunications, therefore project related or cumulative impacts are not expected.

5.13 CULTURAL RESOURCES (HISTORICAL/ARCHAEOLOGICAL/PALEONTOLOGICAL)

5.13.1 INTRODUCTION

This section addresses existing conditions and potential impacts to cultural resources (archaeological, historical, and paleontological) resulting from the proposed project. The archaeological and historical analysis is based on information provided by Archaeological Associates (April 2000), including a preliminary cultural reconnaissance of the proposed plan area. Paleontological information is derived from the paleontology reconnaissance prepared by MBA (May 2000). Both reports are included in EIR Appendix F.

The purposes of the cultural resources inventory was to gather information concerning previously recorded prehistoric and historic resources within the boundaries of the plan area as a basis for evaluating potential impacts, and to identify measures necessary for the protection of significant resources.

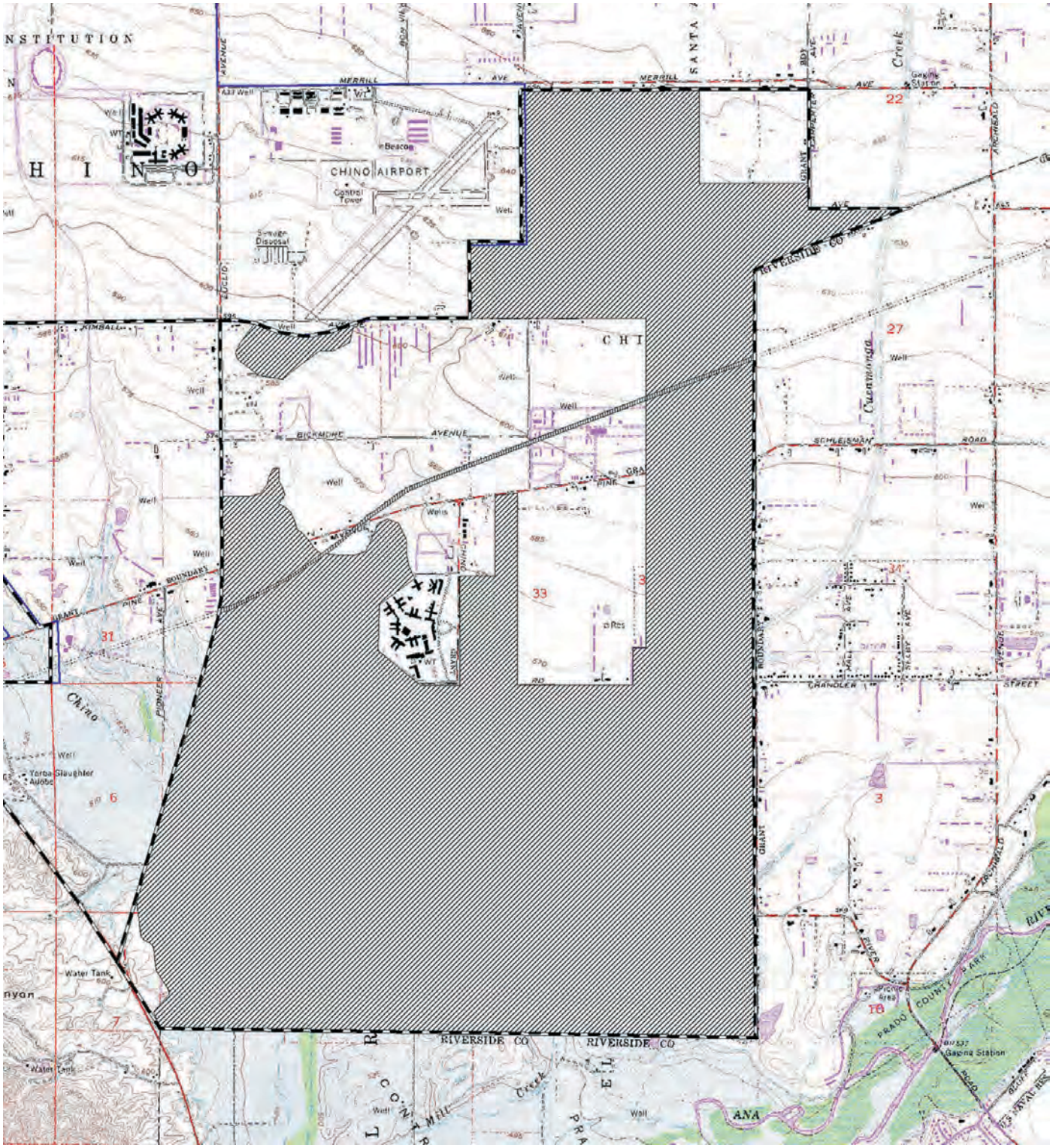
5.13.2 EXISTING CONDITIONS

Cultural Resources Overview

The Prado Basin has been a focal point for human activity during prehistoric times and as well as in the more recent past. The availability of a permanent water source supplied by the Santa Ana River and its tributaries has resulted in the presence of numerous prehistoric and historic archaeological sites in the Basin. Sites range in age from 8,000-5,000 years B.P. (Milling Stone Horizon) to the mid 1900s (American Period).

Creation of the Prado Flood Control Basin during the late 1930's and early 40's eventually led the U.S. Army Corps of Engineers to sponsor a number of cultural resource studies focusing on both the prehistory and history of the basin. Over the last three decades, a surprisingly large body of data has been gathered, particularly with regard to pre-WWII small farms and dairies.

The current cultural resources records search indicates that approximately 85% of the proposed project (i.e. the plan area) has been previously surveyed for prehistoric and historic cultural resources (Exhibit 5.13-1). Past surveys date from 1975 to the present. With the exception of a few hundred acres, the entire area south of Pine Avenue (encompassing approximately 2/3 of the plan area) has been previously investigated. Furthermore, much of the northeastern portion of the study area has been studied in conjunction with past expansion plans of the Chino Airport.



Areas Surveyed for Cultural Resources
SOI/Euclid Ave. Boundary
City of Chino Boundary

SOURCE: Psomas

3250 1625 0 3250
SCALE IN FEET

Michael Brandman Associates

Exhibit **5.13-1**
Cultural Resource
Previously Surveyed Areas

The types of surveys conducted have included linear surveys (roads, power lines, and pipelines), acreage surveys (e.g. Prado Regional Park and Prado Regional Golf Course), and several large scale flood control projects. The vast majority of prehistoric and historic studies were associated with Prado Flood Control Basin projects sponsored by the U.S. Army Corps of Engineers, Los Angeles District. The most comprehensive investigation conducted within the southern portion of the study area was *Phase II Archaeological Studies of Prado Basin and the Lower Santa Ana River* (Langenwalter & Brock 1985). This study included background research, survey, test excavation, and evaluations for National Register of Historic Places (NRHP) eligibility for numerous Prado Basin sites (including several within the plan area).

A total of fifty-three archaeological sites (8 prehistoric, 45 historic) have been recorded within the plan area (Table 5.13-1). With the exception of only a few historic sites, all prehistoric and historic resources are situated below the Prado Dam high water line (below 566' MSL elevation). Fourteen of the sites have identification numbers prefixed with "SBR-" (for San Bernardino County). However, the vast majority of sites are regarded as "Pending Sites". Pending sites are those sites whose existence and location have yet to be confirmed. Generally, their presence is based upon early maps, historic references and hearsay. These sites begin with the letter "P".

TABLE 5.13-1
CULTURAL RESOURCES WITHIN THE PLAN AREA

Site Number	Site Description
SBR-1543	Habitation site (The Pate Mesa Site)
SBR-1571/H	Historic trash dump. Prehistoric groundstone feature comprising a foundation remnant of the Pate Ranch
SBR-2259	Mano & bowl fragment (location now covered by park headquarters)
SBR-2260	Bedrock milling station
SBR-2845	Light lithic and groundstone scatter ('Bandini Mountain' site)
SBR-5241	projectile points and lithics reported by informant (site believed to be destroyed)
SBR-5243	Large light artifact scatter (Corral Site)
SBR-5244	Groundstone scatter reported by informant (site destroyed during construction of Vander Laan Dairy)
SBR-5274	Mortars, pestles, and projectile points reported by informant. Site destroyed by pumping station (Altadena Dairy site)
SBR-5573H	Britski Ranch site (1933)
SBR-7136H	Hartshorn Farm site (1890's)
SBR-7676H	Ross Ranch site (1899)

TABLE 5.13-1 (Cont.)
CULTURAL RESOURCES WITHIN THE PLAN AREA

Site Number	Site Description
SBR-7679H	Olive grove at Le Gaye Ranch (1883)
P871-1H	McCarty Ranch (1878)
P871-2H	Payne Hog Farm (1878)
P871-3H	Farm site (1899)
P871-4H	Kirby Farm site (1899)
P871-5H	The Songer Place (1899)
P871-6H	Ben Fugua Ranch site (1880's)
P871-8H	Remington Ranch (1900's)
P871-9H	Ranch House site (1926)
P871-10H	House site (1926)
P871-11H	Barn site (1926)
P871-12H	Chino Valley Grist Mill (1875)
P871-13H	The Brown Place (1899)
P871-14H	Arborn Ranch and Raab Farm (1857)
P871-15H	Willow Springs Ranch (1860's)
P871-16H	Mayhew House (1866)
P871-17H	Valley School (1887)
P871-18H	Eva J. Hall farm (1890's)
P871-19H	Spring Valley/Mayhew/Fugua Ditch (1875)
P871-20H	Cline Homestead (1870's)
P871-21H	Aguada Guapas House (1850's)
P871-22H	Mary Race Farm/Dairy (1900's)
P872-9H	unknown
P872-10H	Pioneer School/Cemetery (1887)
P872-11H	Cavanagh House site (1890's)
P872-12H	Richenberger Ranch (1898)
P872-22H	Cavanagh Ranch (1890's)
P872-24H	Moreno Ranch (1890's)
P872-25H	Aramousby Farm site (1900)
P872-27H	Stockwell Service Station and Store (1920's)
P872-41H	Indian/Grange Cemetery (1902)
P872-43H	House site (1920)

TABLE 5.13-1 (Cont.)
CULTURAL RESOURCES WITHIN THE PLAN AREA

Site Number	Site Description
P872-44H	Maguire Ranch (1892)
P872-45H	Cavanagh Residence (1899)
P872-46H	Cavanagh House (1933)
P872-49H	Blinn Property
P872-52H	Farm site
P872-58H	Taylor Ditch (pre-1888)
P872-76H	Wilkinson Dairy (1900's)
P872-81H	Reichmuth Dairy (mid 1930's)

Archaeological Resources

Eight prehistoric archaeological sites have been recorded within the plan area. Most are located adjacent to reliable sources of water. The majority are "Pending Sites" based upon early maps, historic references and hearsay; their existence and location have yet to be confirmed. The prehistoric sites consist of a bedrock milling station, an artifact scatter, a lithic scatter, two groundstone scatters, and two lithic and groundstone scatters. All but one of these prehistoric sites are located adjacent to permanent watercourses within the southern half of the project site. Seven other locations yielded eight isolates (less than 3 artifacts in association).

A study for the U.S. Army Corps of Engineers (Infotech 1988) recommended that 22 prehistoric sites in the Prado Basin area be considered as part of a proposed Prado Basin Archaeological District. Eight of these sites are located within the proposed plan area. No action on the eligibility recommendation has been taken.

Historic Resources

Among the 45 historic resources within the plan area are 12 ranches, 10 residences, and 7 farms dating from the mid to late 19th century. Most of these features are located adjacent to watercourses. Other resources on the site include trash dumps, homesteads, barns, a grist mill, former school site, irrigation ditches, dairies, cemeteries, and service stations.

The Preserve contains no properties listed as California Historical Landmarks (CHL), California Points of Historical Interest, or in the Historic Property Directory. No standing structures or buildings within The Preserve have been evaluated for historical significance.

According to the records search, no National Register listed properties exist within the plan area. However, in 1988, Infotec Research Incorporated (IRI), under contract with the U.S. Army Corps of Engineers (COE), Los Angeles District, evaluated the significance of numerous prehistoric sites in the Prado Basin area for the purpose of determining National Register of Historic Places (NRHP) eligibility (Goldberg and Arnold 1988:98f.). Twenty-two (22) prehistoric sites located in the Prado Basin were recommended for consideration as part of a proposed archaeological district (the Prado Basin Archaeological District). Eight of the twenty-two sites are located within the proposed plan area. They comprise SBR-1543, 1571/H, 2259, 2260, 2845, 5241, 5243, and 5244. With the exception of SBR-2259, 2260, and 5244, all of these sites were tested by Langenwalter and Brock in 1985.

Paleontological Resources

The plan area is underlain by 300-800 feet of alluvial sands, but soil and vegetation currently obscure nearly all of its surface expression. The only geologic unit of paleontologic concern is the older (Pleistocene) alluvium, which comprises about one-quarter of the site's surface and is mostly confined to the southern half. Elsewhere, it is buried beneath younger alluvium. The older alluvium is best exposed along the banks of Mill Creek and on the northeast side of State Route 71. The records search at San Bernardino County Museum indicated no fossil localities have been recorded within the plan area. However, Late Pleistocene alluvium elsewhere in San Bernardino County, including deposits in Chino and Chino Hills, has yielded a diversity of significant vertebrate fossils. A site close to the plan area near Route 71 in Chino has yielded fossil remains of mammoth, ground sloth, camel, bison, horse, and deer.

5.13.3 THRESHOLDS OF SIGNIFICANCE

The following criteria for establishing the significance of potential impacts on cultural resources are derived from the 1999-revised CEQA Guidelines (Section 15064.5). A significant impact would typically occur if the proposed project would:

- Cause a substantial adverse change in the significance of a historical resource:
- Cause a substantial adverse change in the significance of an archaeological resource:
- Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature;
- Disturb any human remains, including those interred outside of formal cemeteries.

Before impacts or mitigation of impacts on archaeologic resources can be addressed, site importance must be determined. Appendix J of CEQA Section III recommends a testing program to determine if

a site may qualify as an important resource. The goals of a testing program are to determine if a subsurface component is present, if the extent of surface and/or subsurface materials may be affected by the proposed action, and if the resources in question have the potential to answer local an regional research questions.

If any cultural resource is determined to be important, a program to mitigate anticipated impacts must be implemented through avoidance or data recovery. Sites found not to be important cultural resources need not be addressed under CEQA.

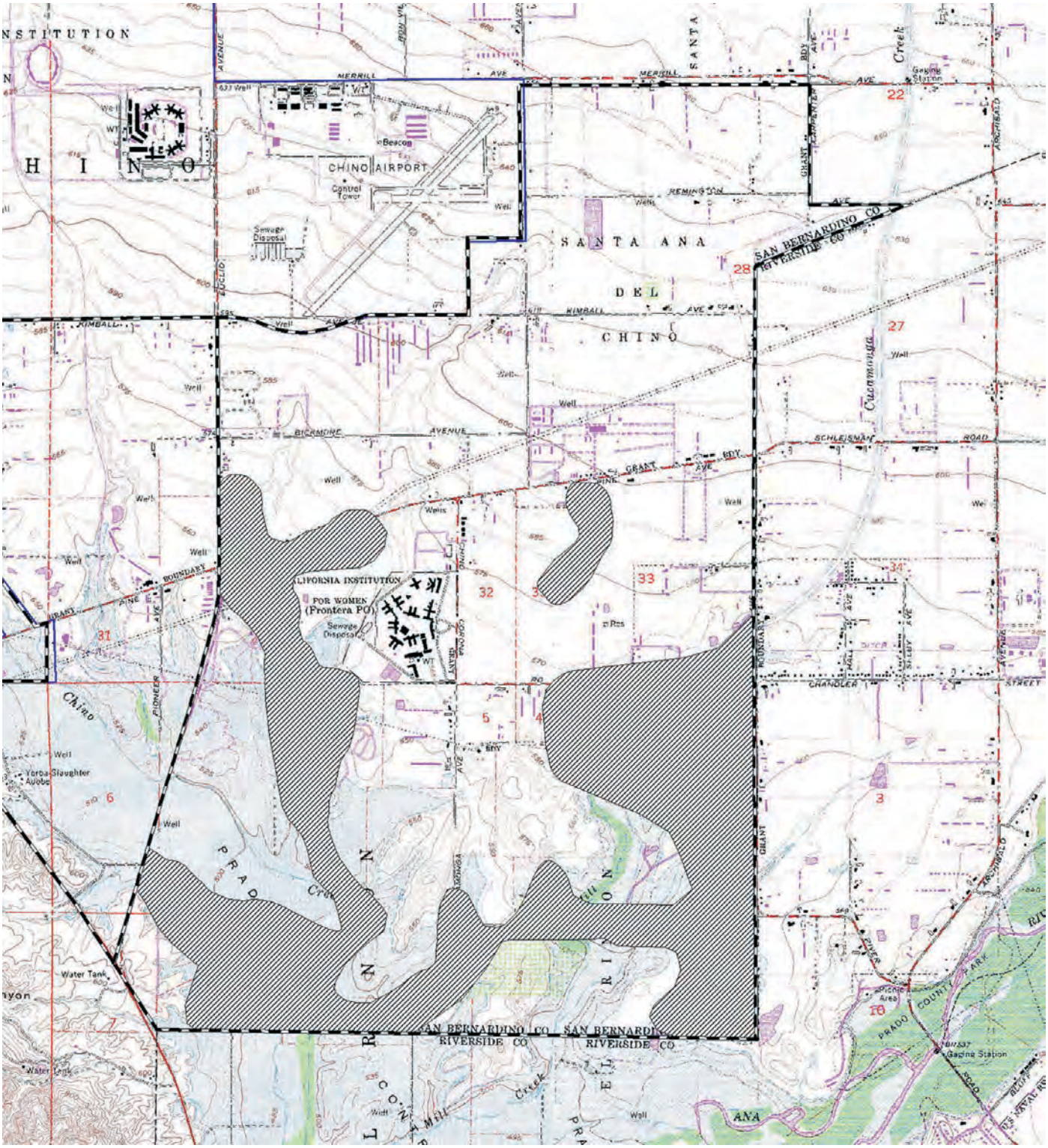
5.13.4 PROJECT IMPACTS

Exhibit 5.13-2 identifies areas considered sensitive for the occurrence of both prehistoric and historic resources with the plan area. These are areas either with previously recorded cultural sites or areas with significant potential for discovery of additional cultural materials based on topography and/or proximity to water features. For the most part, these areas are concentrated within the planned open space system of the proposed project. However, the potential exists for discovery of significant cultural or paleontologic material within both the planned development areas and planned open space areas of the proposed project.

