

### **III. POTENTIALLY SIGNIFICANT ENVIRONMENTAL EFFECTS**

#### **1. AGRICULTURAL RESOURCES**

The focus of the following discussion is related to the potential impacts associated with the conversion of agricultural land to non-agricultural use. These potential impacts could relate to conversion of Williamson Act land, designated Farmland, land zoned for agriculture, or the project's proximity to agricultural uses. For the purposes of potential impacts to agricultural resources, no difference exists between the use of the 10-acre school site for a school or for houses, so this issue is not addressed in the following analyses.

##### **Setting**

The Ontario Sphere of Influence area is located in the central portion of the Chino Basin and is located within the San Bernardino County Agricultural Preserve. Many of the properties within the Sphere of Influence area have been subject to Williamson Act Contracts, a tool utilized by the state to provide the agricultural landowner with property tax breaks while also assisting in the long-term preservation of agricultural land. Historically, agriculture has been the primary land use throughout this area of southern California, including dairies, crop farms, and wineries. Dairy operations in the Chino Basin area began more than 40 years ago. At its height, the larger Chino Basin, of which the Sphere of Influence area is a part, contained the highest concentration of dairy animals found anywhere in the world. According to the California Department of Food and Agriculture, there were approximately 354 dairies operating in the Chino Basin in 1989. As of 1999, about 300 dairies operated in the Chino Basin.

Milk is the highest valued agricultural commodity in San Bernardino County, with a 2002 year valuation of over \$371 million dollars; and most of this production is located geographically in the Chino Basin. This figure is over one half of the total 2002 year value of agricultural production for the County (\$632 million), giving San Bernardino County a state ranking of 14<sup>th</sup> (San Bernardino County Farm Bureau statistics). In contrast, crop sales account for a relatively small percent of the total value of agricultural products sold within San Bernardino County, estimated at 12 percent of the market value for 1997 (1997 Census of Agriculture).

"The economic viability of the agricultural operation in the Ontario Sphere of Influence and southern California have declined in recent years," according to the Final Environmental Impact Report for the City of Ontario Sphere of Influence, October 1997. Further information regarding agricultural productivity is summarized from that document as follows:

Southern California dairies had the lowest net income based on average amounts per hundredweight of milk and average amounts on a per head basis when compared to San Joaquin Valley, Arizona Holsteins, Arizona Jerseys, Idaho, and New Mexico for the first nine months of 1995. The average net income of southern California dairies declined more than the other five areas from 1993 to 1995. The lower net income for southern California dairies is attributable to an increase in operating costs, particularly related to feed, without a corresponding increase in price. This trend is expected to continue as a result of the tough competition from the Central Valley and other states.

Consistent with the above description of relatively lower net income from dairy operations in the Chino Basin, the Census of Agriculture: 1987, 1992, 1997, states that total farm production expenses for San Bernardino County increased from \$389 million in 1987 to \$493 million (26.7 percent increase) in 1997. Total market value of agricultural products sold within the County likewise increased from \$489 million in 1987 to \$618 million (26.4 percent increase) for the same time period.

In recent decades, agricultural land uses have been decreasing in the Chino Basin. The project site is part of an 8,200-acre area annexed into the City of Ontario on November 30, 1999. The annexed area is currently called the New Model Colony (NMC). In 1998, the City of Ontario adopted the NMC General Plan Agreement that laid out a strategy for the development of the NMC. Within the NMC is the proposed Esperanza Specific Plan site, which consists of approximately 223 acres of agricultural land. As evident on San Bernardino and Riverside County aerial maps (Photomapper Software, 2004), agricultural activities such as dairy farming and crop tilling have occurred on the project site since the 1960s with little change in the locations of such activities.

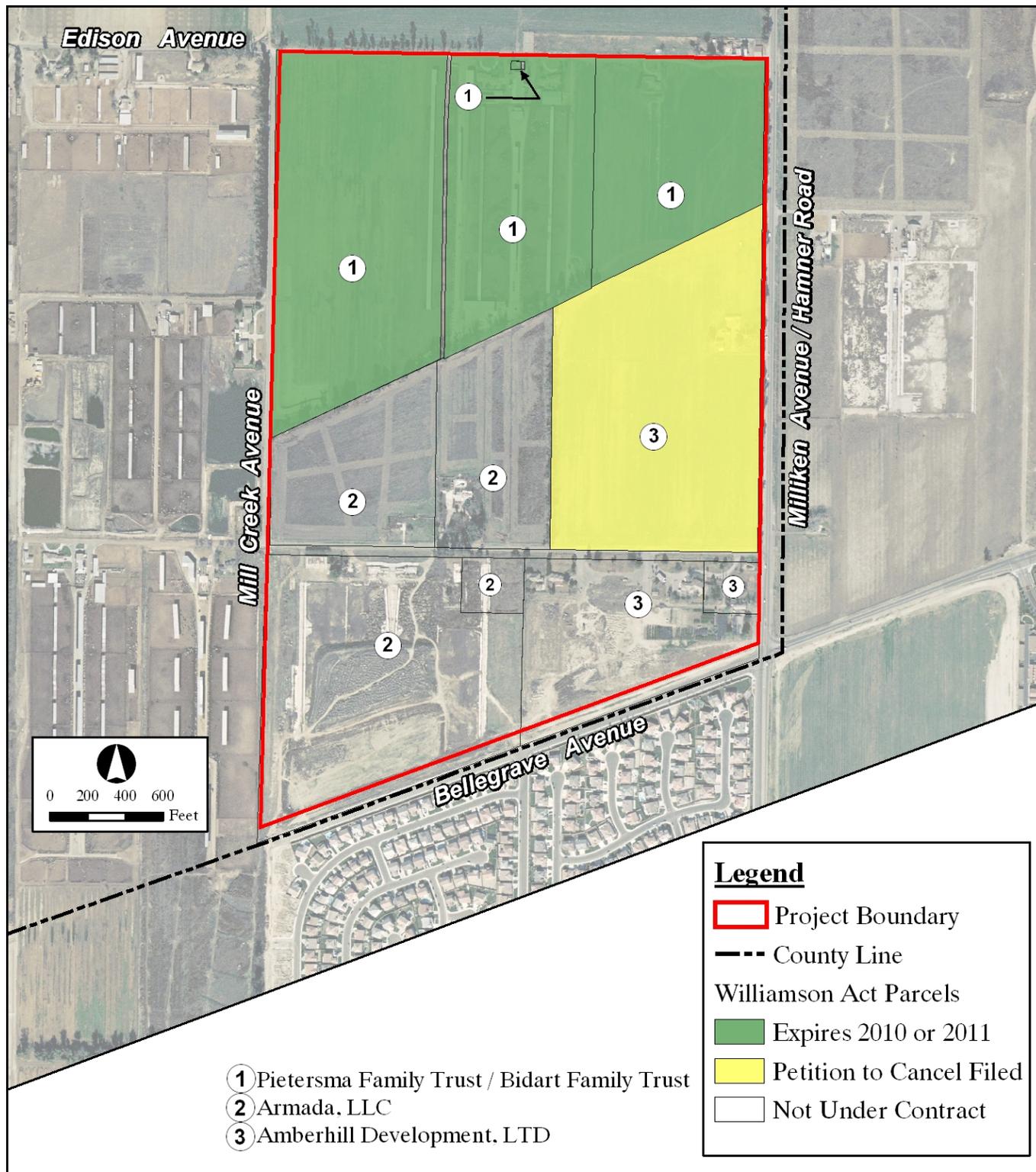
The majority of the Esperanza Specific Plan (the Specific Plan) project site was included in a Land Conservation Agreement (Williamson Act Contract) dated February 20, 1969. Since that time, property owners have changed the contract status of various parcels within the Specific Plan site through the routine filing of Notice of Non-Renewals (NONR). The Pietersma Family Trust/Bidart Family Trust owns approximately 85 acres of the proposed project site and 79 acres of this property is under a Williamson Act contract that expires in 2011. Approximately 40 acres of the overall 64 acres owned by the Amberhill Development, LTD is under an active Williamson Act contract that expires in 2014.

The following table identifies each of the ten parcels within the Specific Plan project site, and states to what degree each parcel is subject to compliance with the Williamson Act. As seen in Table III-1-A below and on Figure III-1-1, *Williamson Act Contracts*, implementation of the Specific Plan will result in the cancellation of Williamson Act Contracts for approximately 40.08 acres of the project site at this time. It is likely that farming will continue on the non-renewed parcels until their contracts expire.

**Table III-1-A Williamson Act Contract Status**

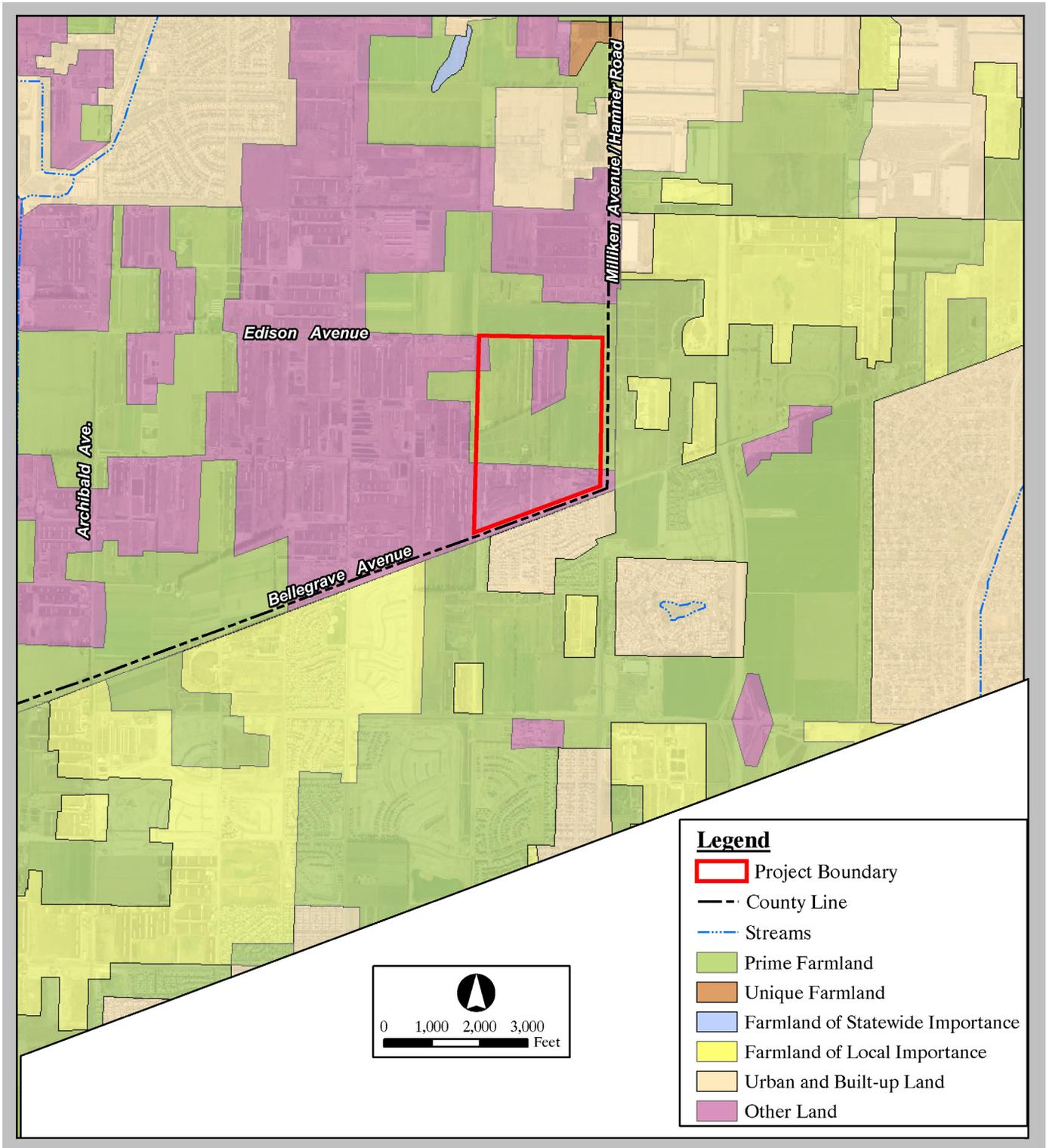
<b>Assessor Parcel Number</b>	<b>Acres</b>	<b>Status</b>	<b>Date of Termination</b>
0218-332-01	37.83	Expired Contract	December 31, 2001
0218-332-02	2.00	Expired Contract	December 31, 2001
0218-332-04	2.00	No Contract	N/A
0218-332-05	20.29	No Contract	N/A
0218-252-03	40.08	Petition to Cancel	December 31, 2014
0218-252-04	13.92	Expired Contract	December 31, 2001
0218-252-05	15.21	Expired Contract	December 31, 2001
0218-252-07	26.28	NONR Filed	December 31, 2011
0218-252-08	34.25	NONR Filed	December 31, 2011
0218-252-09	18.20	NONR Filed	December 31, 2011
0218-252-10	0.04	NONR Filed	December 31, 2011