Archaeological Resources

Proposed development of the plan area could have an adverse impact on as yet undiscovered significant archaeological resources. There is a significant potential that additional prehistoric materials will be encountered during earth-disturbing activities within planned development areas.

Future recreational or agricultural uses within the planned open space system could have the potential to disturb or destroy recorded or as yet undiscovered archaeological resources within these areas. Much of the planned open space system below the 566' elevation is owned or controlled by other public agencies (i.e. U.S. Army Corps of Engineers, Orange County Flood Control District, and County of San Bernardino). Use plans and permits for these areas will be coordinated with the appropriate agencies to assure that no significant impacts occur to archaeological resources in these areas.



Areas Sensitive for Prehistoric and Historic Resources
SOI/Euclid Ave. Boundary
City of Chino Boundary

SOURCE: Psomas

NORTH

3250 1625 0 3250

SCALE IN FEET

Michael Brandman Associates

Exhibit 5.13-2
Cultural Resource Sensitivity

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CHINO SUBAREA 2

Historical Resources

There are forty-five (45) recorded historic sites within the plan area, with most of these located in the planned open space system. Proposed development of the plan area could have an adverse impact on significant historic resources. Additional as yet unrecorded historic resources could be encountered during earth-disturbing activities.

Paleontological Resources

The size of the plan area and its proximity to a recorded paleontological site (near SR 71) suggest that significant paleontological resources could be encountered during earth-moving activities. Older alluvium in the region and within the plan area has a high paleontologic sensitivity because it is a primary source of significant vertebrate fossils. Therefore, proposed development of the plan area could have an adverse impact on significant paleontological resources.

5.13.5 CUMULATIVE IMPACTS

The incremental effects of the proposed project on cultural resources will be mitigated with implementation of the mitigation measures identified below. The planned development of the project is not anticipated to contribute to a potential cumulative impact on cultural resources.

5.13.6 MITIGATION MEASURES

The following mitigation measures are identified to reduce potential impacts to cultural resources.

CR-1. Survey and Mitigation Report

Phase 1 field surveys (surface survey and collection) by a certified archaeologist shall be conducted prior to all earth disturbing activities within the plan area. Existing natural open space, agricultural open space and dairy sites are included in this survey requirement. Excluded would be heavily disturbed areas, lagoons and detention ponds, and paved areas. The archaeologist will identify all prehistoric and historic resources observed during the field survey, complete a preliminary evaluation of the resources, and recommend appropriate measures for the disposition and treatment of significant resources. A technical report shall be prepared including discussion of cultural site significance (depth, nature, condition, and extent of the resources), final mitigation recommendations, and cost estimates. Excavated finds shall be offered to the City of Chino, or its designee on a first refusal basis. Final mitigation shall be carried out based upon the report recommendations and a determination as to site disposition by the City. Possible determinations include, but are not limited to, preservation, salvage, partial salvage, or no mitigation necessary.

CR-2. Archaeological Monitoring

Where recommended in culturally-sensitive areas pursuant to Survey and Mitigation Reports (CR-1 above), archeological monitoring of earth-disturbing activities shall be conducted. The monitoring certified archaeologist will identify any prehistoric or historic resources exposed, complete a preliminary evaluation of the resource, and recommend appropriate resource management for the treatment of the resource. If additional or unexpected archaeological features are discovered, the archaeologist shall report such findings to the City. If the resources are found to be significant, the archaeologist shall determine, in consultation with the City, appropriate actions for further exploration and/or salvage recovery.

CR-3. Paleontological Monitoring

Monitoring for fossil material by a qualified paleontologist is required during construction grading activities within older alluvium (Pleistocene), in order to avoid any disturbances to possible unknown or unidentified paleontological resources.

5.13.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the mitigation measures listed above, impacts on paleontology, archaeology, and historic resources associated with the plan area would be reduced to a level considered less than significant.

5.14 AESTHETICS

5.14.1 INTRODUCTION

This section discusses the existing visual setting and potential impact of the proposed project upon the aesthetics of the plan area, including scenic resources, visual character, light, and glare.

5.14.2 EXISTING CONDITIONS

The visual appearance of the plan area is dominated by dairies and related agriculture uses, and other open space in varying degrees these practices and characteristics have determined the aesthetic qualities of the area's visual resources. The visual analysis completed for the area included the initial step of identifying elements that either add to or detract from the quality of the area. The subsequent step evaluated the role those elements play in the range of views from public areas, including foreground, middle distance, and far distant views.

Positive features that enhance the area's visual resources relate to the current agricultural operations and the accompanying sense of a rural setting. In developed urban landscapes, public views are often limited to foreground features. The lower building density within the existing agricultural setting allows for more extensive views across and through dairy operations or cropland areas.

Negative features that adversely affect the area's visual resources include the lack of adequate infrastructure to provide for current dairy operations and physical spaces to define and separate uses. Examples of this include a lack of curb, gutter, and sidewalks along existing streets and the close proximity of dairies to one another. This latter characteristic provides a visual density and intensity that reduces the area's visual aesthetics. In addition, regional air quality may negatively affect visual resources by reducing the visibility of area hills and mountains and their associated range of color, form, and contrast of scenery.

Scenic Resources

The proposed plan area is located within the Chino Valley, which is a large and generally flat subportion of the larger San Bernardino Valley. The plan area is generally flat with a gentle south-southwest trending slope. Elevations in the area range from about 500 to 600 feet above sea level.

Chino and Mill Creeks traverse the southern part of the area. These creeks have inherent scenic value, although the aesthetics have been diminished in numerous locations by trash deposition and debris. Two other smaller drainage courses (e.g. earthen swales) extend south from the Chino Airport through the plan area, before entering Prado Lake. These drainages have very little vegetation and

scenic value. Approximately 2,197 acres of the plan area lie within the high water inundation area created by the proposed raising of the Prado Dam. Prado Dam is not a visual presence in the area due to its height, distance from the plan area, and the southerly slope of the land toward the dam.

The most visible distant features from the plan area are the hills of the Cleveland National Forest to the south, and the Chino Hills to the west. San Juan Hill, located to the west of the plan area within the Chino Hills is approximately 1,780 feet high. San Juan Hill is located just south of the westerly extension of the major Edison transmission lines. Peaks visible to the distant south of the plan area within the Cleveland National Forest include Sierra Peak and Pleasants Peak, which reach 3,045 and 4,005 feet elevation, respectively.

Within the plan area, middle and foreground views can vary and intermingle depending on the vantage point, topography and vegetation. For example, visibility in the southerly half of the project area is significantly reduced due to an increased level of vegetation. However, visibility increases in the open dairy pasture within the plan area, and cropland portions of the project area due to the relative lack of structures and vegetation.

Visually, the project area can be divided into two (2) distinct areas. The northerly portion, generally identified as that area north of the 556' dam inundation area, is primarily dairy use-related. Significant portions of this area contain facilities for the care and feeding of cows. Little vegetation exists within the area, except for that portion related to feed crops for existing dairy operations.

The southerly portion contains a greater level of vegetation due to the reduced number of dairies, seasonal inundation from Prado Dam and existing water features and recreational areas. The natural vegetation associated with Chino and Mill Creeks, the topographic relief and fallow farmlands combine to create a significant visual resource. This visual and aesthetic appeal is also enhanced by Prado Regional Park and Prado Lake.

Bisecting the plan area in the vicinity of Pine Avenue is a major electrical transmission line operated by the Southern California Edison Company. Electrical facilities located along this alignment include 2-200 kv lines, plus 2-500 kv lines. The electrical towers are estimated to be approximately 125 feet high and represent the most visible man-made feature in the project area.

Dairy Operations and Visual Character

While dairy uses can provide an open rural type setting, the plan area contains a high density of such uses, which places them in close proximity to area roadways and each other. This lack of separation between uses reduces the open rural character normally associated with such uses and therefore, detracts from the area's appearance. In addition, structures built with reflective metal roofing and siding contribute to a stark industrial appearance of storage or production related facilities. Outdoor

storage yards containing obsolete or seldom used agriculture objects or machinery abut some of the area's residences and agriculture facilities. Operational components of the dairies, such as waste water retention lagoons and animal waste also diminish the visual appeal of the area, especially during the summer months when water is minimal and mud is exposed in ponds and lagoon bottoms. The existence of such uses can adversely affect the area's visual resources.

Inland Empire Utility Agency's Co-Composting Facility is a 93-acre facility in the center of the plan area with stockpiled manure and wastewater sludge for compost. Stockpiles typically reaching up to 20 feet high are partially screened from surrounding views by perimeter berms.

The California Institution for Women-Chino (CIW-Chino) is highly visible along Chino-Corona Road and within adjacent portions of Prado Regional Park, but the facility is not readily visible from the surrounding major roadways (i.e. SR 71, Euclid Avenue (SR 83), Pine Avenue). Lighting of this women's correctional facility and grounds, and the barbed wire high perimeter fences, are existing adverse aesthetic and visual elements. U.S. Army Corps of Engineers' plans to create a dike around the western and southern perimeters of the facility for flood inundation protection may have either an adverse or beneficial impact on nearby views, depending upon the design and landscaping of the proposed dike.[1]

The plan area contains a number of existing uses that will either remain or relocate as new development occurs. The plan area is located within a portion of the Chino Basin Dairy Area (CBDA) that is home to one of the largest dairy herd populations in the world. An additional portion of the plan area is devoted to pasture land and agricultural uses. Due to the existing agricultural uses the area is primarily rural in nature with minimal streetlights and no curbs, gutters or sidewalks. Visibility is generally uninterrupted due to the lack of structures within the area.

Light and Glare

Light and glare sources are very limited within the plan area due to the lack of structures, streetlights, and hard surfaces typically found with urban/suburban development. The most significant areas illuminated at night are the California Institution for Women and the industrial buildings on the north side of Merrill Avenue, southeast of the Chino Airport. Portions of various dairy operations within the area are also illuminated at night. However, the nature of the existing nighttime lighting, in areas other than the Institute for Women and the industrial area identified above, more resembles a rural setting due to the non-uniformed spacing of the lighting and the lack of well illuminated gathering spaces normally associated with an urban setting.

[1] Supplemental EIS and Project EIR for Prado Basin and Vicinity, Including Stabilization of the Bluff Toe at Norco Bluffs; U.S. Army Corps of Engineers (7/2000).

Surrounding Views

The land uses immediately surrounding the plan area are generally low lying and do not represent significant visual features. The Chino Airport is located along the northerly project boundary. Although a number of large buildings exist on the Airport property they are separated from surrounding properties and uses by a significant distance due to existing Airport safety zones. Euclid Avenue/State Route 83 is the westerly project boundary and is designated a scenic highway by the County for that portion within the unincorporated area of the County south of Riverside Drive. Euclid Avenue is not significant visually since it is at the same elevation as the surrounding area. Adjacent to the northwest corner of the project area is the California Institution for Men. The Institution is illuminated at night, but does not represent a significant light source due to its distance from the project area.

The plan area is generally screened from view along State Route 71, a state designated scenic highway, by low hills along the east side of SR 71. The site appears as part of a low, distant horizontal visual plane along SR 71 north of Pine Avenue (see Exhibit 5.14-1). The site is more readily visible from higher elevations in the Chino Hills to the west of SR 71

5.14.3 THRESHOLDS OF SIGNIFICANCE

In evaluating potential aesthetics impacts of a proposed project, Appendix G of the CEQA Guidelines, the Environmental Checklist, indicates a potentially significant affect could occur if the project would result in any of the following:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- Substantially degrade the existing visual character or quality of the site and its surroundings.
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

Photo 1 Approach to Prado Regional Park - Northbound Euclid Avenue

Photo 2 View of Chino Subarea 1 From Elevated Vantage Point Above State Route 71 (Sub Area 2 Visible at Horizon)

NORTH

Michael Brandman Associates

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Exhibit **5.14-1**

Open Space Views

THE PRESERVE • CHINO SUBAREA 2

5.14.4 PROJECT IMPACTS

The impacts associated with implementation of the proposed plan are primarily derived from the change in land use from a rural to urban condition. This transformation will significantly change the character of the project area. While the land use change is significant it may not represent a significant change from an aesthetic perspective since rural and urban settings may each have positive and negative attributes. Development of the proposed plan area will result in a change from a rural to urban character, incorporating a variety of residential, commercial, industrial, recreation, and open space uses. The open space character and scenic values of the site below the 566-foot elevation would remain largely unaltered.

Scenic Resources

As noted within the existing setting section above, most significant scenic resources are located off-site. The proposed project will not affect these particular resources or vicinity characteristics. Visual resources within the project area are primarily located at or below the existing 566' dam elevation inundation area. The proposed project does not intend to change that condition. Land uses below the 566-foot elevation will retain a mix of open space, recreation and agricultural uses. The Preserve Specific Plan identifies the area below the 566-foot dam inundation elevation as one of the more significant and unique open space opportunities in the region. The land use concept builds upon this opportunity and provides a natural oasis for active and passive recreational opportunities. The area below the 566-foot dam inundation elevation is envisioned as a dynamic combination of active and passive recreation, habitat and agricultural uses." (p. 32) Consistent with this objective, the Plan further provides that "The open space land use designations address a specific range of uses intended to help preserve the historic, rural character or Chino. The majority of these designations are incorporated within the 566-foot dam inundation elevation." (p. 82)

The proposed specific plan contains the following five (5) open space land use designations:

- Agriculture: To provide for agricultural uses, including farming, stables, pastures, and grazing.

- Open Space-Recreation: To provide for open space areas for active and passive recreation and to provide protection from environmental hazards.

- Agriculture/Open Space-Natural: To provide for agricultural and open space uses, including passive recreation, equestrian uses, farming, pastures, grazing, permanent open space, wildlife preserves, multi-purpose trails, and water retention basins.

- Open Space-Natural: To provide 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 passive outdoor recreational uses.

- Open Space-Water: To provide for the preservation of water resources, such as watercourses and lakes.

The proposed specific plan land uses within the southerly half of the plan area will be consistent with existing land uses and compatible with the land uses proposed within the balance of the planning area to the north. The development of the northerly portion of the project area will substantially change the existing character and nature of the area. Although no scenic resources have been identified within this area, the proposed project will change the area from a rural agricultural related setting to an urban setting with a mixture of residential, commercial, and industrial uses.

The proposed specific plan responds to the County's scenic highway designation for Euclid Avenue by defining both an Urban Expressway and Rural Expressway roadway design and cross-section for different segments of the route adjacent the plan area (i.e. north of Pine Avenue and south of Pine Avenue). To respond to existing scenic resources that can be viewed from area roadways, such as Euclid Ave., the Preliminary Draft Specific Plan "will tailor the design of an Expressway to that of the surrounding character, two street sections are provided: an Urban and Rural street section. In urban areas, an Expressway [Euclid Avenue] is an eight-lane, high capacity roadway with a 200-foot right-of-way and a curb-to-curb width of 160-feet, including a 64-foot median. In rural areas, an Expressway maintains the same right-of-way width but the design can be altered to reflect the open character by eliminating or reducing the median, eliminating curbs, and providing a wide, paved/or shoulder." The Specific Plan also indicates that "Between Kimball and Pine Avenues, Euclid Avenue is the urban cross section…Between Pine Avenue and the 71 Freeway, Euclid Avenue reflects the rural cross section." (p. 101) This theme is further delineated in the Specific Plan through specific treatments. That portion north of Pine Ave. is required to provide "A lush understory and groundcover…" South of Pine Avenue. "Informal groupings of native landscaping should be used." (p. 139).

Due to the proposed land use pattern, the impact upon existing land uses and scenic resources within the project area will be less than significant.

Visual Character

The visual character of the project area will change substantially as land uses transition from one dominated by agriculture to an urban setting. This change will disrupt the open and rural condition represented by existing uses and reduce visibility due to the construction of buildings and other structures.

The highly visible existing major electrical transmission lines traversing the plan area will remain, but are placed within an Open Space-Recreation designation that will respect their existence and separate permanent uses from their location. The electrical towers do not significantly impair visibility or views within and through the plan area. The towers, however, represent a highly visible man-made feature that will remain with development of the plan area.