The California Department of Conservation maintains maps identifying important farmland. As shown in Figure III-1-2, *Farmland Designation*, the project site is identified as Prime Farmland and Other Land. Prime Farmland includes lands with the best combination of physical and chemical features for the production of agricultural crops, and encompasses approximately 133 acres of the project site. Other Land includes land that does not meet the criteria of any other Farmland Designation category. Approximately 90 acres of the site are categorized as Other Land on the Department of Conservation maps. The proposed project does not accommodate the preservation of the designated Prime Farmland.



Esperanza Specific Plan Draft EIR  
 Williamson Act Contracts

Figure III-1-1



Source: California Dept. of Conservation, Farmland Mapping and Monitoring Program, 2002



## Esperanza Specific Plan Draft EIR Farmland Designation

Figure III-1-2

The portion of the project site south of the existing Merrill Avenue contains vacant agriculture land, formerly comprised of dairy farms, row crops, and agricultural use structures. A limited number of occupied single-family residential units and outbuildings associated with farming activities, still exist in this area. An existing 8-acre detention basin used to facilitate on-site storm water runoff is located in the southwestern corner of the project site, along Bellegrave Avenue. The recently completed County Line Channel located in Bellegrave Avenue serves as the primary storm water/flood control facility for the proposed project. Existing land uses along the northern portion of the proposed project site consist of active crop and dairy uses as well as outbuildings and residences associated with the farming activities. A windrow of mature eucalyptus trees extends approximately 1,500 feet along the southern boundary of the Pietersma property and approximately 1,200 feet in a southward direction along the shared Armada, LLC and Amberhill Development, LTD ownership line (see Figure I-1-4, *Property Ownership Map*). Another eucalyptus windrow extends along the eastern edge of the proposed project and along the Hamner/Milliken Avenue right-of-way.

Land uses within the immediate surrounding properties include active crop production to the north and active dairy farming to the west. A single-family residential development is located immediately south of the site and abandoned agricultural land is located east of the site, within Riverside County.

### **Thresholds for Determining Significance**

Impacts on agricultural resources may be considered significant if the proposed project would:

- Result in the cancellation of a Williamson Act contract for any parcel or conflict with existing agricultural use.
- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Department of Conservation, to non-agricultural use. CEQA Guidelines Appendix G suggests the use of the Department of Conservation Land Evaluation and Site Assessment (LESA) model to assess the significance of conversion of agricultural lands. For the purposes of evaluation in this EIR, the LESA model is used as the tool to assess the significance of this threshold.
- Conflict with existing zoning for agricultural use.
- Involves other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.

### **Project Compliance with Existing Regulations**

The California Land Conservation Act (Williamson Act) was passed in 1965 to protect specific parcels of land in agricultural and open space use. Landowners enter into ten-year contracts with local governments and in return receive lower property tax assessments. The City's Williamson Act program provides an implementing tool for the General Plan Agricultural Resources Element.

Administration of the City program involves two sets of records, one being the contracts between the property owner and the County, and the other being a series of agricultural preserve maps establishing the boundaries of lands under contract. The City of Ontario administers this program

for the County. Contracts are valid for an initial period of ten years and automatically renew each year to maintain a ten-year life. The property owner or local planning jurisdiction may initiate a notice of non-renewal, stopping the automatic annual renewals and placing the contract in a status in which it completes its remaining 10-year life. Alternately, a property owner may cancel a contract, subject to an approval process and penalties, to provide an immediate end to the contract. The Williamson Act specifies that contracts under the Act may only be cancelled if the cancellation is consistent with the purposes of the Act and in the public interest. To approve cancellation, the City Council must find that the cancellation is either: (1) consistent with the purposes of the Williamson Act, or (2) in the public interest. (Gov. Code, Section 51282, subd. (a).) To support a finding that the cancellation is consistent with the purposes of the Act, the City Council must make the following findings:

- (b)(1) the owner of the land has already served a notice of non-renewal of the contract,
- (b)(2) the cancellation is not likely to result in the removal of adjacent lands from agricultural use,
- (b)(3) the cancellation is for an alternative use which is consistent with the applicable provisions of the relevant General Plan,
- (b)(4) the cancellation will not result in discontinuous patterns of urban development, and
- (b)(5) there is no proximate noncontracted land which is both available and suitable for the proposed alternative use of the land, or development of the land would provide more contiguous patterns of urban development. (Gov. Code, Section 51282, subd. (b).)

To support a finding that the cancellation is in the public interest, the City Council must find:

- (c)(1) other public concerns substantially outweigh the objectives of the Williamson Act, and
- (c)(2) there is no proximate noncontracted land which is both available and suitable for the proposed alternative use of the land, or development of the land would provide more contiguous patterns of urban development. (Gov. Code, Section 51282, subd. (c).)

When a notice of non-renewal (NONR) has matured (i.e., the remaining years have run out and the property is no longer subject to the contract) or a cancellation occurs, removal of the subject land from the Agricultural Preserve requires a separate action to amend the official City maps by a process called diminishment.

The California Department of Conservation maintains maps identifying important farmland. As shown in Figure III-1-2, *Farmland Designation*, the project site is identified as Prime Farmland and Other Land. The state considers the loss of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland as a significant environmental impact under CEQA. Prime Farmland includes lands with the best combination of physical and chemical features for the

production of agricultural crops. The proposed project does not accommodate the preservation of the designated Prime Farmland.

To help viable agricultural enterprises continue as urbanization approaches, the City of Ontario established the Agricultural Overlay District, Article 27 of Title 9 of the Ontario Municipal Code overlay district (“Right to Farm”) ordinance. The purpose of the overlay district is to allow for and guide agricultural-related activities on an interim basis until such time as a Specific Plan is approved for a property and urban development begins. It requires a minimum 100-foot separation between active agricultural operations and new, non-agricultural development; the separation requirement may be satisfied by an off-site easement with adjacent properties. These requirements are to be addressed in the Specific Plan review process.

The California Regional Water Quality Control Board Santa Ana Region (RWQCB) is taking steps to characterize, prevent, and remediate the groundwater in the Chino Basin. A regulatory program specifically aimed at dairies in the Chino Basin and their relationship to water quality has been established at the Santa Ana RWQCB. This program is discussed in the Hydrology and Water Quality section of this EIR, Section III-7.

The GPA for the NMC allows for the conversion of virtually all of the active agricultural land in the NMC, with the only future agricultural land consisting of the 200-acre Southern California Land Foundation (SoCALF) Preserve, owned by the County of San Bernardino. The GPA for the NMC land use plan designates the area as primarily low density residential. Nevertheless, the City of Ontario recognizes the importance of existing agricultural activities, and the GPA for the NMC includes a goal for “continued operation and expansion, as appropriate, of existing farms and agricultural-related businesses.” Toward that end, policies are provided within the GPA for the NMC for implementation of the following objectives related to existing agriculture:

- Enable existing farms and agricultural-related businesses to operate and/or expand, until economically infeasible, in concert with the development of adjacent properties;
- Minimize land use patterns or development that encourages “leap frog” development;
- Minimize the opportunity for agricultural use versus urban use conflicts; and
- Discourage the adoption of inappropriate, unnecessary, and restricting federal, state and local regulations that threaten the economic viability of existing agricultural operations.

### **Design Considerations**

No specific design measures will be implemented that will retain agricultural lands or operations after project build-out.

### **Environmental Impacts Before Mitigation**

*Threshold: The proposed project would result in the cancellation of a Williamson Act contract for any parcel or conflict with existing agricultural use.*

Since the adoption of the City of Ontario GPA for the NMC, notices of non-renewal have been filed by property owners of a large portion of the agricultural preserve property within the NMC,

including all parcels on-site. The filing of non-renewal notices by the property owners is reflective of the lack of a long-term commitment to agricultural uses in this area. Approximately 53 percent of the project site was under active or non-renewed Williamson Act contracts in 2002. Since the implementation of the southern portions of the project will begin within the next couple of years, a petition for cancellation has been filed for 40.08 acres (APN: 0218-252-03). This is considered a significant impact.

Additionally, the project site and some of the area surrounding the project site support active agricultural operations. According to the GPA for the NMC (1998), agriculture comprises about 89 percent of the existing land use in the NMC. Dairy farming operations are the primary agricultural land use and occupy 47 percent of the NMC area; and forage and row crops, berries, veal and poultry production, homes associated with agricultural operations, agricultural related businesses, composting facilities, roads and utility corridors occupy the remaining area.

Potential conflicts between new development and existing agricultural land uses occur when the new development, by its nature, precludes or interferes with the continued agricultural use of adjacent or nearby land. In order to allow for the continued agricultural use of the area, the City of Ontario has adopted an Agricultural Overlay District (Article 27 of Title 9 of the Ontario Municipal Code), that recognizes the right for agricultural operations to continue on an interim basis in the NMC, and provides guidelines to gradually transition to urban land uses. The Specific Plan will be required to comply with this policy established to protect agricultural land uses from conflict with non-agricultural land uses. This includes the appropriate buffer being maintained as long as the Pietersma dairy is in operation. The project proposes mainly residential land uses along with neighborhood parks and an elementary school site. These uses would generally have a low potential to conflict with the continued agricultural use of adjacent properties as long as compliance with the Agricultural Overlay District standards is maintained. No significant impacts due to conflicts between land uses are expected.

*Threshold: The proposed project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. CEQA Guidelines Appendix G suggests the use of the Department of Conservation Land Evaluation and Site Assessment (LESA) model to assess the significance of conversion of agricultural lands. For the purposes of evaluation in this DEIR, the LESA model is used as the tool to assess the significance of this threshold.*

The proposed 223 acre Specific Plan will convert approximately 133 acres of Prime Farmland into non-agricultural uses. The Land Evaluation and Site Assessment (LESA) model, developed by the California Department of Conservation, was used to analyze the significance of the conversion of agricultural lands to urban uses on the project site. The proposed project site was evaluated through the LESA model on several factors related to agricultural suitability. Soil types, soil characteristics, relative project size, water availability, and surrounding uses related to agriculture were all factors used to “rate” the project site based on its “agricultural value.” The LESA Model includes the tabulation of lands subject to Williamson Act Contracts within the “Zone of Influence” identified for the project; however, it does not require the incorporation of specific farmland designations into the analysis. The LESA model utilizes a rating system based

on 100 possible points to evaluate each of these factors, and then weights them to comprise a final score which ultimately describes the agricultural value of the project site. (Please see Appendix B for a discussion of the technical aspects of the LESA model).