Light and Glare

The affect of existing light and glare within the plan area is currently minimal due to the lack of structures and other physical improvements. Development of the project area will add to the amount of physical improvements and associated hard surfaces that reflect light, including buildings, parking areas, and signs. However, proposed development must comply with landscaping criteria contained within the Specific Plan that will "help unify the street scene, orient travelers and create a memorable image." (p. 138) The Plan also contains landscape and streetscape design guidelines "to establish a unified landscape framework that provides continuity throughout the public portions of the project area, including public roads, easements, parkways, medians, and development edges." (p. 138) Individual project landscaping must comply with both the specific plan standards and guidelines, and the existing Chino Zoning Ordinance.

Although additional light and glare sources would be created, the use of landscaping, directional lighting criteria, and building design criteria incorporated into the specific plan would reduce the impact to a level that is less than significant.

Surrounding Views

The plan area is relatively flat and views from off-site locations will not be significantly affected, except those from elevated portions of Chino Hills, located approximately one (1) mile to the west. Views from the Chino Hills area are generally more distant and lack perspective due to minimal height variation when measured against the distance to the site. These views are also occasionally obscured by the general visibility conditions found in the area. Closer views of portions the plan area are obtained from the Butterfield Ranch area in Chino Hills near the intersection of SR 71 and Euclid Avenue. These are largely views of Prado Regional Park and other open space within the plan area that will not be substantially altered.

The more urbanized areas of the site are located to the north and east of the open space areas. Buildings within the urban areas proposed closest to the Chino Hills are 40 and 45 feet for residential and commercial uses, respectively, and are located over a mile away. The height in commercial areas can increase to 65 feet for non-habitable structures.

Due to the distance to urban related uses and proposed building heights, the quality of the views from surrounding vantage points including SR 71 and the Chino Hills will not significantly change.

5.14.5 CUMULATIVE IMPACTS

The plan area represents one of the last remaining, large non-urban land units in southwestern San Bernardino County. Areas surrounding the project site have been or are proposed for development. However, the project area's scenic resources are to be preserved through open space, recreation and agriculture designations for the enjoyment of residents of the project area and surrounding region.

The visual character of the project area will change to reflect the urbanizing pattern of the surrounding region. Light and glare will increase within the plan area similar to that found within the existing and proposed development pattern surrounding the project site. These changes are not considered to be cumulatively significant and adverse.

Surrounding views of the project area are primarily limited to that available from the Chino Hills area to the west. Portions of the Chino Hills area have already developed and development within the plan area will not change that condition nor reduce area visibility due to the distance to the project site. As such, the change in the surrounding views of the plan area will not be cumulatively significant and adverse.

5.14.6 MITIGATION MEASURES

No mitigation measures are necessary for impacts associated with the transition of rural to urban uses within the planned development areas of the site. The proposed specific plan includes design guidelines and criteria to create an attractive and positive visual condition for future development. These guidelines and criteria include:

- Landscape & Streetscape Guidelines
- Paseo Treatments
- Gateway Treatments
- Landscape Planting Criteria
- Non-Residential Design Guidelines
- Community Core Design Guidelines
- Lighting Guidelines

These elements, when implemented through Design Review are essentially project design features. They represent features that will both assure a quality urban visual environment, and minimize the visual impact associated with a significant change in land use.

5.14.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The components of the specific plan described above will reduce the level of impact to less than significant.

5.15 GENERAL PLAN CONSISTENCY ANALYSIS

The following is a consistency analysis of The Preserve Specific Plan and the City Chino General Plan. This section documents each of the goals of the Chino General Plan and describes how the proposed Specific Plan responds to such goals. General policies and goals are cross-referenced below to corresponding sections of this EIR where additional environmental information may be provided.

5.15.1 LAND USE ELEMENT

Growth and Identity

General Policy (See EIR Sections 5.1 Land Use, 5.11 Public Services, 5.12 Utilities, 6. Growth Inducement)

The City of Chino has set no maximum population limits. Growth shall be in a phased and orderly manner consistent with the availability of adequate public and private services, utilities and public facilities (Rev. 1-80-88 Measure M).

The Specific Plan Responds to the Policy:

The Preserve incorporates smart growth and sustainable cities principals in its development plan and blends them with a unique environmental setting and commits public and private resources to make them work. The Preserve has been carefully crafted to guide growth to the most appropriate locations, avoiding hazards and biologically sensitive areas. Phasing and financing plans contained in the Specific Plan guide an orderly development that is tied with the provision of services and utilities.

General Policy (See EIR Sections 3. Project Description, 5.1 Land Use, 5.2 Agriculture)

The City of Chino shall develop a community image which portrays it as a diverse, yet well maintained and pleasant suburban environment in which to live and do business. The City's rural agriculture heritage should also be maintained and fostered.

The Specific Plan Responds to the Policy:

The Preserve's development concept combines a mixture of uses: open space and agricultural, residential neighborhoods, a regional commercial center, and an employment center centered on the Chino Airport. The Community Core, the heart and focus of The Preserve, accommodates a mixture of residential, commercial, office, cultural, civic, and educational uses in a traditional downtown. The

residential categories are purposefully broad to encourage a variety of products types that appeal to all segments of the market. The residential categories accommodate a variety of housing types, from equestrian estates, detached single-family suburban style homes, clustered units, duplexes, townhomes, apartments, and condominiums. The development standards ensure a variety of product design and allow a diversity of product arrangements. Permanent agricultural and natural open space areas are accommodated in The Preserve in the most appropriate locations. This helps to maintain the City's cultural heritage.

Residential Land Uses

General Policy (See EIR Section 3. Project Description)

Each new development should have, to the maximum extent, its own distinct character and identity. Adopted land uses patterns should also serve to protect and enhance the character of existing neighborhoods.

The Specific Plan Responds to the Policy:

Each of the residential land use designations: Estate, Low Density, Medium Density, and High Density will have their own distinct character and each is addressed in the residential designation development plan. The Community Core accommodates a residential environment in a traditional downtown. Each land use category accommodates a broad range of housing types: the Estate Residential category accommodates equestrian estates and clustered projects; the Low Density category accommodates detached single-family suburban style homes, clustered units, duplexes and townhomes; the Medium Density category accommodates small lot single-family projects, duplexes, townhomes and even some apartments; the High Density category accommodates small lot single-family projects, duplexes, townhomes, apartments and condominiums. The intent of these broad residential categories is to encourage a variety of products types that appeal to all segments of the market. The development standards and design guidelines ensure a variety of product design, densities, and allow a diversity of product arrangements.

General Policy (See EIR Section 3. Project Description, 5.1 Land Use)

The City's overall land use pattern shall stress higher density development in the Central portion of the City and along Euclid Avenue, and lower density development in the outlying areas.

The Specific Plan Responds to the Policy:

The central portion of The Preserve is the Community Core, which accommodates a mixture of residential, commercial, office, cultural, civic, and educational uses in a traditional downtown. The High Density residential category surrounds the core. The Community Core and High Density categories accommodates for sale and rent, duplexes, townhomes, clustered residences, flats, live-work products, residential lofts over commercial, pocket lots, detached condominiums and condominiums. The residential density decreases the further from the Community Core, with a concentration of medium density residential near the regional commercial center and the Chino Airport. The Preserve includes a regional commercial center and airport related business park along Euclid Avenue, north of Pine Avenue. The lowest density, the Estate Residential category, is located on the southern end of Community Core adjacent to the 566-foot dam inundation area.

General Policy (See all EIR Sections 5.1 through 5.14)

The design and location of all residential neighborhoods shall be such as to avoid adverse environmental impacts upon the neighborhood and vice versa.

The Specific Plan Responds to the Policy:

Residential development within The Preserve will be situated in areas away from known environmental impacts. Residential neighborhoods are not located in areas that contain earthquake faults, flooding or dam inundation potential, or within the currently adopted Chino Airport noise and safety zones. Environmentally sensitive areas and drainage courses are maintained and incorporated within the plan. The electrical transmission line is preserved and utilized for open space, recreation, nurseries and other uses. The transmission line runs east-to-west across The Preserve, roughly parallel to Pine Avenue.

General Policy (See EIR Sections 3. Project Description 5.1 Land Use, 5.14 Aesthetics)

The design of the residential environment shall be such as to give the appearance of a suburban density and scale, except in rural areas, where the scale shall be rural in nature.

The Specific Plan Responds to the Policy:

The Low Density, Medium Density, and High Density Residential land use designations contain development standards that are designed to give the appearance of a suburban density. The Estate Residential land use designation is designed to give the appearance of a rural scale with single-family, ranch style homes set on large lots. In addition, design guidelines have been created to ensure quality

development with The Preserve. Design guidelines address such issues as landscape and streetscape, grading, signage, and lighting. There are also specific guidelines that address residential development in terms of site planning and architectural design. Quality and attention to detail must permeate the initial design, layout of the streets and lots, grading, structure design, landscaping, lighting, and fences.

Commercial Land Uses

General Policy (See EIR Sections 3. Project Description, 5.1 Land Use)

Commercial development shall be located centrally to the community, with outlying commercial areas providing either specialized services, or services limited in scope to serving local residents.

The Specific Plan Responds to the Policy:

The central focus of The Preserve is the Community Core. The Community Core accommodates a mixture of residential, commercial, office, cultural, civic, and educational uses in a traditional downtown setting. Due to the orientation and location of the Community Core, it is easily accessible to the entire Preserve. Neighborhood Commercial uses are strategically located throughout The Preserve to allow convenient access to local serving uses, such as service stations and markets, by residents and visitors. The regional Commercial, Airport Related and Light Industrial land use designations are located to both capitalize on Euclid Avenue and the Chino Airport as well as to buffer the residential portions of the plan from the airport. The Euclid Regional Center and Airport Related land use categories are intended to capture a high proportion of revenue producing uses, improve the regional jobs-housing balance and act as a center for diversified employment uses.

General Policy (See EIR Section 3. Project Description)

All commercial development shall be of the highest aesthetic and functional quality. Detailed design critera and standards shall be established in order to achieve this purpose and provide developers with suitable guidance. Such criteria shall at a minimum address building height, architectural design, landscaping, bulk, parking design and pedestrian circulation.

The Specific Plan Responds to the Policy:

The Preserve Specific Plan includes standards and criteria that provide future developers, city staff, and decision makers with clear guidance. All the Non-Residential and Residential land use designations include detailed development standards, including height, setbacks, landscaping, and bulk. The Specific Plan also describes the intended character of each land use category, allowable

land use, uses subject to Conditional Use Permit, and appropriate temporary uses for each land use category. The Design Guidelines for The Preserve address community design, connectivity, architectural design, landscaping, gateways, signage, lighting, and walls.

General Policy

The city shall regulate signs in a manner which will emphasize safety, help improve and protect the appearance of buildings as well as the City as a whole, foster legible sign graphics, and promote the public's awareness of the business community while respecting the City's low-keyed suburban character

The Specific Plan Responds to the Policy:

The Specific Plan defers to the City's adopted sign ordinance for specific sign standards. The Design Guidelines address overall guidance for the scale, placement, and quality of signs in the General Signage Guidelines section and the Community Core Signage Guidelines.

Industrial Land Uses

General Policy (See EIR Sections 3. Project Description, 5.1 Land Use)

The City shall designate sufficient land to provide a full range of manufacturing employment and needed support services. Land for manufacturing support services as well as quasi-industrial uses shall be located in close proximity to manufacturing employment center, but in separate districts.

The Specific Plan Responds to the Policy:

The Preserve includes approximately 475-acres that accommodate manufacturing, manufacturing support services, offices as well as quasi-industrial uses. These uses are clustered around the Chino Airport to take advantage of this facility's long-term potential as well as to buffer residential uses from the impacts of the airplanes.

General Policy (See EIR Section 3. Project Description)

All industrial development shall be well designed of quality construction, and should reflect the general suburban nature of the community. By and large, a park-like atmosphere shall predominate which presents an attractive and inviting atmosphere to employees, visitors, present employers and prospective employers.

The Specific Plan Responds to the Policy:

All projects are subject to the City of Chino building standards to ensure quality construction practices. In addition, all Non-Residential land use designations, including Light Industrial and Airport Related, incorporate detailed development standards, such as height, setbacks, landscaping, and bulk. The Specific Plan also describes the intended character of each land use category, allowable land use, uses subject to Conditional Use Permit, and appropriate temporary uses for each land use category. The Design Guidelines for The Preserve address community design, connectivity, architectural design, landscaping, gateways, signage, lighting, and walls.

General Policy (See EIR Section 3. Project Description)

It is critical that the City acting in liaison with other private, public and quasi-public groups actively recruit a broad range of new industrial employment to locate in Chino. The City shall establish such a recruitment program in order to develop and expand the current employment base.

The Specific Plan Responds to the Policy:

The Preserve provides the opportunity to locate prospective employers to the City. The Preserve accommodates more than 10 million square feet of business uses. The Community Core Land Use Designation accommodates a range of employment generating activity by concentrating a mixture of uses within one area. The Preserve provides an additional area for which the City may promote the location of employment generating uses to take advantage of the proximity of the Chino Airport and residential areas.

Intergovernmental Coordination

General Policy (See EIR Section 2.2 and Appendix A)

Through its cooperation with the San Bernardino West Valley Planning effort, the Local Agency Formation Commission, the Chino Hills General Plan Committee, the Southern California Association of Governments, the San Bernardino Association of Governments, as well as other publicly sponsored and privately sponsored planning oriented groups, the City shall insure that while its interests are furthered, its plan will be closely coordinated with and supportive of those of neighboring jurisdictions.

The Specific Plan Responds to the Policy:

The Preserve Specific Plan has undergone an intensive program to illicit input and comments from interested citizens, affecting agencies, and property owners. This includes five Focus Group meetings that were held to discuss issues and opportunities and review the conceptual and preferred land use plans. These focus group meeting involved representatives and members concerned with: environmental issues (March 15, 2000), infrastructure and services (March 22, 2000), transportation and mobility (April 6, 2000), property owners' interests (April 12, 2000), and review of the alternative plans (June 7, 2000).

A few examples of intergovernmental coordination in the development of The Preserve land use plan and circulation system include coordination with the County of San Bernardino in regards to traffic impacts and the Chino Airport, the Army Corps of Engineers and Orange County Water District regarding the 566-foot dam inundation area, the Santa Ana River Watershed Agency and related groups, regarding the Santa Ana River, the Local Agency Formation Commission regarding annexation, and adjacent jurisdictions in initial input and review of the plan.

General Policy

The City shall work closely with the Local Agency Formation Commission in expanding, updating and implementing the Sphere of Influence Plan. At present, the City's Sphere of Influence is very closely drawn around the present City limits. While the jurisdictional boundaries of Ontario and Montclair in the north, and the Los Angeles County line in the west, provide clearly understood limits, the Sphere of Influence lines to the south and east should be expanded to more closely approximate the city's natural Sphere of Influence.

The Specific Plan Responds to the Policy:

Since The Preserve is being annexed into the City of Chino, the City has worked closely with the Local Agency Formation Commission.

General Policy (See EIR Sections 5.1 Land Use and 5.2 Agriculture)

Agricultural land within Chino and its Sphere of Influence shall be converted into urban uses in a gradual, phased and orderly manner.

The Specific Plan Responds to the Policy:

The Preserve is a long-term plan for the conversion and development of agricultural lands in the former sphere of influence area. The phasing, financing and infrastructure plans ensure an orderly pattern and pace of growth commensurate with the ability to provide service. It is important to note that not all agricultural lands are converted. Approximately 345-acres of permanent Agriculture and 518-acres of Agriculture/Open Space-Natural areas accommodate agricultural uses within The Preserve.

General Policy (See EIR Sections 4. Environmental Setting, 5.1 Land Use, 5.3 Hydrology and Water Quality)

The City shall discourage strongly the major expansion of Prado Dam, and encourage the Corps of Engineers to seek alternative solutions for increasing the holding capacity of the dam. Rather, the City shall support the "All Rivers" plan which will provide for a minimal raising of the Prado Dam, and further flood control facilities upstream.

The Specific Plan Responds to the Policy:

The Army Corps of Engineer's Santa Ana Mainstem Project has been approved and will result in the raising of the El Prado Dam 28 feet and the spillway 8 feet. The Preserve maintains the new 566-foot dam inundation elevation almost entirely and accommodates appropriate uses within the floodable areas.

General Policy (See EIR Section 5.11 Public Services—Schools)

The City and Chino Unified School District should work closely in the location and development of new schools and school administration and support facilities within the City and its Sphere of Influence.

The Specific Plan Responds to the Policy:

The location and development of new schools is an important issue within the Preserve. The Preserve accommodates the development of two elementary schools and one K-8 school. These are conceptually located within the Community Core and the residential area in the east. In addition, the four residential land use designations each allow for the siting of educational facilities, subject to Conditional Use Permit.

Environment

General Policy (See EIR Section 5.9 Air Quality)

The City shall take what steps it can towards the attainment and long-term maintenance of an ambient air quality consistent with Federal, State and Regional standards.

The Specific Plan Responds to the Policy:

The Preserve has been designed to help reduce vehicular trips. The Preserve locates the majority of residences near the Community Core, where services, entertainment, employment and cultural experiences can be accessed. The Preserve also includes an extensive trail and paseo system and accommodates the future development of a designated transit system. All these features provide viable options to the automobile and help the City attainment air quality standards.

General Policy (See EIR Section 5.8 Noise)

The City shall work to help ensure that to the maximum extent possible a quiet living and working environment is achieved for all those living or working within the Planning area.