The proposed project site scored 38.69 out of 50 points on the Land Evaluation (LE) section which relates soil types and characteristics to agriculture. The proposed project site scored 40.5 out of 50 for its Site Assessment (SA) characteristics (e.g., water availability, project site, surrounding agriculture). The final LESA model score for the proposed project site was 79.19 out of 100. This score of 79.19 resulted in a scoring decision of “Considered Significant.” This LESA model score indicates that the conversion of agricultural lands within the project site is considered significant (see Appendix B for LESA model worksheets).

Contributing to these higher LESA scores was the fact that approximately 119 acres of the project site are currently under a Williamson Act contract. As shown in Table III-1-A, a petition for cancellation has been filed for a 40 acre parcel that was due to expire in 2014, and approximately 79 acres are scheduled to be under contract until 2011. Approximately 40 percent of the surrounding area within an approximate one-quarter mile zone of influence are also under Williamson Act Contracts. Although the project site is located within an area that is converting from agriculture to non-agricultural uses, the existence of accessible groundwater, favorable soil types and surrounding agricultural uses makes conversion of the project site from agricultural to non-agricultural uses significant with respect to the LESA model.

The Ontario GPA for the NMC (1998) projects virtually a 100 percent conversion of existing agricultural land to non-agricultural uses, except for approximately 200 acres of land that are owned by the County of San Bernardino and managed by the Southern California Land Foundation (SoCALF). The majority of the 200 acres is designated Prime Farmland and is leased to dairy operators. The SoCALF properties can only be used for agriculture and/or open space, however, the use of 1988 Park Bond Act funds for acquisition and maintenance of the property ensured that the land would be used for agricultural preserve. This property will not be converted to non-agricultural uses by the proposed project. The proposed project will, however, result in 119 acres of land currently being used for dairy farming and irrigated crop production to be converted to urban uses.

Cumulatively, the proposed project will contribute to the loss of prime Farmland in the NMC and within the Chino basin as a whole. The GPA estimates that cumulatively in the 8,200-area of the NMC about 6 percent (2,952 acres) is considered prime agricultural soils. Thus, the prime Farmland on the project site represents about 4.0 percent of the projected cumulative loss while the site itself represents only 2.7 percent of the total land area of the NMC. The NMC is part of the larger Chino Basin which historically served as agricultural land. Within the past 10 years, the Jurupa and Eastvale areas of Riverside County to the east and south of the NMC, and areas located within the City of Chino south of the NMC are in the process of converting from agriculture to non-agricultural uses including residential, commercial, and industrial. This cumulative loss of Farmland soils is considered significant. The GPA for the NMC EIR was certified with Overriding Consideration findings related to the cumulative loss of agriculture. Cumulative losses of Farmland resulting from this project were a part of that original EIR and

Statement of Overriding Consideration. No new issues have been raised by this project which were not considered in the GPA for the NMC EIR.

*Threshold: The proposed project would conflict with existing zoning for agricultural use.*

The project site is located in an area that has historically consisted of agricultural uses. However, in recent years agricultural lands have diminished and been replaced with other uses. In the last 30 years, residential uses have been approved and developed south of Bellegrave Avenue in Riverside County, southeast of the project site. Industrial and manufacturing developments have replaced agricultural uses in areas centered along the Interstate 15 and Highway 60 corridors. Potential conflicts between new development and existing agricultural land uses occur when the new development, by its nature, precludes or interferes with the continued agricultural use of adjacent or nearby land. In order to allow for the continued agricultural use of the area, the City of Ontario has adopted an Agricultural Overlay District (Article 27 of Title 9 of the Ontario Municipal Code), that recognizes the right for agricultural operations to continue on an interim basis in the NMC, and provides guidelines to gradually transition to urban land uses. The Specific Plan will be required to comply with this policy established to protect agricultural land uses from conflict with non-agricultural land uses. The project proposes mainly residential land uses along with a local park and an elementary school, and this use would generally have a low potential to adversely affect the continued agricultural use of adjacent properties. Conflicts between residential/park uses and agriculture, would be minimal because there are no row-crops requiring pesticide application adjacent to the project site. MM Ag 1 addresses this issue. In order to minimize conflicts between urban and agricultural land uses, each Specific Plan developed for properties within the NMC must comply with the Agricultural Overlay District requirements for urban development in proximity to existing agricultural operations. The proposed project shall establish a minimum 100-foot separation between active agricultural operations and new, non-agricultural development, or an equivalent easement that is approved by the City of Ontario.

The Specific Plan is being prepared for 223 acres of land immediately west of Hamner/Milliken Avenue and north of Bellegrave Avenue at the county line boundary. This conversion of agricultural land to residential uses is consistent with the land use designations found in the Ontario GPA for the NMC. Furthermore, the site's placement in proximity to the Riverside County line boundary in an area currently being urbanized is consistent with the NMC General Plan objective of limiting "leap-frog" development.

The GPA for the NMC established pre-zoning for the 8,200 acres within the Sphere of Influence area, which includes the Specific Plan. Therefore, implementation of the Specific Plan will be consistent with existing zoning for the area, and will have no impact to existing zoning for agricultural land use.

*Threshold: The proposed project involves other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.*

Other than direct conversion of agricultural land to non-agricultural uses, discussed above, the project includes the construction of on- and off-site roads, water and sewer infrastructure that will provide access and utilities to the adjacent agricultural property and encourage development

of urban uses in the area. Therefore, the proposed project involves other actions or improvements that could promote the conversion of additional Farmland offsite. However, the offsite roads and infrastructure were evaluated for potential environmental impacts in both the GPA for the NMC Final EIR and the Mitigated Negative Declarations prepared for the NMC Infrastructure Master Plans. These offsite facilities, though needed by the proposed project, will be constructed with or without this project to implement the GPA for the NMC and the Infrastructure Master Plans. Impacts related to the conversion of Farmland in the NMC have been addressed in these related environmental documents. See pages 5.2-7 through 5.2-9 of the GPA for the NMC Final EIR. These discussions, which are incorporated by reference, result in a finding that impacts to both agricultural land and agricultural productivity would be significant and a Statement of Overriding Consideration was adopted.