The Specific Plan Responds to the Policy:

All construction within The Preserve is required to comply with the City's development standards and is subject to the City's noise ordinance. The Preserve itself has been designed to help achieve this goal. The noise contours of the Chino Airport, adopted as of 1991, have been respected and no residential uses are located within or adjacent to the 65 dB noise contour. The Community Paseo and Open Space System, an extensive trail system along major roadways, provides a buffer between major streets and adjacent residential areas.

General Policy (See EIR Sections 5.3 Hydrology and Water Quality, 5.5 Geology and Soils, 5.6 Hazards)

Development shall not be allowed in areas of high natural hazard without adequate mitigation.

The Specific Plan Responds to the Policy:

Development within The Preserve is situated so as to avoid known hazards and environmentally sensitive areas. The developable areas avoid earthquake faults, flooding or dam inundation areas, and

the currently adopted Chino Airport noise and safety zones. Environmentally sensitive areas and drainage courses are maintained and incorporated within the plan.

Resource Conservation

General Policy (See EIR Section 5.12 Utilities—Electricity, Natural Gas)

The City shall take positive steps to ensure that newly constructed facilities are as energy efficient as possible.

The Specific Plan Responds to the Policy:

Future developers within The Preserve are required to comply with the City's building code and are encouraged to incorporate energy efficient techniques. The Preserve is also designed in a company manner and with transit and trail option to help reduce the need to utilize the automobile.

General Policy (See EIR Section 3. Project Description, 5.1 Land Use)

The land use pattern within Chino shall respect the general aim of conserving energy.

The Specific Plan Responds to the Policy:

The Preserve is designed in a compact manner. The Preserve is a community featuring a mixture of residential neighborhoods focused around a diverse community core and a regional commercial center, interconnected with a Multi-Purpose Open Space feature by a system of paseos and trails. The compact placement of these features, along with transit and trail options will help to reduce the need to utilize the automobile.

5.15.2 CIRCULATION ELEMENT

Goals, Policies and Actions

Goal G2-1—Transportation Facility Improvement (See EIR Section 5.7 Transportation and Circulation)

Plan, develop, and maintain street improvements, including landscaping, to ensure adequate future capacity to accommodate traffic demands.

The Specific Plan Responds to the Policy:

The roadway standards for The Preserve were developed from the City of Chino Design Standards and General Plan to accommodate traffic generated by the project as well as through traffic. The roadway system consists of seven roadway classifications that accommodate varying amounts of traffic. The seven roadway classifications are: expressway, major arterial, primary arterial highway, secondary arterial highway, local collector, commercial collector and Main Street. The Design Guidelines address landscaping and streetscape issues in The Preserve.

Goal G2-2—Truck and Hazardous Materials Routes in the City (See EIR Section 5.7 Transportation and Circulation)

The City's truck route and district designations should concentrate truck access to commercial and industrial areas, and should minimize intrusion on residential areas. The Ctiy's hazardous materials routes shall be designated on roadways that minimize the possible impact to residential areas in the City.

The Specific Plan Responds to the Policy:

Routes for trucks are identified along Kimball, Euclid and Pine Avenues to minimize impacts on the Community Core or residential areas within The Preserve.

Goal G2-3—Rail Service (See EIR Section 5.7 Transportation and Circulation)

Support rail service facilities which limit the number of land use conflicts and are integrated with other transportation modes, in a comprehensive strategy.

The Specific Plan responds to the Policy:

Rail facilities do not exist within or adjacent to The Preserve. However, a transit system is planned for The Preserve. The transit system is envisioned as a one-way, continuous loop on dedicated, or prioritized lanes, thus minimizing the number of land use conflicts. The form of this transit can be either rubber-tired or rail.

Goal G2-4—Transportation Demand Management (TDM) Program (See EIR Section 5.7 Transportation and Circulation)

Develop and implement employment and home-based TDM programs, reducing the number of vehicular trips generated by both Chino residents and non-residents working in the City.

The Specific Plan Responds to the Policy:

Development within the Preserve is subject to the City's Transportation Demand Ordinance. Developers are also encouraged to incorporate the latest technological advances, such as Internet connections and electronic timers. Having access to such technological advances will promote home-based businesses.

Goal G2-5—Public Transit (See EIR Sections 3. Project Description, 5.7 Transportation and Circulation)

The City shall encourage improved facilities, routes, and ridership on all public transit.

The Specific Plan responds to the Policy:

The Preserve accommodates an innovative transit system, which consists of a local transit system and the regional bus service. The transit system is a one-way loop on dedicated or prioritized lanes with transit stops that serve major features, such as the community core and residential area.s.

Goal G2-6—Commuter and Recreational Trails (See EIR Sections 3. Project Description, 5.1 Land Use, 5.7 Transportation and Circulation)

Promote commuting and recreational trails as an alternative mode of travel.

The Specific Plan Responds to the Policy:

The Preserve has been designed to help reduce vehicular trips and promote commuting. The Preserve locates the majority of residences near the Community Core, where services, entertainment, employment and cultural experiences can be accessed. The Preserve's local transit system is located within walking distance of a quarter mile of major activity areas and concentrations of residences. The Preserve also includes an extensive trail and paseo system that provides convenient access to all areas of the plan. All these features provide viable options to the automobile and help promote alternative means of travel.

Goal G2-7—Development Type (See EIR Sections 3. Project Description, 5.1 Land Use)

The City shall support land uses in the Chino Airport area which fulfill the goals, and policies of the General Plan and the Chino Airport Master Plan.

The Specific Plan Responds to the Policy:

The Airport Related and Light Industrial land use designations accommodates development that directly can be related and/or complement the Chino Airport. The noise and safety zones of the Chino Airport are accommodated within these land uses to help buffer residences as well as provide appropriate uses according to the currently adopted Chino Airport Land Use Plan, 1991.

Goal G2-8—Public Facilities Systems (See EIR Sections 5.3 Hydrology and Water Quality, 5.12 Utilities—Water, Wastewater)

Provide complete, safe, and efficient public utility systems which serve future land use needs.

The Specific Plan Responds to the Policy:

The public utility systems within The Preserve are designed to serve its development and will connect tot he regional systems. Utility plans have been addressed in the Water, Sewage, and Drainage Utility Master Plan.

5.15.3 HOUSING ELEMENT

Goals, Policies and Actions

Goal G3-1—Housing Preservation (See EIR Sections 3. Project Description, 5.10 Population and Housing)

Protect and preserve existing housing to ensure that it continues to meet Chino resident's needs for sound housing in a safe environment.

The Specific Plan Responds to the Goal:

The existing land use of land within The Preserve's area consists mainly of agricultural uses, open space and vacant lands, and some public facilities. There are very few housing units within The Preserve's existing land uses and The Preserve will offer substantial new housing opportunities.

Goal G3-2—Housing Production (See EIR Sections 3. Project Description, 5.10 Population and Housing)

Encourage the construction of a range of new housing appropriate to the needs of Chino residents and the neighborhood where it will be located.

The Specific Plan Responds to the Goal:

The Preserve contains various residential land use designations, which consist of: Estate, Low Density, Medium Density, and High Density. The various designations allow for a broad range of housing types that are strategically located and connected among major features. The Low Density, Medium Density, and High Density Residential land use designations are designed to give the appearance of a suburban density. The Estate Residential land use designation is designed to give the appearance of a rural scale with single-family, ranch style homes set on large lots. The diversity of residential neighborhoods offers a variety of housing types, densities, and price ranges.

Goal G3-3—Remove Governmental Constraints

Review and, where possible, remove governmental constraints to the production of housing in the city.

The Specific Plan Responds to the Goal:

Development in The Preserve is subject to the City's entitlement and permit processes, however, residential land use designations promote a wide range of densities and housing types in order to achieve variety and accommodate a broad spectrum of market segments. Housing of various densities will be placed throughout The Preserve.

Goal G3-4—Housing Accessibility

Ensure equal access to both sale and rental housing regardless of race, creed, color, sex, marital status, physical handicaps, age, or national origin.

The Specific Plan responds to the Goal:

Residential development within The Preserve will comply with all applicable local, state, and federal fair housing laws in both the sale and rental of housing. In addition, development within The Preserve is subject to the City's entitlement and permit processes.

Goal G3-5—Community Participation (See EIR Section 2.2 and Appendix A)

Encourage public participation in establishing housing policy and designing housing programs for the city.

The Specific Plan Responds to the Goal:

The Preserve Specific Plan has undergone an intensive program to illicit input and comments from interested citizens, affected agencies, and property owners to illicit their input and comments regarding the development of the area. This includes five Focus Group meetings that were held to discuss issues and opportunities and review the conceptual and preferred land use plans. These focus group meeting involved representatives and members concerned with: environmental issues (March 15, 2000), infrastructure and services (March 22, 2000), transportation and mobility (April 6, 2000), property owners' interests (April 12, 2000), and review of the alternative plans (June 7, 2000). In addition, The Preserve was adopted after four public hearings with the planning commission and city council.

5.15.4 CONSERVATION/OPEN SPACE ELEMENT

Goals, Policies and Actions

Goal G4-1—Agricultural Preservation (See EIR Section 5.1 Land Use, 5.2 Agriculture)

To preserve and protect land devoted to agricultural uses and to promote activities to help achieve self-sustainment.

The Specific Plan Responds to the Goal:

The Preserve includes two land designations, Agriculture and Agriculture/Open Space-natural that accommodate agricultural, recreation, habitat, and open space uses. The Agriculture land use designation is intended to provide for agricultural uses including farming, stables, pastures, and grazing. The Agriculture/Open Space-Natural land use designation is intended to provide for agricultural and open space uses, including passive recreation, equestrian uses, farming, pastures, grazing, permanent open space, wildlife preserves, multi-purpose trails, and water retention basins.

Goal G4-2—Improve Air Quality (See EIR Section 5.9 Air Quality)

To improve air quality in the Chino area.

The Specific Plan Responds to the Goal:

The Preserve provides strategies that promote a reduction in vehicle usage for everyday activities. The Preserve locates the majority of residences near the Community Core, where services, entertainment, employment and cultural experiences can be accessed. The Preserve also includes an

extensive trail and paseo system and accommodates the future development of a designated transit system. All these features provide viable options to the automobile and help the City improve air quality standards.

Goal G4-3—Preserve Plant and Wildlife Resources (See EIR Section 5.4 Biological Resources)

To encourage the preservation and conservation of plant and wildlife resources in the City.

The Specific Plan responds to the Goal:

The Preserve includes five open space land use designations: Agriculture, Open Space-Recreation, Agriculture/Open Space Natural, Open Space-Natural, and Open Space-Water. The open space land use designations account for approximately 50% of the total Preserve area. There are 2,987 acres designated within The Preserve. These land use designations are intended to preserve natural resources. The Open Space-Natural land use designation in particular, is intended to accommodate permanent natural open space, wildlife preserves, natural drainage and steam courses, cultural and historic resources, and protect natural plant and animal habitats.

Goal G4-4—Cultural and Historical Preservation (See EIR Section 5.13 Cultural Resources)

To preserve the City's cultural and historical resources for the enjoyment and education of Chino residents.

The Specific Plan Responds to the Goal:

The open space land use designations address a specific range of issues intended to help preserve the historic, rural character of Chino. The Open Space-Natural land use designation, which covers 1640 acres, 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. Agricultural uses are also an important historic land use. The Agriculture and Open-Space Agriculture land use designations consist of 863 acres in The Preserve.

Goal G4-5—Reduce Dependence on Non-Renewable Resources (See EIR Section 7. Significant Irreversible Environmental Changes)

The City shall commit itself and encourage residents of Chino to reduce dependence on non-renewable and non-recyclable resources.

The Specific Plan Responds to the Goal:

The Preserve provides strategies that promote a reduction in vehicle usage for everyday activities. The Preserve locates the majority of residences near the Community Core, where services, entertainment, employment and cultural experiences can be accessed. The Preserve also includes an extensive trail and paseo system and accommodates the future development of a designated transit system. All these features provide viable options to the automobile and help the City reduce dependence on non-renewable and non-recyclable resources.

Goal G4-6—Encourage Use of Alternative Energy Sources (See EIR Section 3. Project Description)

To encourage and promote the use of alternative energy sources with emphasis on the use of renewable energy sources.

The Specific Plan Responds to the Goal:

The Preserve requires future developers to comply with the City's building code and encourages developers to incorporate energy efficient building techniques. The Preserve is also designed in a compact manner and with transit and trail option to help reduce the need to utilize the automobile.

Goal G4-7—Promote Energy Conservation Practices (See EIR Section 3. Project Description, 5.12 Utilities—Electricity, Natural Gas)

To encourage the use of energy management and conservation practices, while striving to achieve a sustainable energy future.

The Specific Plan Responds to the Goal:

Future developers within The Preserve are encouraged to incorporate energy efficient techniques. The Preserve is also designed in a compact manner and with transit and trail option to help reduce the need to utilize the automobile.

Goal G4-8—Protect Public from Flood Hazards (See EIR Sections 5.1 Land Use, 5.3 Hydrology and Water Quality)

To protect the public's health, safety and general welfare from flood hazards through flood control practices.

The Specific Plan Responds to the Goal:

A significant portion of The Preserve, 2,917 acres, lies within the inundation area created by the raising of El Prado Dam. The raised dam is initially designed to accommodate a 333-year flood event. The area below the 566-foot dam inundation elevation is envisioned as a dynamic combination of active and passive recreation, habitat and agricultural uses. The California Institute for Women falls partially within the 566-foot dam inundation elevation. Levees will be constructed to protect the structures on the prison facility's property from inundation. There will be no residential or commercial development within this area to protect the public's health and safety. The Open Space-Recreation land use designation will provide protection from environmental hazards.

Goal G4-9—Conserve Mineral Resources (See EIR Sections 5.1 land Use, 5.5 Geology and Soils)

To encourage the conservation of mineral resources, including rock, sand and gravel resources.

The Specific Plan Responds to the Goal:

The various open space designations within The Preserve present opportunities for conservation of resources. The open space land use designations are divided into five subcategories: Agriculture, Open Space-Recreation, Agriculture/Open Space-Natural, Open Space-Natural, and Open-Space Water. The Open Space-Natural land use designation, in particular, 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.

Goal G4-10—Reduce Local Solid Waste (See EIR Section 5.12 Utilities—Solid Waste, Dairy Waste)

To reduce the amount of local solid waste generated in the City.

The Specific Plan Responds to the Goal:

Dairy Waste is currently generated in the City. Manure from dairy operations is spread over farmed lands, shipped out of the area or composted at the Co-Composting facility. The Co-Composting facility is operated by the Chino Municipal Water District for the purpose of composting both dairy manure and wastewater sludge into a marketable commodity. There are discussions to relocate the Co-composting facility to Subarea 1. The Preserve must comply with local solid waste reduction requirements. In addition, Specific Dairy Waste Management requirements have been created in order to reduce the amount of dairy waste within The Preserve. The requirements call for the removal of

approximately 2 million tons of stockpile manure by December 31, 2001. Dairy uses are transitioning to more urban land uses within The Preserve.

Goal G4-11—Soil Conservation (See EIR Sections 3. Project Description, 5.1 Land Use)

To conserve and protect soil resources in the City.

The Specific Plan Responds to the Goal:

The Preserve features a multi-purpose open space feature, which consists of 2,987 acres. The open space feature provides opportunities for soil conservation. This open space feature is subdivided into 5 categories that include: Agriculture, Open Space-Recreation, Agriculture/Open Space-Natural, and Open Space-Water. The Open Space-Natural (OS-N) Land Use Designation particularly encourages the conservation of soil resources in the City by promoting permanent open space.

Goal G4-12—Conserve Water (See EIR Section 5.12 Utilities—Water)

To conserve water resources in the City of Chino.

The Specific Plan Responds to the Goal:

The Open-Space-Water (OS-W) Land Use Designation within The Preserve is intended to preserve water resources, such as watercourses and lakes. This designation allows land to be used for such things as lakes and waterbodies and water related recreation. In addition, The Preserve will incorporate an extensive reclaimed water system, keying off of the adjacent treatment plant.

Goal G4-13—Meet Existing and Future Water Demands (See EIR Section 5.12 Utilities—Water)

To meet existing and future water demands for the City.

The Specific Plan Responds to the Goal:

The Preserve is serviced by an extensive and well-planned infrastructure system that is designed to accommodate future development within The Preserve. The water, wastewater, drainage, and utility systems are designed to seamlessly connect to the regional/local systems. The infrastructure plans were developed separately and incorporated into this Specific Plan.

Goal G4-14—Maintain Federal, State and Local Water Quality Standards (See EIR Section 5.3 Hydrology and Water Quality)

To ensure that the City's water supply maintains federal, state and local water quality standards.

The Specific Plan Responds to the Goal:

The Preserve is serviced by an extensive and well-planned infrastructure system. The water, wastewater, drainage, and utility systems are designed to seamlessly connect to the regional/local systems. The infrastructure plans were developed separately and incorporated into this Specific Plan. Water and wastewater issues will be addressed upon completion of the Water and Wastewater Master Plans. Dairy waste management is an important issue within The Preserve and is critical to the health of the Santa Ana River. For this reason, the Santa Ana River Water Quality Control Board (SARWQCB) enforces requirements of the Clean Water Act. Dairy operators are also subject to the Porter Cologne Water Pollution Control Act.

Goal G4-15—Open Space for Natural Resources Preservation (See EIR Sections 5.1 Land Use, 5.4 Biological Resources)

To encourage the development of open space for preservation of the City's natural resources.

The Specific Plan Responds to the Goal:

The Preserve includes 2,987 acres of open space land use designations. There are five open space land use designations: Agriculture, Open Space-Recreation, Agriculture/Open Space Natural, Open Space-Natural, and Open Space-Water. These land use designations are intended to preserve natural resources. The Open Space-Natural Land Use Designation, which consists of 1,640 acres, accommodates permanent natural open space, wildlife preserves, and natural drainage and stream courses, cultural and historic resources, and protect natural plant and animal habitats.

Goal G4-16—Open Space for Outdoor Recreation (See EIR Section 5.1 Land Use)

To maintain and encourage the development of open space for outdoor recreation.

The Specific Plan Responds to the Goal:

The Preserve includes 2,987 acres of open space land use designations. There are five open space land use designations: Agriculture, Open Space-Recreation, Agriculture/Open Space Natural, Open Space-Natural, and Open Space-Water. The Open Space-Recreation Land Use designation, which

consists of 422 acres, is intended to establish open space areas for active and passive recreation. Allowable land uses include: sports fields, golf, equestrian facilities, and multi-purpose trails.

5.15.5 GOALS AND OBJECTIVES (GENERAL PLAN APPENDIX A)

Goal 1 (See EIR Section 3. Projection Description)

To encourage the provision of recreation facilities in new residential subdivisions.

The Specific Plan Responds to the Goal:

The four different residential land use designations, as well as the Community Core, encourage open space in new development projects. New developments are required to meet local park ordinances. However, there is flexibility to provide other cultural, service and recreational activities. The Estate Residential (ER) Land Use Designation's intent is for open space and landscaping to dominate the visual scene and encourages the creation and use of equestrian facilities and trails. The Community Core land use designation allows for a mix of uses that promote the integration of open space and recreation within the area. The Community Core allows for plazas and courtyards and wide, landscaped sidewalks with textured paving. The Community Paseo and Open Space System is a system of trails and linear open spaces that connect major features of The Preserve, such as the Community Core, residential areas and public facilities. This system accommodates walking, equestrian, bicycling and skating options.

Goal 2 (See EIR Section 5.11 Public Services—Parks/Recreation)

To acquire parkland in advance of urban development in an attempt to avoid high land costs.

The Specific Plan Responds to the Goal:

Future development is required to comply with local park ordinances. Satisfaction of the parkland requirements will be required prior to entitlement. The parks system for The Preserve consists of both Neighborhood and Community parks distributed within the residential sectors of the project. The calculation of parkland dedication requirements is based on the provisions of the City's Local Park Ordinance. The Preserve's Conceptual Park Plan consists of one 45-acre Community Park and six Neighborhood Parks, ranging in size from 5 to 15 acres. Additionally, the Park Plan includes recommendations for the placement of parks however; the final park placement will be determined upon final approval of tract or parcel maps, and may contain some combination of public parks and private recreation facilities.

Goal 3 (See EIR Section 3. Project Description)

To utilize innovative park design in relating various user groups and provide for low cost maintenance.

The Specific Plan Responds to the Goal:

Subject to local Park Ordinance, park design is addressed in the Park Plan. In addition, The Preserve provides basic guidelines and locational principles. These principles will be used in the preparation of any tract maps, or subsequent park improvement plans. Park and recreation facility design shall be based on innovative design concepts and consideration of long-term park maintenance costs.

Goal 4 (See EIR Section 3. Project Description, 5.11 Public Services—Parks/Recreation)

To determine current and future park and recreation requirements and design facilities and programs to satisfy the needs of residents.

The Specific Plan Responds to the Goal:

Subject to local Park Ordinance, park and recreation requirements are addressed in The Preserve's Park Plan. In addition, The Preserve provides basic guidelines and locational principles. The calculation of parkland dedication requirements is based on the provisions of the City's Local Park Ordinance. The Local Park Ordinance authorizes the City to require the dedication of land/or the payment of in-lieu fees for park and recreational purposes as a condition of approval for a tentative or parcel map. The Preserve's Conceptual Park Plan consists of one 45-acre Community Park and six Neighborhood Parks, ranging in size from 5 to 15 acres.

Goal 5 (See EIR Section 3. Project Description)

To encourage the development of bicycle and equestrian paths and trails where planned.

The Specific Plan Responds to the Goal:

The Community Paseo and Open Space System is the backbone of The Preserve, interweaving the various features of the plan and connecting the entire community with the open space feature to the south. The Community Paseo and Open Space System provides a convenient and viable mobility option to the car and accommodates walking, bicycling, and skating.

Bicycle paths are encouraged in The Preserve through the Bicycle Plan, which consists of an extensive bicycle system. The bicycle system is connected with major features of The Preserve and with the regional bicycle system. The bicycle system is composed of on-street and off-street pathways.

Equestrian paths and trails are an important feature of The Preserve. The standards for the bikeway system in The Preserve are identical to those found in the Circulation Element of the City of Chino General Plan. The equestrian trails are located in the Estate Residential land use category and along Hellman Avenue.

5.15.6 NOISE ELEMENT

Goals, Policies and Actions

Goal G6-1 —Protect Public Health, Safety & Welfare (See EIR Sections 5.1 Land Use, 5.6 Hazards, 5.8 Noise)

Protect the public health, safety and general welfare by eliminating existing noise problems and by preventing significant degradation of the future acoustic environment through the establishment of standards that specify acceptable limits of noise for land uses throughout the City

The Specific Plan Responds to the Goal:

The Chino Airport has an important presence in The Preserve and necessary measures are taken to protect the public health, safety, and general welfare. Airport Noise and Safety Zones, as of 1991, were utilized to drive the land use plan. Noise sensitive and inappropriate uses are not located within the adopted noise and safety zones. The City's Airport Overflight Zone applies to The Preserve. The Chino Airport Noise and Safety Zones restrict the location of certain types of sensitive uses, such as residential, while providing an opportunity for compatible uses, such as industrial warehouse. The airport noise contour, 65-dB, is located north of Kimball Avenue within airport property. Schools, residences, hospitals and churches are prohibited within the 65-dB contour. Appropriate uses for the 65dB noise contour include industrial, commercial, recreation, agriculture and open space uses.

5.15.7 SEISMIC & PUBLIC SAFETY ELEMENT

Seismic and Geological Hazards Policy Plan

General Goal (See (EIR Section 5.5 Geology and Soils)

To reduce loss of life, injuries, damage to property and social economic dislocations resulting from seismic geologic hazards.

The Specific Plan Responds to the Goal:

Development within The Preserve will be located away from any known fault lines. The area of The Preserve that lies near a fault line is zoned for open space land use designations that do not include structures capable of supporting human habitation, even temporary habitation. Allowable land use designations surrounding the earthquake fault include: crop cultivation, equestrian centers, multi-purpose trails, lakes and waterbodies, and wildlife/habitat conservation areas.

Flood Hazard Policy Plan

General Goal (See EIR Section 5.3 Hydrology and Water Quality)

To prevent injury or loss of life and damage to property due to flooding hazards.

The Specific Plan Responds to the Goal:

All flood hazards have been avoided in The Preserve. The Prado Flood Basin will consist primarily of open space and recreational uses which will prevent injury or property damage. There will be no structures developed that are capable of supporting human habitation, even temporary habitation within this area. The 566-foot dam inundation elevation is the level of the area behind the dam that could be inundated by a 200-year flood event. The area below the 566-foot dam inundation elevation is envisioned as a dynamic combination of active and passive recreation, habitat and agricultural uses. In addition, the Open Space-Recreation land use designation is intended to provide protection from environmental hazards.

Wildland Fire Hazard Policy Plan

General Goal (See EIR Section 5.11 Public Services —Fire Protection)

To reduce loss of life, injuries, damage to property, and natural resources due to wildland fires.

The Specific Plan Responds to the Goal:

There is a possibility for wildland fires in the Open Space Land Use Designation of The Preserve. However, future development within The Preserve must comply with Building Standards and Fire Code. In addition, urbanization reduces the threat of wildland fires except on the perimeter. There is a linear path in this area that acts as a buffer.

Defensible Space Policy Plan

General Goal (See EIR Section 5.11 Public Services—Police)

To reduce loss of life, injury and loss or damage to property by considering crime prevention in site planning and development design.

The Specific Plan Responds to the Goal:

Details of each proposal are subject to City review at time of submittal. In addition, The Preserve's Design Guidelines promote safety and crime prevention through its themes of quality and unity. Quality development is realized through an attention to detail that is carried froth from the initial conception to final construction. In addition, The Preserve's design guidelines promote a greater sense of community by directly connecting services, employment, and housing.

5.15.8 AIR QUALITY ELEMENT

Goal G7-1—Air Quality Improvement (See EIR Section 5.9 Air Quality)

To achieve coordination of air quality improvement within the portion of the South Coast Air Basin in San Bernardino County and improved air quality through reductions in pollutants from Orange, Riverside and Los Angeles Counties.

The Specific Plan Responds to the Goal:

The Preserve offers a transit system and a system of trails, which will promote reduced vehicle usage, which will also promote air quality improvement. The Community Paseo and Open Space System is the backbone of The Preserve, interweaving the various features of the plan and connecting the entire community with the open space feature to the south. The Community Paseo and Open Space System is a system of trails and linear open spaces that connect the major features of The Preserve. The Community Paseo and Open Space System provides a convenient and viable mobility option to the car and accommodates walking, bicycling, and skating.

Goal G7-2—Ground Transportation (See EIR Section 3. Project Description)

To achieve a diverse and efficient ground transportation system which generates the minimum feasible pollutants.

The Specific Plan Responds to the Goal:

The Preserve provides a mix of land uses, including residential, community core and commercial. These features are interconnected by a system of paseos and trails. Additionally, the transportation plan provides a variety of options, including a transit system, a bicycle system, and an equestrian system. The Preserve's design encourages the use of alternative transportation methods, which will help to reduce the amount of pollutants.

Goal G7-3—General Aviation Emissions

To encourage the minimum feasible emissions from Chino Airport.

The Specific Plan Responds to the Goal:

The Preserve accommodates the Chino Airport's Noise and Safety Zones to protect the health, safety, and welfare of residents and businesses in the plan area. The City continues to work with the County of San Bernardino to reduce emissions.

Goal G7-4—Efficient Land Use Pattern (See EIR Section 3. Project Description

To achieve a pattern of land uses which can be efficiently served by a diversified transportation system and development projects which directly and indirectly generate the minimum feasible air pollutants.

The Specific Plan Responds to the Goal:

The Preserve is designed in a compact manner. The Preserve is a community featuring a mixture of residential neighborhoods focused around a diverse community core and a regional commercial center, interconnected with a Multi-Purpose Open Space feature by a system of paseos and trails. The compact placement of these features, along with transit and trail operations will help to reduce the need to utilize the automobile.

The Preserve provides a mix of land uses, including residential, community core and commercial. These features are interconnected by a system of paseos and trails. A system of roadways has been

created for The Preserve, based upon the City's design standards. Additionally, the transportation plan provides a variety of options, including a transit system, a bicycle system, and an equestrian system. The interconnected nature of The Preserve allows for the use of alternative transportation. Many of business features are accessible by bicycle, walking, or public transportation. This system will help to reduce the amount of air pollutants.

Goal G7-5—Reduce Particulate Emissions (See EIR Section 5.9 Air Quality)

Reduce to a minimum particulate emissions from such uses as construction, operation of roads, and buildings.

The Specific Plan Responds to the Goal:

Future developers within The Preserve are encouraged to incorporate energy efficient techniques. In addition, The Preserve features all of the strategies that make sense at a local level for reducing the need to use the automobile for everyday activities. The reduction in vehicle usage will contribute to reduced particulate emissions.

Goal G7-6—Reduce Energy Consumption

To reduce emissions through reduced energy consumption.

The Specific Plan Responds to the Goal:

The Preserve is designed in a compact manner and with transit and trail option to help reduce the need to utilize the automobile. The highest density of development is located near the core of The Preserve, thus minimizing the need to utilize the automobile. Future developers within The Preserve are encouraged to incorporate energy efficient techniques.

5.15.9 ECONOMIC DEVELOPMENT ELEMENT IMPLEMENTATION PLAN

Goal G8-1—Sales Tax Revenue

To maximize the amount of sales tax revenue captured by the City of Chino. Since Proposition 13 limits property tax revenues, the City depends on sales tax revenues for 30% of Chino's general funds (illustrated in Figure 1, page 7). General funds are used to pay for police and fire protection, as well as many other services integral to a high quality of life. In order to continue offering a high level of services to residents and businesses, it was determined that one of the goals of the economic development strategy should be maximizing sales tax revenues.

The Specific Plan Responds to the Element Goal:

There are approximately 10 million square feet of business uses accommodated in the Preserve Specific Plan. Business land use designations are divided into four subcategories: Neighborhood Commercial, Regional Commercial, Light Industrial and Airport Related. These land use designations allow a wide range of intensities in order to encourage an exciting mixture of uses and ensure the long-term viability of The Preserve. To ensure this variety, a number of innovative tools are used in the development plan. In addition to the business land use designations, the Community Core Land Use Designation encourages a variety of commercial uses. These various land use designations will contribute to sales tax revenue.

Goal G8-2—Employment Opportunities (See EIR Section 3. Project Description)

To encourage and accommodate growth in industrial and office activity over the next two decades to create approximately 18,000 new jobs by 2010 and maintain Chino's high jobs/housing ratio.

The Specific Plan Responds to the Element Goal:

There are four business land use designations in The Preserve: Neighborhood Commercial, Regional Commercial, Light Industrial and Airport Related. The Preserve also includes four residential land use designations, which contribute to the jobs/housing ratio. Additionally, the Community Core land use designation encourages a mix of uses including business and residential areas. The Preserve anticipates the development of 9,779 housing units and the development of 10,234,744 square feet of business uses.

Goal G8-3—Positive Business Environment

To maintain the city government's positive business environment.

The Specific Plan Responds to the Element Goal:

The Preserve provides several land use designations that promote a variety of business activities. The Preserve anticipates the development of over 600 acres in the business land use designations. The business land use designations include: Neighborhood Commercial, Regional Commercial, Light Industrial and Airport Related. Additionally, the Community Core provides for a variety of business opportunities, including retail, office, and dining. Business land use designations allow a wide range of intensities in order to encourage an exciting mixture of uses and ensure the long-term viability of The Preserve.

Goal G8-4—Quality of Life (See EIR Section 3. Project Description)

To have an economic development program that respects and enhances the community's quality of life.

The Specific Plan Responds to the Element Goal:

The business land use designations within The Preserve allow for a wide range of intensities in order to encourage a mixture of uses and ensure the long-term viability. The Community Core also offers a unique opportunity within The Preserve. The Community Core allows for a mixture of uses within one area, which allow for a high level of activity and diversity to be generated. The business land use designations coupled with The Preserve's unique transportation system will enhance the community's quality of life. In addition, The Preserve includes design guidelines that are intended to ensure a high quality of development and minimize negative impacts from things such as noise and odor.

SECTION 6
GROWTH INDUCEMENT

CEQA Guidelines, Section 15126(d) provides that a proposed project must evaluate for growth-inducing impacts. Section 15126.2(d) further delineates the criteria that must be met. In general the "economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment" that could occur must be evaluated. Topics to be discussed related to this include the following:

- Removal of an impediment to growth, such as the expansion of a wastewater treatment plant;
- The additional public service facilities necessary to meet additional growth, the construction of which could cause a significant environmental effect;
- An identification of project characteristics that may encourage and facilitate other activities that could significantly effect the environment.

6.1 REGIONAL SETTING

Development of the proposed project site has been constrained by its agricultural preserve status, administered by the County of San Bernardino, and the inclusion of much of its site within the Prado Dam inundation area below the 566-foot and 556-foot elevation contours. However, the project site is one of the last remaining major units of the Chino Basin Dairy Area (CBDA) to transition to urban uses. Substantial development has either already occurred or has received plan approval in the surrounding Cities of Ontario, Chino Hills, Corona, and Norco, and in Chino as well. In addition, significant tract development has been approved or is pending approval within the Eastvale area of the unincorporated area of Riverside County, located just east of the project area.

Bordering the proposed project area to the west is the recently approved Subarea 1 planning area, which has been annexed to the City of Chino. The City of Ontario has also approved an 8,200-acre sphere GPA (the "new Model Colony") that extends south to the proposed project boundaries. Uses planned within the Ontario GPA area include approximately 31,200 residential units, 5.5 million square feet of commercial uses, 5.2 million square feet of industrial and business park uses, 500 acres of educational uses, 888 acres of parks and trails, and 776 acres of public and infrastructure uses.

Immediately adjacent to or in close proximity to the proposed project area are a variety of transportation related facilities, including the Chino Airport, State Routes 71, 60, and 91, and Interstate 15. These facilities provide regional and interstate access from the project area.

The combined effect of planned and approved regional growth is the isolation of Subarea 2 dairy activity and agricultural uses within a rapidly developing peripheral urban environment. Although the project area is of considerable size, in the regional perspective it now represents an "infill" area. The density of the dairy operations in the project area has caused significant environmental effects upon the area's ground water, and steps have been taken by responsible agencies to implement actions to resolve this problem. Significant infrastructure, particularly transportation related, must be made available to support planned regional growth.

The proposed project represents one of the last remaining large areas of non-urbanized land to transition to planned development in southwest San Bernardino County. From a regional perspective the proposed project will not result in growth inducing effects due to the substantial level of on-going and planned development activity surrounding the project area.