### **Mitigation Measures Considered**

CEQA §21002 states “it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects. The Legislature further finds and declares that in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.”

Section 15364 of the CEQA Guidelines defines “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.”

On-site and off-site mitigation for the loss of agricultural land and uses was considered but found to be infeasible. If a portion of the site was maintained in agriculture, in the long-term it would become economically unviable as the other dairies and agricultural uses within the Chino Basin move out to other regions or states. Agriculture needs specialized support uses such as feed stores, equipment sales and maintenance, and manure removal services. Without a critical mass of customers (dairies and farms), such services close thus driving the cost of securing such services up and making agriculture less profitable. According to the Census of Agriculture,<sup>1</sup> farm production expenses in San Bernardino County increased from an average of \$167,844 per farm in 1997 to \$240,765 per farm in 2002. Over the same time period, the number of farms in San Bernardino County decreased from 1,861 to 1,382. Neighboring Riverside County saw similar increased expenses of \$204,052 per farm in 1997 to \$253,229 in 2002, with a similar loss in the number of operating farms from 3,864 in 1997 to 3,184 in 2002. These trends will continue as the cost of land, supplies, and services increase.

Environmental factors and regulations are also causing the decline in the viability of agriculture within the Chino Basin. Stricter air quality and water quality regulations make farming more difficult and create an environmental burden on urbanized areas. The sources contributing to particulate matter pollution include road dust, windblown dust, agriculture, construction, fireplaces and wood burning stoves, vehicle exhaust, and NO<sub>x</sub> and SO<sub>2</sub> reaction with ammonia (NH<sub>3</sub>). Specifically, SCAQMD data indicates the largest component of PM-10 particles

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<sup>1</sup> USDA, national Agricultural Statistics Service, 2002 Census of Agriculture, June 2004.

monitored at the Rubidoux monitoring station (located east, or downwind of the NMC in Riverside County) comes from dust (unpaved roads, unpaved yards, vacant land that has been disced). PM-2.5 particles are mostly manmade particles resulting from combustion sources. According to SCAQMD, the highest component of PM-2.5 pollution in the area comes from nitrate particulates. As reported in a recent study conducted by Hughs, et al, at Cal Tech (2002), NO<sub>x</sub> produced by vehicles throughout the SCAB is carried by local wind patterns into the Chino area. The NO<sub>x</sub> reacts with ammonia (NH<sub>3</sub>) produced from local dairies to form ammonium nitrate particles, adding to a unique air quality problem in the project vicinity. Thus, agricultural uses in general and dairy uses specifically are contributing to and causing air quality degradation.

As discussed in Hydrology/Water Quality Section III-7, one of the largest point sources of pollutants in the Chino Basin, and including the project site, is dairy operations, and the SARWQCB regulates discharges of dairy waste through NPDES Permit No. CAG018001. This permit restricts the method in which dairies can dispose of wastes (manure and washwater). The SARWQCB requires dairies to contain all washwater and all storm water runoff on-site, with containment facilities designed for the 24-hour, 25-year storm event. It is recognized that higher intensity storms will result in discharge of manure and wash water from the dairies. Wash water is required to be contained on-site and manure must be removed from a facility within 180 days of its removal from corrals, transported and disposed of at regulated disposal and/or composting facilities. Despite these regulatory controls, off-site discharges of wastewater do occur due to inadequate containment and enforcement. Runoff from dairies contains large amounts of manure, urine and other organic materials, and this contaminated runoff from dairies eventually reaches the Santa Ana River. Agricultural land use, and, in particular, dairy operations, have been implicated as a primary source of the high nitrogen and TDS concentrations in Chino Basin ground water. Dairy abandonment will benefit water quality by reducing nitrate and total dissolved solids (TDS) in receiving waters. Assuming that 30,000 tons of salts enter Chino Basin ground water per year (Basin Plan, 1995) from disposal of dairy waste, over a total area of 19,300 acres, a salt load reduction to ground water of as much as 825 tons per year may be achieved by implementing the project and removing the current dairy land use. Furthermore, total coliform pollutant loadings would likely also be reduced as a result of dairy conversion, resulting in further improvement to water quality. Thus, the increased regulations of agricultural operations and the benefits to urban uses of removing especially dairies further supports the unviability of long-term agricultural preservation on-site and within the Chino Basin as a whole.

To mitigate for loss of farmland on a City-wide and cumulative basis, a mechanism could be established to conserve farmland lost to urbanization. Such a program might include a fee established and paid to a non-profit agricultural land conservation organization, or other structure, to ensure that agricultural lands of Prime, Statewide, or Unique Importance are conserved within the area. Such a mechanism would appear to reduce significant impacts to agricultural lands in the future however, as discussed above, economic and environmental factors will preclude the long-term viability of agriculture in the Chino Basin. Likewise, mitigation measures involving conservation easements and other methods of agricultural preservation have been considered but rejected as infeasible for this project. A conservation easement is an easement that is purchased from a willing land owner and which places a permanent deed restriction on the piece of property allowing only agricultural uses on said property. According to

Southern California Agricultural Land Foundation representative, Mr. Chuck Hale<sup>2</sup>, “while conservation easements may work in other parts of the state, SoCALF does not know of any conservation easements that exist in Southern California because of the unique real estate market in this region, making it an economic disadvantage to a property owner to place property under permanent agricultural use.” He also stated that “conservation organizations may find it beneficial to acquire agricultural land in fee and subsequently encumber the land with an agricultural conservation easement. Once encumbered, the fee title to the land can be resold to a conservation buyer.” Thus, the process would require purchasing viable agricultural land, recording easements and reselling the land to some entity or individual interested in maintaining the property in agriculture. Finding a willing seller and a conservation buyer are too speculative, thus making such an arrangement infeasible for this project, especially in a region where the economic viability of agriculture is limited. The long-term economic viability of agriculture in the Chino Basin is declining as discussed above. If this approach were taken in the NMC, to be fair, easements for all prime Farmland soils lost (about 2,952 acres) would have to be acquired elsewhere. Cumulatively, this is also not a feasible approach. In addition, preserving agriculture within the NMC, would impede the City of Ontario from achieving General Plan goals and objectives for housing. Conservation of farmland within the NMC would also be inconsistent with the GPA for the NMC Final EIR. Therefore, city-wide farmland preservation was considered infeasible. It should be noted, however, that the City's General Plan policies and Agricultural Overlay District allow agricultural uses to continue during the transition to urban uses.