6.2 GROWTH ISSUES

REMOVAL OF IMPEDIMENTS TO GROWTH

The most significant restriction is the designation of the area by San Bernardino County as the San Bernardino Dairy Preserve. Also of significance is the 566' elevation contour of the Prado Dam inundation area. Both of these restrictions have constrained development within the area. The adoption of the proposed project by the City of Chino and its subsequent annexation will facilitate removal of the agricultural restriction and allow sustainable, master planned development, consistent with "smart growth" principles, to occur. The proposed plan will not induce further growth within the Prado Basin as remaining open space is either publicly-owned or constrained by the 566' inundation line.

The proposed project outlines various infrastructure and improvement policies to implement the proposed project, including roadways, storm drains, water, and sanitary sewer systems. These improvements are to be completed incrementally, will be phased with planned development, and will be sized to serve the planned development.

Development is proposed on existing dairy properties and other associated uses, such as pasture lands as discussed in EIR Section 5.1 Land Use and 5.2 Agriculture, many of these dairies would eventually relocate for economic reasons irrespective of the current proposed project. This transition will likely be beneficial to the environment with respect to water resources. At present it is estimated that 34,000 tons per year of salt reach the area's groundwater basin due to manure and wash water from dairies in and around the project area. Even with current groundwater cleansing methods, 26,500 tons of salt per year remain in the groundwater, excluding the amount resulting from rainfall runoff.

PUBLIC SERVICES

A variety of public services exist within the region due to the proximity of surrounding cities or proposed urban development. Development of the subject property will require the extension of services and facilities to provide for new area residents and businesses. This document has analyzed the cost and revenue associated with new development and found adequate funding will be available to meet most of the projected public services needs. The placement of new facilities within the proposed project area has been analyzed as part of the proposed land uses. Due to the proximity of existing and planned development outside the project area these expanded services will not cause the premature development of properties outside the project area and, thus, not significantly effect their development potential.

ENCOURAGE AND FACILITATE OTHER ACTIONS

The proposed project represents a significant change in the project area's existing land use. This change is consistent with the planned land use conversion occurring to the east in the unincorporated area of Riverside County, to the north within the City of Ontario Sphere of Influence, and to the north and west within the City of Chino. The project area represents one of the last phases of a regional urbanizing process that has, until this time, avoided the subject area due to various development restrictions. As such, the proposed project does not encourage or facilitate other actions that could cause further development.

6.3 CONCLUSION

In general, if a project meets any of the three (3) criteria initially listed above, it could be considered growth-inducing. In this case, the growth inducing impacts that can trigger adjacent development have already occurred due to the existing and planned development surrounding the subject property. The only significant remaining land that could be subject to growth pressures from the proposed project is constrained by the 566' foot elevation Prado inundation line and is largely in public ownership (i.e. Corps of Engineers, Orange County Flood Control District, and other agencies.)

SECTION 7
SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(c) of the CEQA Guidelines requires the consideration and discussion of significant environmental impacts, including significant irreversible environmental changes which would be caused by the proposed project. The various environmental changes associated with the proposed project that are applicable to this provision are discussed below.

NON-RENEWABLE RESOURCES

The Preserve would involve consumption of non-renewable resources during the construction phase, as well as the operational life of the project. This would result in an irretrievable commitment of nonrenewable resources, such as fossil fuels, including fuel oil, natural gas, and gasoline used by vehicles and equipment associated with the construction and operational phases of the project. The consumption of other nonrenewable or slowly renewable resources would result from development of the proposed project, including, but not be limited to, lumber and other forest products, sand and gravel, asphalt, petrochemical construction materials, steel, copper, lead, and water.

AGRICULTURAL LAND

The proposed project will convert existing agricultural uses and prime agricultural land to urban uses. The large capital investment in infrastructure and urban development would most likely preclude or discourage feasible redevelopment or reversion to agricultural uses or open space.

TRANSPORTATION, NOISE, AND AIR QUALITY

As a result of the implementation of The Preserve there would be a substantial increase in vehicle use and roadway traffic in the vicinity of the project. Due in part to the use of vehicles, the proposed project will also result in a long-term increase in ambient noise and a reduction in local and regional air quality, which are considered irreversible.

PUBLIC SERVICES AND UTILITIES

The demand for public services and utilities, including police and fire services, solid waste collection, and telephone and cable service would be continuous and irreversible.

AESTHETIC CHARACTER

The conversion of current agricultural uses and vacant or undeveloped lands to urban uses would irreversibly alter the rural character of the site.

SECTION 8
ALTERNATIVES TO THE PROPOSED PROJECT

8.1 INTRODUCTION

Section 15126.6 of the state CEQA Guidelines, as amended, requires that an EIR include a comparative evaluation of the proposed project with alternatives to the project, including a "No Project" Alternative.

As described in Section 2, Summary, the proposed project is the implementation of The Preserve Master Plan, including a Specific Plan, General Plan Amendment, annexation to the City of Chino, and related actions. This section focuses on alternatives to the proposed project capable of avoiding or substantially lessening any significant adverse impact associated with the proposed project, even if these alternatives would impede to some degree the attainment of project objectives or be more costly. Additionally, alternatives are discussed in the terms of achieving project objectives.

The EIR has focused on direct, indirect and cumulative effects on the environment that will result from implementation of the proposed project. Direct environmental impacts of the project are expected related to agricultural resources, air quality, biological resources, cultural resources, geologic hazards, hazardous waste and/or materials/risk of upset, hydrology and water quality, land use, mineral resources, noise, population, employment, and housing, public services and utilities, recreation, traffic and circulation, and visual resources/aesthetics.

All impacts of the proposed project can be mitigated to a level that is considered less than significant, with the exception of those identified below:

- Irretrievable loss of open space and conversion of land from a rural to urban character.
- Localized urban/rural land use conflicts until buildout of the plan area is achieved.
- Conversion of prime agricultural land and prime farmland to urban uses.
- Regional loss of agricultural productivity
- Construction phase emissions of particulates (PM_{10}) and Nitrogen Oxides (NO_x)
- Cumulative air quality impact from combined sources (within the South Coast Basin non-attainment area).
- Cumulative traffic impact to regional highway segments and intersections.

- Cumulative demand on future electricity supplies.

The alternatives to the proposed project evaluated in this section are the following:

- No Project
- Environmental Land Use Alternative
- Metropolitan Center Land Use Alternative
- Alternative Location

The "Environmentally Superior Alternative" will be identified from among these alternatives and the proposed plan. An alternative that is environmentally superior would typically result in the fewest or least significant environmental impacts, and would be capable of achieving most of the objectives of the proposed project. Based upon the evaluation of the three (3) alternatives in this section, the "No Project Alternative" is considered to be the Environmentally Superior Alternative. Of the remaining alternatives, the Environmental Land Use Alternative is also identified as environmentally superior.

The analysis of the alternatives includes the assumption that all applicable mitigation measures associated with the proposed project would also be implemented with the appropriate alternatives. However, applicable mitigation measures may be scaled to reduce or avoid the potential impacts of the alternative under consideration and may not precisely match those identified for the proposed plan. If an impact is not raised within the discussion of the alternative it is because the impact is expected to be of the same type and magnitude as that associated with the implementation of the proposed plan.

A description of each alternative and a comparative environmental evaluation with the identified impacts of the proposed plan and project is provided below.

8.2 NO PROJECT ALTERNATIVE

The No Project Alternative assumes the project area would continue under the current land use designations in the County of San Bernardino General Plan. The current County General Plan Land Use designation for the site is Agriculture-Agriculture Preserve (AG-AP). The minimum lot size allowed within this category is 10 acres. The site would not be annexed to the City of Chino. To provide a meaningful analytical frame work, it is assumed in this scenario that utilization of the site consistent with General Plan land use designations already occurs with the existing agricultural-related and recreational uses.

Impact Evaluation

Land Use

The No Project Alternative assumes that the plan area would continue to operate under the existing County Agricultural Preserve without annexation, without adoption of the proposed Specific Plan, and without any significant addition of new infrastructure or extension of public services. In addition, a substantial portion of the project area south of Pine Avenue would remain in recreational use, including Prado Regional Park and its related concession areas. These uses fall entirely within the 566-foot Prado Dam inundation area, which encompasses approximately 53 percent of the total project area. The inundation area precludes significant development within this area. Both the regional park and adjacent concession areas are administered by the County of San Bernardino Regional Parks Division, pursuant to a master lease granted by the U.S. Army Corps of Engineers. The park lease area includes a total of 2,200 acres within the project area and adjacent Chino Subarea 1 to the west that was recently annexed to the City.

Allowing the existing land uses to remain could result in the continued degradation of the existing groundwater basin, which is significantly impacted by dairy waste. In addition, the existing dairy operations will be significantly affected by recent regulations on the amount of waste storage that can be stored on-site. As such, it is conceivable that in lieu of the proposed plan, the existing number of dairies and cows could be substantially reduced under the No Project Alternative since they may not be able to continue operations under these new regulations and will be forced to relocate to other areas.

The No Project Alternative would avoid the irretrievable loss of open space and conversion of land from rural to urban character that is associated with the proposed plan. Localized rural/urban land use conflicts within the plan area would be minimized. However, with buildout of surrounding approved plans and development (i.e., Ontario 'New Model Colony', Eastvale, Chino Subarea 1) the plan area would be subject to external urban use conflicts that would further impact the viability of the agricultural preserve.

Agriculture

The No Project Alternative would avoid the conversion of prime farm land and agricultural land to urban use. It may not, however, avoid the regional loss of agricultural productivity, as the dairies would, in all likelihood, continue to leave the area due to regional competition and water quality regulations.

Hydrology and Water Quality

Under the No Project Alternative, it is assumed existing SARWQCB regulations to reduce manure stockpiles and contain dairy runoff would lead to gradual improvement in surface and groundwater quality (i.e., reduced total dissolved solids and nitrates (salts)) either with or without the dairies.

The No Project Alternative would minimize or avoid the introduction of various urban pollutants in runoff associated with implementation of the proposed project. However, the proposed plan offers an opportunity to further accelerate the removal of manure stockpiles and reduce TDS and nitrates in surface waters and the groundwater basin. With application of project design features and mitigation measures (see Section 5.3-6), the proposed plan would likely be superior to No Project in terms of water quality.

As with the proposed project, the No Project Alternative would avoid significant impacts to the Prado Dam high water inundation area.

Traffic and Circulation

The No Project Alternative avoids the substantial additional traffic generation on the local and regional highway system that would result with implementation of the proposed plan.

Air Quality

Continued dairy and agricultural use of the site under the No Project Alternative would result in continuation of cumulatively significant ROG, methane, ammonia and particulate (PM_{10}) emissions associated with such activities. As such, the No Project Alternative would contribute to the cumulative air quality impact from combined sources (within the South Coast Air Basin non-attainment area). However, the significant project and cumulative CO emissions associated with the proposed plan would be avoided. The significant NO_x emissions associated with proposed plan construction activities and operations would be substantially reduced, though not below significance thresholds. PM-10 emissions are cumulatively significant for both the No Project Alternative and the proposed project. However, emissions of PM-10 associated with continued dairy and agricultural use substantially exceed both the estimated levels for proposed plan construction activities and proposed plan mobile sources at buildout. The net effect of proposed project implementation is that two non-attainment pollutants or precursors (ROG and PM-10) will be significantly reduced, while one non-attainment precursor (NO_x) and one attainment pollutant (CO) will be increased significantly.

Noise

Noise levels under the No Project Alternative would continue to be low, due to the prevailing agricultural use, although traffic noise on surrounding arterial roads (e.g., Euclid Avenue, Pine

Avenue/Schleisman Avenue, Merrill Avenue, Kimball Avenue) would continue to increase due to regional traffic growth. Airport noise influences would still occur with or without the proposed project. It is possible that noise levels may change in the future as some dairies relocate due to regulatory requirements or financial need. However, due to the County of San Bernardino's agricultural zoning and agricultural preserve status, other animal or farming operations with similar noise characteristics could replace existing dairy uses. Therefore, noise impacts under the No Project Alternative would continue to be less than significant.

Biological Resources

Many of the area's existing biological resources are located south of the 566' Prado Dam inundation area and would be expected to remain in their current condition if the proposed plan were not adopted. Foraging areas for migratory birds in pasture and fallow fields north of the 566' elevation would not be impacted under the No Project Alternative. Some additional habitat for other species, such as burrowing owls and raptors would also be retained above the 566' elevation.

Runoff and percolation from existing dairies and agricultural uses have contributed to the degradation of surface and ground water resources within the plan area and Prado Basin, with the potential for adverse effects on riparian and aquatic species. However, on balance, the No Project Alternative would have a less than significant impact on biological resources.

Geology and Soils

The No Project Alternative would avoid potentially significant hazards associated with liquefaction and subsidence. These hazards associated with the proposed project would be reduced to less than significant levels with code compliance, standard geotechnical conditions and other mitigation measures identified in Section 5.5, however.

Hazards

The No Project Alternative would minimize exposure of populations and improvements to hazards associated with Chino Airport aircraft activity in the vicinity, although such hazards are considered reduced to less than significant levels by the adopted Airport Safety Zones (Referral Areas). It is likely that various identified hazardous waste sites (e.g. underground storage tanks, small hazardous waste generators, etc.) would still remain within the plan area.

Public Services and Utilities

Significant impacts to service providers and utilities would be avoided under the No Project Alternative. This includes schools, fire, police, parks, waste management, water and power suppliers. Impacts to these service providers and utilities would be reduced to less than significant levels with

implementation of water, sewer and drainage master plans, and identified mitigation measures, including payment of service and hook-up fees.

Cultural Resources

Potential impacts to historic and prehistoric archaeological resources would be minimized with continuation of current agricultural uses of the area. Impacts of the proposed project to such resources would be mitigated to less than significant levels with implementation of identified cultural resource mitigation measures, however.

Aesthetics

The No Project Alternative would result in continuation of existing rural character of the area indefinitely into the future. Dairy activities, which have their own particular aesthetic impact (or appeal depending on preference), would gradually leave the area, leaving the area to limited agriculture uses or open space consistent with the agricultural preserve status. No significant new aesthetic impacts would be anticipated.

Conclusions

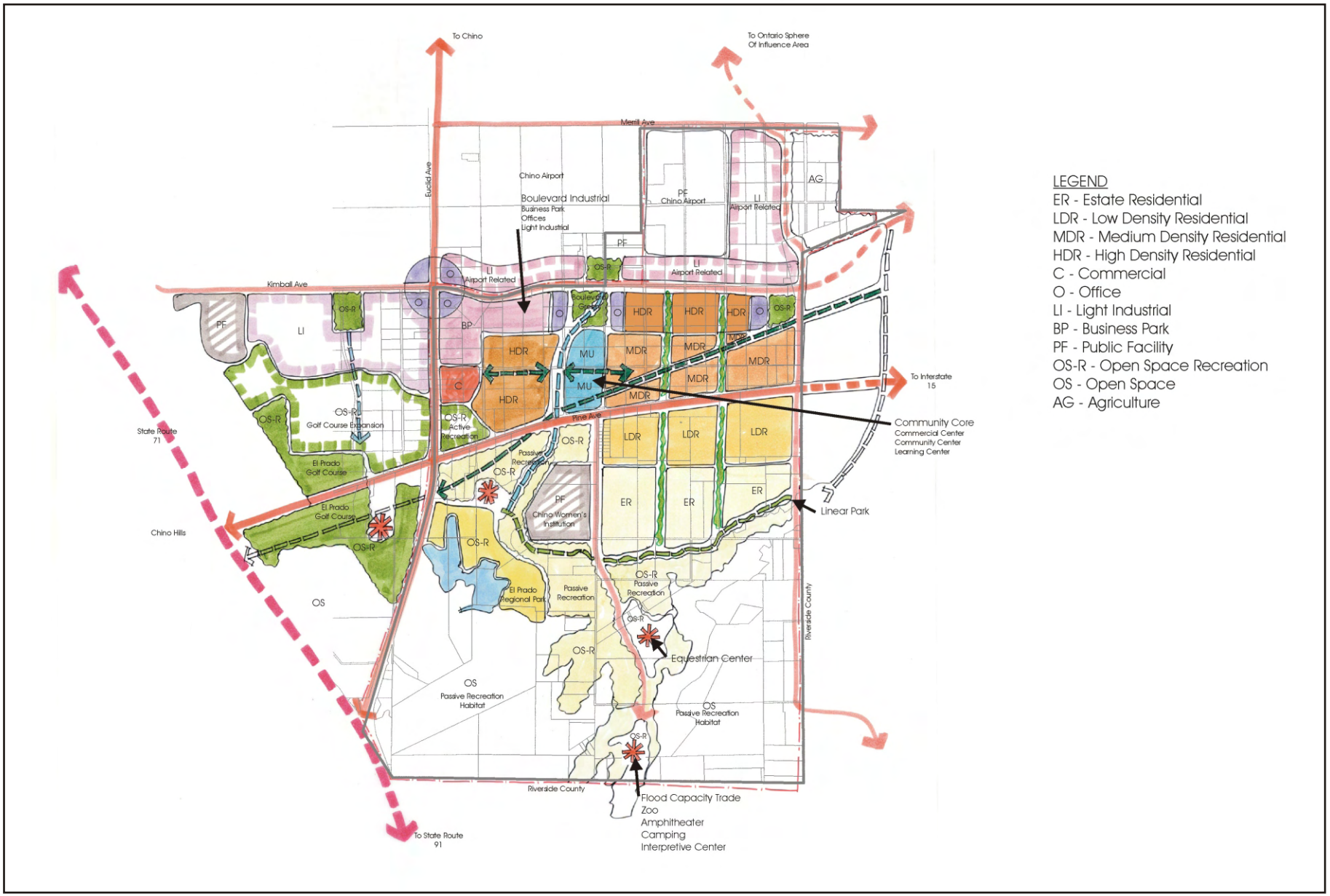
The No Project Alternative maintains the existing rural land use pattern that avoids or minimizes some environmental impacts within the plan area. Some of the impacts that are avoided or minimized include agricultural land conversion, traffic and circulation, noise, biological resources and impacts to public services and utilities. However, the existing land use could continue to degrade the area's existing surface and groundwater quality, create significant odor, particulate and vector problems, and not respond to any of the objectives of the proposed project. In addition, aesthetic values are compromised due to the density of dairy operations, the outside storage of equipment, and the lack of area improvements. Overall, this alternative would be considered slightly environmentally superior to the proposed plan. However, other than meeting selected environmental goals, it does not meet any of the objectives of the proposed project.

8.3 ENVIRONMENTAL LAND USE ALTERNATIVE

The 'Environmental Land Use Alternative' was considered as a preliminary land use concept during the formulation of the Specific Plan and proposed land use development plan. For the proposed plan area (Subarea 2), the Environmental Land Use Alternative represents a decrease in the number of residential units from 9,779 to 6,958 (approx. 29% reduction), and the amount of square feet devoted to business related land uses, from 10,238,744 to 7,840,800 (approx. 24% reduction). The number of acres devoted to open space areas would increase by 20% from 2,988 acres to 3,587.

The concept plan for this alternative assumes the following factors (Exhibit 8.3-1):

- The adopted Chino Airport 65 dB noise contour
- Full respect for the 566-foot dam inundation elevation
- Incorporation of appropriate uses within the 566-foot dam inundation area
- Short-term incorporation of the Inland Empire Utilities Agency Co-Composting facility
- Retention of the County-owned agricultural preserve in the northeast corner of the project area.
- Incorporation of the Southern California Edison Transmission line corridor as open space.
- Extension of the land use concept to include Chino Subarea 1 (as illustrated in Exhibit 8.3-1).



NORTH

MAP NOT TO SCALE

Michael Brandman Associates

05760012 · 6/2001

Exhibit **8.3-1**

Environmental Alternative

THE PRESERVE • CHINO SUBAREA 2

- Retention and incorporation of the existing drainage ways and areas of high biological sensitivity.

Distinguishing features of this concept from the proposed Specific Plan land use plan include the following:

- Community Core reduced in size and shifted to the west, north of Pine Avenue (adjacent an extension of the Community Paseo and Open Space System that follows an existing drainage course);
- Reduced size of Regional Commercial component (along Euclid Avenue);
- Reduction in total Commercial and employment-generating uses;
- Concentration of lower density residential uses south of Pine Avenue;
- Emphasis on passive, regional recreational use and natural habitat below the 566'elevation (i.e. no agricultural designations below the 566' elevation).

Impacts of the Environmental Land Use Alternative, and a comparative discussion with the proposed project specific plan are provided below. The analysis and data comparisons are focused on the Subarea 2 portion of the alternative, which was mapped to also include Subarea 1. The implications of further density reductions associated with the Environmental Land Use Alternative are discussed in the 'Conclusions' section which also follows.

Impact Evaluation

Land Use

This alternative deemphasizes the Community Core design envisioned in the proposed Specific Plan. Instead, this alternative would provide a plan that is linked to various elements, including the Chino Airport, a reduced community center/commercial center, and the regional recreation/open space area, rather than focused around a major and centrally located design component. This is a significant departure from the proposed Specific Plan Community Core area as the project's defining focus, and clustered land uses that radiated outward from a central commercial area. In this alternative the Community Core would be replaced with a multi-use area and include a community center and commercial center. The community center portion of the mixed-use area would include entertainment, museum, theater, and a learning center. The commercial center portion would contain neighborhood-serving uses, such as a supermarket, dry cleaners, and movie theater. This alternative contains many of the same land uses as the proposed Specific Plan, but the intensity of residential densities would gradually transition in a uniform manner from higher intensity uses around the airport

to the north, to those of lesser intensity adjacent to the open space areas to the south. This alternative would contain many of the plans and policies as the proposed project due to the similar types of proposed land uses.

The emphasis on passive recreation and habitat in the open space system is potentially compatible with U.S. Army Corps of Engineers plans for the Prado Flood Control Basin. Business and open space areas would be generally distributed along Euclid Avenue and Kimball Avenue in a manner similar to that proposed in the Specific Plan. Additional clusters and corridors of open space areas would be located north of Pine Avenue.

Urban/rural land use conflicts would still occur during the transition period until buildout of the plan area is achieved. This alternative envisions a reduced density of development south of Pine Avenue, as a transition to the open space system. However, this alternative would not avoid the irreversible loss of open space and conversion of land from rural to urban character.

Mitigation measures identified in this EIR and the Specific Plan would be appropriate under this alternative, and would serve to reduce all other land use impacts to a level that is less than significant.

Agriculture

This alternative retains 158 acres in an Agricultural use designation in the northeast sector of the plan area, but does not identify any agriculture below the 566' elevation. The impact of this alternative on agricultural land conversion would be significant and potentially greater than the proposed project, which retains 345 acres in an Agricultural use designation and 518 acres in an Agricultural/Open Space-Natural designation.

Transportation and Circulation

The number of daily trips generated on area roadways and freeways would be reduced by approximately 22% as compared to the proposed Specific Plan (Table 8-1). This represents a potentially significant reduction in comparison with the proposed project. The mitigation measures provided within the EIR and Specific Plan, including the full development of the internal roadway system and coordination with other agencies in the provision of needed improvements to off site roadways and freeway segments, would still be required since this alternative would contribute to congestion on those facilities.

It must also be noted that the traffic impact analysis for the proposed project represents a worst-case analysis that does not take into account potentially significant future reductions in trips on the local and regional system with implementation of the potential transit system in the Specific Plan. In order for such a transit system to be viable, an intensity and proximity of uses must be established that is

sufficient to encourage and support transit use. The proposed Specific Plan land use plan, with its major Community Core and employment-generating uses, surrounded by higher and medium density residential uses, provides an opportunity for a future transit system that is not assured with the lower density Environmental Land Use Alternative. Thus, the Environmental Land Use Alternative does not necessarily respond favorably to the project objective of meeting community traffic demands and promoting transit usage.

TABLE 8-1
ENVIRONMENTAL ALTERNATIVE TRIP GENERATION

Land Use	Amount	Units[1]	Peak Hour				Daily
			AM		PM		
			IN	OUT	IN	OUT	
Single-Family Detached Residential	385	DU	73	216	250	139	3,684
Single-Family Detached Residential	747	DU	142	418	486	269	7,149
Single-Family Detached Residential	1,907	DU	362	1,068	1,240	687	18,250
Multi-Family Attached Residential	3,612	DU	253	1,336	1,300	650	21,166
Commercial Retail	431.244	TSF	233	151	789	858	17,448
Office	816.750	TSF	874	123	172	825	6,657
Business Park	1,515.888	TSF	1,819	349	455	1,501	19,343
Light Industrial	3,645.972	TSF	2,953	401	438	3,136	25,412
Multi-Family Attached Residential	307	DU	21	114	111	55	1,799
Commercial Retail	715.473	TSF	315	200	1,102	1,195	24,162
Office	715.473	TSF	787	107	150	730	6,017
Agriculture	158.0	AC	16	16	16	16	316
Prison	113.7	AC	199	215	86	80	2,894
Open Space-Recreation	1,579	AC	632	632	1,263	1,263	31,580
Airport (Public Facility)	223.3	AC	36	85	121	121	1,340
Jr. High School	1,000	ST	260	200	80	80	1,450
Elementary Schools (2)	1,200	ST	204	144	12	12	1,224
Hotel	200	RM	68	44	64	58	1,646
TOTAL			**9,247**	**5,818**	**8,133**	**11,673**	**191,537**

[1] DU = Dwelling Units; TSF = Thousand Square Feet; AC = Acres; ST = Students; RM = Rooms

Air Quality

The development of the Environmental Land Use Alternative would result in short-term emissions due to construction related activities that are similar to those of the proposed project. This is because the land area subject to earthwork disturbance and timeframe for buildout of the plan area would be similar in both alternatives. Construction emissions of NO_x would remain significant. Long-term operational air emissions would decrease in comparison to the proposed Specific Plan as a result of the reduction in the projected number of daily vehicle trips. The feasibility of a future transit system within this reduced density alternative is uncertain. Such a transit system could lead to long-term vehicle-trip and air emissions reductions. Nevertheless, it is reasonable to assume air quality impacts would decrease under this alternative.

Noise

Under this alternative noise from vehicle trips would be incrementally reduced in comparison to the proposed project. As indicated above, the reduction in the number of traffic generating land uses would incrementally reduce project-related traffic. This would reduce traffic related noise, which would be the most significant project wide noise impact. As with the proposed Specific Plan, the incorporation of mitigation measures, identified in Section 5.8, would reduce long-term noise levels to less than significant.

Biological Resources

This alternative would allocate open space areas in a manner similar to that proposed by the Specific Plan. In general, areas below the 566' elevation, which include most of the area's significant biological resources, would be placed within open space designations. The elimination of the Agricultural use designation within the open space system below the 566' elevation could facilitate long-term conversion of existing farmland and dairies to passive recreation use or open space habitat. Resulting impacts on significant resources in the Chino Creek and Mill Creek drainages could be either reduced or increased depending upon the specific uses and resource management measures implemented in these areas. The impact of the Environmental Land Use Alternative upon biological resources is considered less than significant.

Population, Employment and Housing

Under this alternative, the number of residential units would be decreased by 44 percent and the business related square footage would decrease by 27 percent. The estimated jobs to housing ratio for the proposed Specific Plan at buildout is estimated to be 1.36, which will exceed the San Bernardino County-wide average of 1.22. Due to the Environmental Use Alternative, significant reduction in housing units and proportionately smaller decrease in square footage for business-related uses, it is

expected the jobs to housing ratio for the plan area would increase relative to the proposed project, but still remain substantially higher than the ratio for the county as a whole.

Aesthetics

As with the proposed project, this alternative represents an urban character that is distinctly different than the existing agricultural land use pattern. Unlike the proposed project, however, this alternative lacks a compact urban form organized around a Community Core, which could otherwise enhance the urban character and aesthetic quality of the community. The Environmental Land Use Alternative includes opportunities for the extension of additional open space into the urban area north of Pine Avenue via the Community Paseos and designated Open Space-Recreation (OS-R) areas. As a result, total open space would increase beyond that provided for in the proposed project. Despite these distinctions, the project area's overall visual character under this alternative would remain similar to that of the proposed project. Building heights and site design requirements for new development would be similar to that proposed within the Specific Plan. The important visual resources within the plan area boundaries are represented by the existing open space and recreation areas below the 556' elevation. The Environmental Land Use Alternative would have similar design features and impacts upon aesthetics as the proposed project.

Public Services and Utilities

Both this alternative and the proposed project would require a significant extension of urban infrastructure and an increase in public services and facilities to meet the change in public needs. In general, the level of increase in services would be similar to that within the proposed project. However, some services are more sensitive to actual population growth than others, such as public schools, parks and recreation, and police protection. Due to the reduced level of residential and business-related uses, it is expected that impacts to these services would be reduced relative to the proposed project. As with the proposed project, services and utilities impacts can be reduced to less than significant levels with payment of fees and implementation of identified mitigation measures.

Geology and Soils

The Environmental Land Use Alternative would be subject to potentially significant hazards associated with liquefaction and subsidence. These hazards would be similar to those associated with the proposed project, and would be reduced to less than significant levels with code compliance, standard geotechnical conditions and other mitigation measures identified in Section 5.5, however.

Hazards

The Environmental Land Use Alternative would expose additional populations and new improvements to hazards associated with Chino Airport aircraft activity in the vicinity. Although this

exposure is reduced relative to the total population and level of development within the proposed plan, such hazards are considered reduced to less than significant levels by the adopted Airport Safety Zones (Referral Areas). As with the proposed project, no significant remaining hazards are anticipated with implementation of identified mitigation measures.

Cultural Resources

Potential impacts to historic and prehistoric archaeological resources would be similar to those of the proposed project and would be mitigated to less than significant levels with implementation of identified cultural resource mitigation measures

Hydrology and Water Quality

As with the proposed project, the Environmental Land Use Alternative would result in the introduction of various urban pollutants into storm water runoff. Urban uses would gradually replace existing agricultural sources of nitrates and TDS in surface waters and groundwater. The reduced overall density of this alternative and slight increase in designated open space would likely increase total permeable surface area. This could incrementally reduce storm water flows to the open space system and enhance percolation opportunities within the urban area to the groundwater basin. The Environmental Land Use Alternative would avoid significant impacts to the Prado Dam high water inundation area. The impacts of this alternative on hydrology and water quality are anticipated to be similar to or slightly less than those of the proposed project, and are capable of mitigation to less than significant levels.

Conclusion

The Environmental Land Use Alternative would result in a significant reduction in residential units and business related square footage. In addition, this alternative would increase the amount of open space areas by approximately 20 percent. Implementation of this alternative could result in a significant decrease in vehicle trips, primarily due to a 29 percent decrease in residential units and a 24 percent decrease in business related square footage. As with the proposed project, the number of vehicle trips would contribute to significant cumulative impacts upon the region's circulation system.

Long-term air emissions associated with vehicular sources could be reduced, although the feasibility of transit, an integral feature of the proposed project, is uncertain with this alternative. In comparison to the proposed project, this alternative would result in a decrease in the total number of employment opportunities, although the jobs/housing ratio for the plan area would be slightly above that estimated for the proposed project.

This alternative is considered to have a similar impact upon aesthetics and biological resources as the proposed Specific Plan due to the nature of the project area and the design of the land use plan. Some of this alternative's infrastructure and service needs would also be similar, although population specific services, such as schools, could be reduced from that required for the proposed project.

The land use design of the alternative would also result in a significant departure from the intent of the proposed Specific Plan, and would not respond as favorably to design goals and objectives of the project. The Community Core in the proposed Specific Plan is intended to provide a variety of commercial, institutional, entertainment, and residential uses in close proximity to each other, thereby allowing for greater pedestrian-type movement and interaction, with density levels and concentrations amenable to the use of public transit.

Further Density Reductions to Environmental Land Use Alternative

From an environmental perspective, further density reductions to the Environmental Land Use Alternative may be possible that could substantially reduce daily trip generation and related project impacts on the regional circulation system. For example, an approximate 50% reduction in residential units, from 6,958 to 3,478 units, and an approximate 50% reduction in business use square footage from 7,840,800 sf to 3,920,400 sf, could result in approximately 75,000 fewer daily trips on the regional system.[1] Such a reduction would also likely result in significantly reduced air quality, noise, and public services impacts. With these density reductions, additional open space could be made available for retention of agricultural uses, expanded community paseos and linear greenbelts, or other additions to the open space system above the 566' elevation.

While this variation of the Environmental Land Use Alternative would qualify as an environmentally superior alternative, it is unlikely that it would feasibly attain most of the basic objectives of the project. At the reduced density, it is unlikely this alternative would provide the broad range of living, working and recreational opportunities desired by the City for Subarea 2. The alternative would not respond favorably to the goal of accommodating a broad range of uses that capitalize on adjacent uses, and may not respond to the goal to enhance the City of Chino's fiscal outlook. The reduced densities would not promote transit usage, and the variety of housing opportunities and neighborhoods would be diminished. More importantly, it is unlikely this alternative would provide sufficient density of development to support needed major infrastructure improvements. Substantial investments in infrastructure, including new roads, water, wasterwater, and drainage systems, are needed to support the planned development of this rural area. A sufficient size and density of development is needed to finance needed improvements and spread infrastructure costs to the

[1] Assumes 50% reduction in residential and business uses in Table 8.3-1 Environmental Land Use Alternative Trip Generation.

development. Nevertheless, this variation of the Environmental Land Use alternative is not rejected from further discussion and consideration through the EIR process.

8.4 METROPOLITAN CENTER LAND USE ALTERNATIVE

The 'Metropolitan Center Land Use Alternative' was considered as a preliminary land use concept during the formulation of the Specific Plan and proposed land use development plan. For the proposed plan area (Subarea 2), the Metropolitan Center Land Use Alternative represents a decrease in the number of residential units from 9,779 to 4,818 (approximately 51 percent) and an increase in the amount of square footage devoted to business related land uses, from 10,238,744 to 11,803,671 (15 percent). The number of acres devoted to open space areas will increase from 2,988 acres to 3,369 or approximately 13 percent.

The concept plan for this alternative assumes the following factors (Exhibit 8.4-1):

- A potential studied Chino Airport 65 dB noise contour.
- Expanded development of the Chino Airport property for airport related industrial uses and commercial uses
- Modification of the 566-foot dam inundation elevation
- Incorporation of appropriate uses within the 566-foot dam inundation area
- Relocation of the Inland Empire Utilities Agency Co-Composting facility
- Conversion of the County-owned agricultural preserve in the northeast corner of the project area to airport-related light industrial use
- Incorporation and intensification of land uses within the adjoining Subarea 1 to the west
- Southerly realignment of Pine Avenue within the plan area
- Incorporation of the Southern California Edison Transmission line corridor as open space
- Retention and incorporation of the existing drainage ways and areas of biological sensitivity.