Approximately 200 acres of land that are owned by the County of San Bernardino and managed by the Southern California Agricultural Land Foundation (SoCALF) are located within the NMC to preserve a portion of the approximately 8,200 acres that will be converted in the future. The majority of the 200 acres is designated Prime Farmland and is leased to dairy operators. The SoCALF properties can only be used for agriculture and/or open space, however, the use of 1988 Park Bond Act funds for acquisition and maintenance of the property ensured that the land would be used for agricultural preserve. This land is not considered mitigation for the loss of Prime Farmland on the Specific Plan project site, however.

### **Proposed Mitigation Measures**

**MM Ag 1:** In order to minimize conflicts between urban and agricultural land uses, each Specific Plan developed for properties within the NMC must comply with the Agricultural Overlay District requirements for urban development in proximity to existing agricultural operations. The proposed project shall establish a minimum 100-foot separation between active agricultural operations and new, non-agricultural development, or an equivalent easement that is approved by the City of Ontario.

**MM Ag 2:** In order to minimize conflicts between urban and agricultural land uses, all residential units in the Subarea 29 Specific Plan shall be provided with a deed disclosure, or similar notice, approved by the City Attorney regarding the proximity and nature, including odors, of neighboring agricultural uses.

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<sup>2</sup> Southern California Agricultural Land Foundation, Mr. Chuck Hale, personal communication June 24, 2005.

**Summary of Project-Specific Environmental Effects After Mitigation Measures are Implemented**

Although mitigation strategies have been considered, none were determined feasible to completely avoid or reduce the cancellation of Williamson Act Contracts and the loss of Farmland to non-agricultural uses. The implementation of the Specific Plan will result in significant environmental impacts from the conversion of agricultural land to non-agricultural uses and a Statement of Overriding Consideration will be required prior to project approval. This is consistent with the findings of the GPA for the NMC Final EIR.

**Summary of Cumulative Environmental Effects After Mitigation Measures are Implemented**

Similarly, City-wide mitigation strategies have been considered such as agricultural preservation fees and easements but none were determined feasible for economic and environmental reasons. The purpose and intent of the NMC General Plan Amendment would be defeated by efforts to preserve agricultural lands within the NMC. The avoidance or reduction of the cumulative effects of the cancellation of Williamson Act Contracts and the loss of Farmland to non-agricultural uses within the Chino Basin cannot be achieved.

Cumulatively, the proposed project will contribute to the loss of prime Farmland in the NMC and within the Chino basin as a whole. As discussed above, the Ontario GPA for the NMC (1998) projects virtually a 100 percent conversion of existing agricultural land to non-agricultural uses. The GPA estimates that cumulatively in the 8,200-area of the NMC about 36 percent (2,952 acres) is considered prime agricultural soils. Thus, the prime Farmland on the project site represents about 4.5 percent of the projected cumulative loss while the site itself represents only 1.6 percent of the total land area of the NMC. The NMC is part of the larger Chino Basin which historically served as agricultural land. Within the past 10 years, the Jurupa and Eastvale areas of Riverside County to the east and south of the NMC, and areas located within the City of Chino south of the NMC are in the process of converting from agriculture to non-agricultural uses including residential, commercial, and industrial. This cumulative loss of Farmland soils is considered significant. The GPA for the NMC EIR was certified with Overriding Consideration findings related to the cumulative loss of agriculture. Cumulative losses of Farmland resulting from this project were a part of that original EIR and Statement of Overriding Consideration. The discussion of cumulative impacts is limited because the Specific Plan is consistent with the plans used in the evaluation of each environmental issue area discussed here and in Section IV-1, Cumulative Environmental Effects. No new issues have been raised by this project which were not considered in the GPA for the NMC EIR. The Statement of Overriding Consideration for this project will be consistent with the GPA for the NMC Final EIR.

## 2. AIR QUALITY

The following discussion summarizes the Air Quality Impact Analysis (the Air Study) for the Esperanza Specific Plan (the Specific Plan), prepared by Albert A. Webb Associates, in November 2005. This report is contained in its entirety as Appendix C of this document. The focus of the following discussion is related to the potential impacts related to sensitive receptors, air quality plans, air quality standards, cumulative increases of pollutants, and production of odors. As discussed in Section III-11, Transportation/Traffic, the traffic created by the school will be worse than the traffic created by 46 single-family residences. Therefore, for the purposes of the following analysis, the project is assumed to include approximately 1,410 dwellings and a 10-acre elementary school.

### **Setting**

#### *Physical Setting*

The Specific Plan is located in the City of Ontario in San Bernardino County, within the South Coast Air Basin (SCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAB consists of Orange County, the coastal and mountain portions of Los Angeles County, as well as Riverside and San Bernardino counties. Regional and local air quality within the SCAB is affected by topography, atmospheric inversions, and dominant onshore flows. Topographic features such as the San Gabriel, San Bernardino, and San Jacinto Mountains form natural horizontal barriers to the dispersion of air contaminants. The presence of atmospheric inversions limits the vertical dispersion of air pollutants. With an inversion, the temperature initially follows a normal pattern of decreasing temperature with increasing altitude, however, at some elevation, the trend reverses and temperature begins to increase as altitude increases. This transition to increasing temperature establishes the effective mixing height of the atmosphere and acts as a barrier to vertical dispersion of pollutants.