Distinguishing features of this concept from the proposed Specific Plan land use plan include the following:

- Community Core scaled-down to community serving commercial center along realigned Pine Avenue
- Intense corridor of regional serving business and commercial uses along Euclid Avenue
- Business Park/Industrial uses along Kimball Avenue, further separating residential development from Chino Airport.
- Reduction in total housing units, with higher proportion of both high density and estate residential units.
- An active, regional recreational and golf center within the open space system to the south.
- Extension of the land use concept to include Chino Subarea 1 (as illustrated in Exhibit 8.3-2).

Impact Evaluation

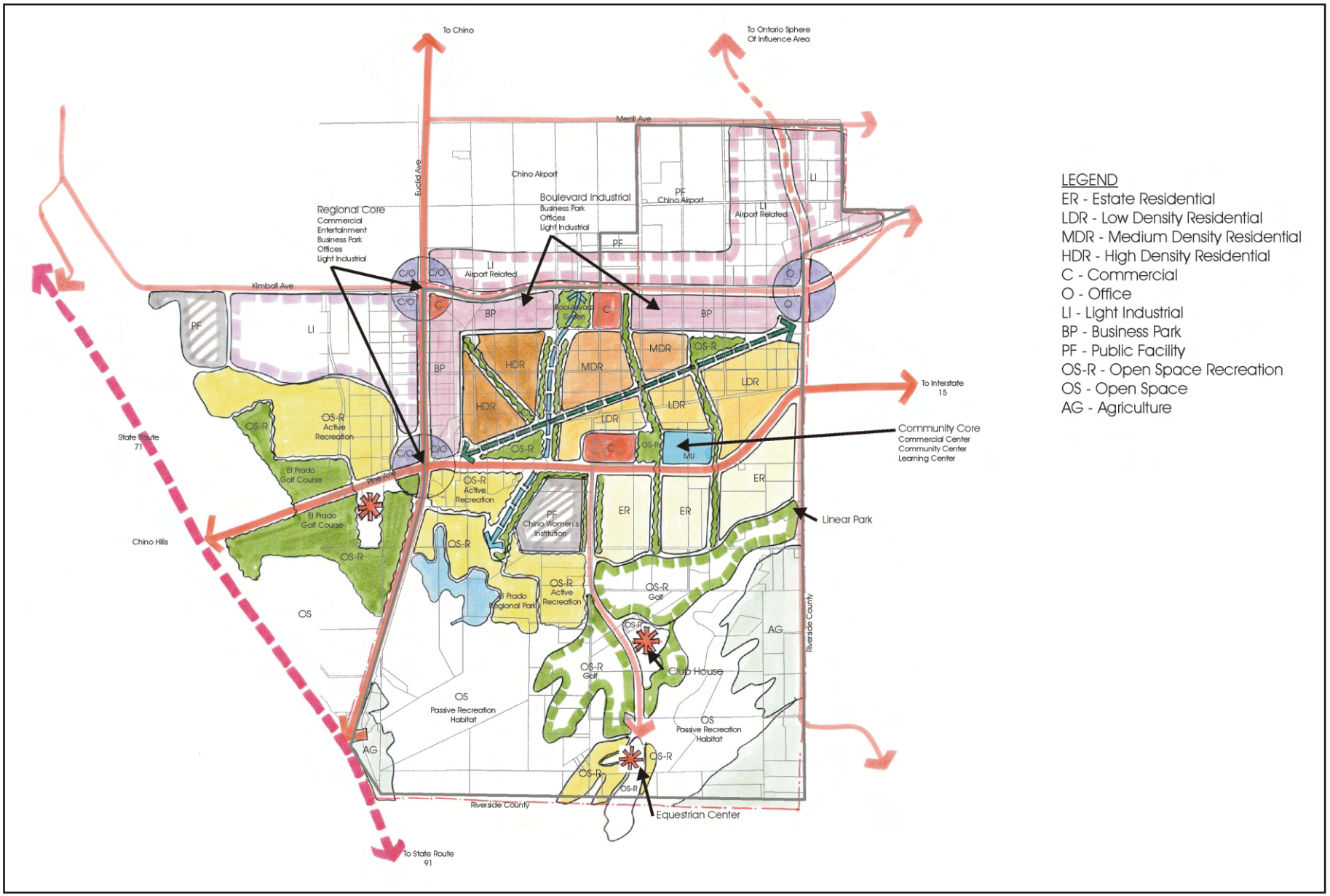
The analysis and data comparisons that follow are focused on the Subarea 2 portion of this alternative, which was mapped to also include Chino Subarea 1.

Land Use

This alternative contains many of the same land uses as the proposed Specific Plan, although a more uniform transition of intensity occurs from Euclid and Kimball Avenues to lower intensity uses to the east and south within the plan area. The realigned Pine Avenue serves as a distinct separator between urban uses to the north and estate residential, recreational and other open space uses to the south.

The open space areas in the southerly portion of the project area are intensified from that proposed in the Specific Plan. A championship 18-hole golf course is suggested and an intensive/active recreational facility is proposed between the Women's Correctional Facility and Subarea 1 to the west and south of the Women's Correctional Facility. These recreational areas would include soccer and baseball fields, basketball, tennis, and volleyball courts, as well as picnic and children's play areas. Lighted sports fields could be accommodated where they would have a limited impact on open space, habitat, and residential areas.

Urban/rural land use conflicts would still occur during the transition period until buildout of the plan area is achieved. This alternative would not avoid the irretrievable loss of open space and conversion of land from rural to urban character. Identified land use mitigation measures for the proposed project would be appropriate under this alternative and would serve to reduce other impacts to a level that is less than significant.



NORTH

MAP NOT TO SCALE

Michael Brandman Associates

05760012 · 6/2001

Exhibit **8.4-1**

Metropolitan Center Land Use Alternative

THE PRESERVE • CHINO SUBAREA 2

Agriculture

This alternative retains 400 acres in an Agricultural use designation in the southeast sector of the plan area below the 566' elevation., but would convert the existing agricultural land owned by San Bernardino County and the Southern California Agricultural Land Foundation in the northeast sector to light industrial use. The impact of this alternative on agricultural land conversion would be significant and potentially greater than the proposed project, which retains 345 acres in an Agricultural use designation and 518 acres in an Agricultural/Open Space-Natural designation.

Transportation and Circulation

The number of daily trips on area roadways and freeways would be similar to or slightly less than the proposed project plan, with the 51 percent reduction in residential units and the 15 percent increase in business related square footage (Table 8-2). Traffic impacts associated with this alternative are expected to be similar to those projected for the proposed plan due to the significant number of vehicle trips generated. Mitigation measures provided within the EIR would be required since the alternative will contribute to significant congestion on those facilities. Significant impacts to the regional circulation system would remain after mitigation.

It must also be noted that the traffic impact analysis for the proposed project represents a worst-case analysis that does not take into account potentially significant future reductions in trips on the local and regional system with implementation of the potential transit system in the Specific Plan. In order for such a transit system to be viable, an intensity and proximity of uses must be established that is sufficient to encourage and support transit use. The Metropolitan Center Land Use Alternative includes an intensity of commercial and business-related uses along Euclid Avenue and Kimball that may be conducive to potential future regional transit connections. This alternative has the potential to respond favorably to the project objective of meeting community traffic demands and promoting transit usage.

TABLE 8-2
METROPOLITAN CENTER LAND USE ALTERNATIVE TRIP GENERATION

Land Use	Amount	Units[1]	Peak Hour				Daily
			AM		PM		
			IN	OUT	IN	OUT	
Single-Family Detached Residential	458	DU	87	256	298	165	4,383
Single-Family Detached Residential	825	DU	157	462	536	297	7,895
Single-Family Detached Residential	1,252	DU	238	701	814	451	11,982
Multi-Family Attached Residential	2,128	DU	149	787	766	383	12,470
Commercial Retail	797.148	TSF	335	215	1,188	1,283	25,899
Office	571.725	TSF	657	91	120	600	5,065
Business Park	4,168.692	TSF	5,002	959	1,251	4,127	53,193
Light Industrial	5,540.832	TSF	4,488	609	665	4,765	38,620
Multi-Family Attached Residential	155	DU	11	57	56	28	908
Commercial Retail	362.637	TSF	210	134	707	765	15,608
Office	362.637	TSF	457	62	83	403	3,568
Agriculture	400.0	AC	40	40	40	40	800
Prison	113.7	AC	199	215	86	80	2,894
Open Space-Recreation	1,500	AC	600	600	1,200	1,200	30,000
Airport (Public Facility)	223.3	AC	36	85	121	121	1,340
Jr. High School	1,000	ST	260	200	80	80	1,450
Elementary Schools (2)	1,200	ST	204	144	12	12	1,224
Hotel	200	RM	68	44	64	58	1,646
TOTAL			**13,198**	**5,663**	**8,087**	**14,858**	**218,945**

[1] DU = Dwelling Units; TSF = Thousand Square Feet; AC = Acres; ST = Student; RM = Rooms

Air Quality

The development of the Metropolitan Center Land Use Alternative would result in short-term emissions due to construction-related activities that are similar to or slightly greater than the proposed project. Although the land area subject to earthwork disturbance would be similar, the grading requirements to support the overall higher intensity of uses could be greater with this alternative.

Long-term operational air emissions would be similar to the proposed project due to the comparable number of daily vehicle trips. The feasibility of a future internal transit system, with attendant vehicle-trip reduction and air quality benefits, is uncertain under this alternative. It is reasonable to assume air quality impacts would remain the same under this alternative, but continue to represent a significant unavoidable impact.

Noise

Land uses incorporated into this alternative would produce project-related vehicle trips and traffic-related noise. Under this alternative, noise from vehicle trips would be similar to noise impacts on the proposed project. The inclusion of business park and commercial uses along the length of Kimball Avenue provides a further separation of residential uses from Chino Airport and aircraft noise. The Metropolitan Center Land Use alternative is superior to the proposed project in this respect. As with the proposed project, the incorporation of mitigation measures identified in Section 5.8 would reduce long-term noise levels to less than significant.

Biological Resources

This alternative would allocate open space areas in a manner similar to that of the proposed project. However, an 18-hole championship golf course would be placed below the 556' elevation near sensitive biological resources in Mill Creek and Chino Creek. The design of the golf course and required grading could result in direct and indirect impacts to existing habitat areas. With the conversion of agricultural lands in the northeast portion of the plan area to light industrial use, windrows and adjacent farmlands with habitat values would be lost. The biological resource impacts of the Metropolitan Center Land Use Alternative are considered to be similar or greater than those of the proposed project.

Population, Employment and Housing

Under this alternative, the number of residential units would decrease by 51 percent, but the square footage of business-related uses would increase by 15 percent. The estimated jobs to housing ratio for the proposed project at buildout is estimated to be 1.36, which would exceed the San Bernardino County-wide average of 1.22. The Metropolitan Center Land Use Alternative would reinforce the City of Chino as an employment center and help to offset the regional imbalances between 'housing-rich' San Bernardino County and 'jobs-rich' Orange and Los Angeles counties. However, the alternative does not balance employment and housing within the plan area, and in this respect is inferior to the proposed project.

Aesthetics

This alternative would provide many of the same design opportunities to create a quality urban environment as the proposed project and Specific Plan. This alternative is similar to the other alternatives previously discussed in that it represents an urbanized project that is distinctly different than the existing agricultural land use pattern and rural character. Building heights and site design requirements for new development would be similar to the proposed project and Specific Plan. The important visual resources within the project area boundaries are represented by the existing open space and recreation areas located below the 566' Dam inundation elevation. This alternative generally reflects the existing character of the area by offering a variety of regional recreational activities, agriculture and open space habitat below the 566' elevation. The Metropolitan Center Land Use Alternative will generally have similar design features and impacts upon aesthetics as the proposed project and Specific Plan.

Public Services and Utilities

The Metropolitan Center Land Use Alternative represents a significant departure from the area's existing land use pattern. As with the Environmental Land Use Alternative, both this alternative and the proposed project represent a highly urbanized area that will require a significant extension of infrastructure and an increase in public services and facilities to meet the change in public needs. The level of increase in services will be comparable, in many instances, to that within the proposed Specific Plan. However, some needs, such as public schools, parks and recreation, and police protection will be slightly reduced since they are more sensitive to actual population growth than other services.

Conclusion

This alternative would result in significant reduction in residential units, an increase in business related square footage and a slight increase in the amount of open space areas. Implementation of this alternative would result in traffic and circulation impacts that are similar to the proposed project. However, the number of vehicle trips would continue to represent a significant impact upon the region's circulation system. Due to the urban nature of this alternative, many of the same impacts associated with the proposed project and Specific Plan would occur as well.

In comparison to the proposed project, this alternative would result in a substantial increase in the proportion of jobs to housing units, and enable the City of Chino to achieve a level more consistent with the SCAG projected jobs/housing ratio.

This alternative is considered to have a slightly greater impact upon biological resources than the proposed project due to the inclusion of an 18-hole golf course in the southerly portion of the project area, and potentially greater loss of windrows with related farmland habitat value in the northeast

portion of the plan area. Infrastructure and service needs for the alternative plan would be generally similar, although some population sensitive services and facilities could be reduced from that required for the proposed Specific Plan.

As was the case for the Environmental Land Use Alternative, this alternative would result in a departure from the intent of the proposed Specific Plan. The Community Core area proposed in the Specific Plan is intended to provide a variety of commercial, institutional, entertainment, and residential uses in close proximity to each other, thereby allowing for greater pedestrian-type movement and interaction, with density levels and concentrations amenable to the use of public transit.

8.5 ALTERNATIVE LOCATION

Pursuant to CEQA Guidelines 15126.6(f)(2), the City of Chino has considered alternative locations for the proposed. There are no remaining locations within the Chino Basin Dairy Area (CBDA) capable of supporting a major new planned community that meets the goals and objectives of The Preserve, while avoiding or substantially lessening any of the significant effects of the project. As discussed in EIR Section 4.2, remaining lands within the CBDA potentially capable of supporting a project of this size are already approved for development (i.e. New Model Colony-Ontario, Eastvale-Riverside County). City of Chino Subarea 1 has been planned, annexed and approved for a combination of General Industrial, Agricultural/Transitional and Greenspace (Open Space) uses. This 1,800-acre area is subject to environmental constraints that are similar to those in Subarea 2, and insufficient buildable area would have been available to create a compact, balanced community of residential and business uses similar to the proposed project.

While several developments are pending or approved in Chino Hills, Norco and Corona, these are on smaller development sites that are zoned for specific uses, and are not suitable for the type of development envisioned by The Preserve Specific Plan.

In its action including Subarea 2 within the City of Chino sphere of influence, San Bernardino County LAFCO recognized the need to comprehensively plan for the eventual transition of this portion of the County's Agricultural Preserve to alternative uses. No feasible alternative locations are available and suitable for the proposed project.

8.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an Environmentally Superior Alternative be identified. Such an alternative would result in the fewest or least significant environmental impacts while still meeting most of the objectives of the proposed project. The No Project Alternative would allow for the continued operation of area dairies. However, the impacts of current dairy operations upon water resources has

required the adoption of waste disposal and water quality regulations that, among other economic factors, potentially restrict or limit their long-term viability and continued operation within the plan area. The No Project Alternative does not identify mechanisms to provide remediation of area soils that are affected by dairy waste and other organic wastes. The No Project Alternative does, however, reduce significant impacts associated with the proposed plan in terms of transportation and circulation, agricultural land conversion, biological resources, and various public services and utilities. Therefore, pursuant to CEQA 15126.6, the No Project Alternative is identified as an environmentally superior alternative.

The evaluation of the alternatives to the proposed project identified similarities with the proposed plan and, therefore, in many instances similar impacts. This is due primarily to the fact that any major development project within the project area would represent a significant change in land use from a rural to urban character, with the resulting loss of prime farmlands and agricultural productivity. In an effort to provide an appropriate mix of urban land uses, design features with project alternatives tend to reinforce the "smart growth" and sustainable development principles associated with the proposed plan. In addition, existing constraints, such as the Prado Dam inundation area and Chino Airport, also tend to limit the range of reasonable alternatives for the site.

Of the alternatives discussed, the Environmental Land Use Alternative meets many of the proposed project objectives, while substantially decreasing the number of housing units and increasing the amount of open space. The Environmental Land Use Alternative has the benefit of reducing vehicle trips and related mobile source air emissions and noise, while slightly increasing the jobs/housing ratio. .

However, the Environmental Land Use Alternative would not reduce the level of significance of any of the identified environmental impacts without incorporating mitigation measures that are similar to those proposed for the Specific Plan. Further, this alternative does not respond as favorably to a key goal and objective of the proposed Specific Plan, which is to include a Community Core "that serves as the focal point of the community and provides a prominent expression of uniqueness." (page 6, The Preserve Specific Plan). As such, the Community Core area represents an urban design element that responds to quality of life and aesthetic considerations which are not well represented in the other alternatives. The proposed Specific Plan design would create a substantial number of jobs and integrate them within close proximity to housing, while providing pedestrian-oriented access. The combination of pedestrian-oriented access and housing units at a density capable of supporting a viable transit system would create the opportunity to significantly reduce vehicle trips and related air emissions.

SECTION 9
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AND ORGANIZATIONS AND PERSONS CONSULTED

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Southern California Agriculture Land Foundation ..... Chuck Hale

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SECTION 10
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