Dominant onshore flow provides the driving mechanism for both air pollution transport and pollutant dispersion. Air pollution generated in coastal areas is transported east to inland receptors by the onshore flow during the daytime until a natural barrier (the mountains) is confronted, limiting the horizontal dispersion of pollutants. The result is a gradual degradation of air quality from coastal areas to inland areas, which is most evident with the photochemical pollutants (e.g., ozone) formed under reactions with sunlight.

#### *Climate*

Terrain and geographical location influence climate in the SCAB. The Specific Plan site lies within the terrain south of the San Gabriel and San Bernardino Mountains and north of the Santa Ana Mountains. The climate in the SCAB is typical of southern California's Mediterranean climate, which is characterized by dry, warm summers and mild winters. Winters typically have infrequent rainfall, light winds, and frequent early morning fog and clouds that turn to hazy afternoon sunshine.

The following includes factors that govern micro-climate differences among inland locations within the SCAB: 1) the distance of the mean air trajectory from the site to the ocean; 2) the site elevation; 3) the existence of any intervening terrain that may affect airflow or moisture content; and 4) the proximity to canyons or mountain passes. As a general rule, locations farthest inland

from the ocean have the hottest summer afternoons, the lowest rainfall, and the least amount of fog and clouds. Foothill communities in the SCAB have greater levels of precipitation, cooler summer afternoons and may be exposed to wind funneling through nearby canyons during Santa Ana winds. Terrain will generally steer local wind patterns. The Specific Plan site is located in the City of Ontario of San Bernardino County, within the eastern portion of the SCAB.

### *Precipitation and Temperature*

Annual average temperatures in the SCAB are typically in the low to mid-60s (degrees Fahrenheit). Temperatures above 100 degrees are recorded for all portions of the SCAB during the summer months. In winter months, temperatures in the lower 30s can be experienced in parts of the SCAB, including the City of Ontario area.

The rainy season in the SCAB is November to April. Summer rainfall can occur as widely scattered thunderstorms near the coast and in the mountainous regions in the eastern SCAB. Rainfall averages vary over the SCAB. The City of Riverside averages 9 inches of rainfall, while the City of Los Angeles averages 14 inches. Rainy days vary from 5 to 10 percent of all days in the SCAB, with the most frequent occurrences of rainfall near the coast. City of Ontario average annual rainfall is 16.1 inches per year, and average temperature is between 45 and 90 degrees Fahrenheit.

### *Winds*

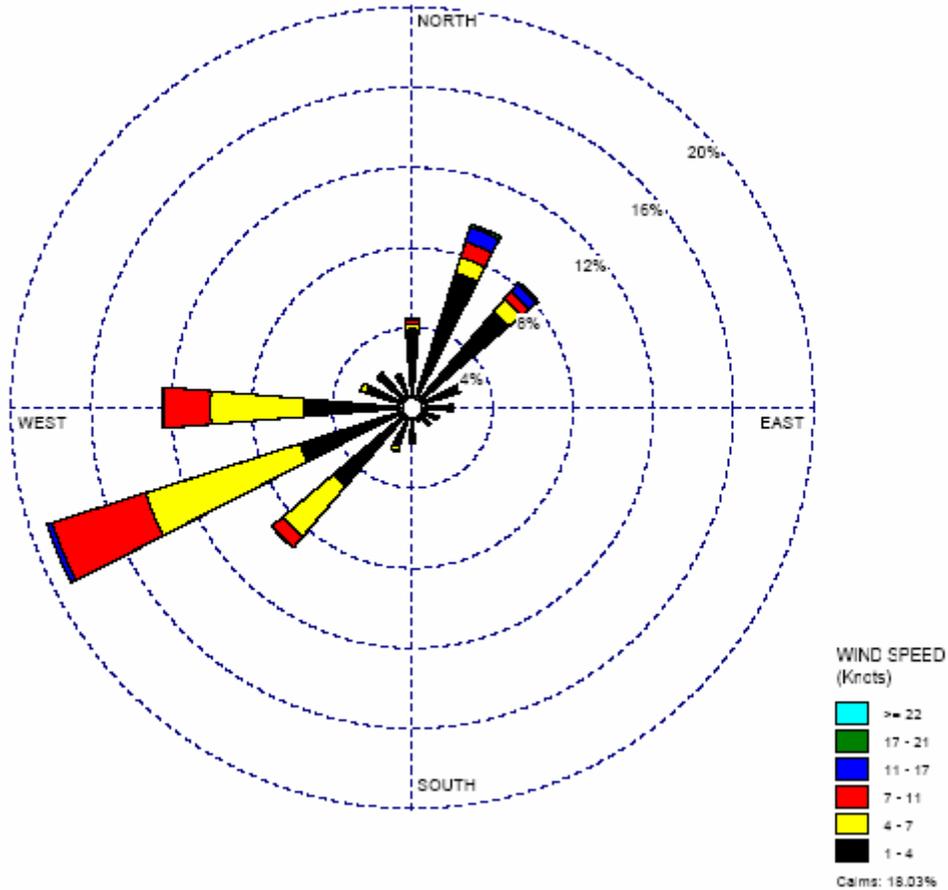
Regionally, the interaction of land (offshore) and sea (onshore) breezes control local wind patterns in the area. Daytime winds typically flow from the coast to the inland areas (on-shore), while the pattern typically reverses in the evening, flowing from the inland areas to the ocean (off-shore). Air stagnation may occur during the early evening and early morning during periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds that produce strong off-shore flow towards the ocean. During these Santa Ana conditions, very high pollutant concentrations can occur due to the very strong temperature inversions that form over the basin.

Locally, the daytime prevailing wind in the Project area is generally from west to east with local terrain influences affecting the prevailing wind direction. Wind direction is monitored by AQMD at several locations; the closest to the Specific Plan site being in Fontana. The wind rose (Figure III-2-1) for the Fontana area of San Bernardino County is shown in Figure 2 of the Air Study (Appendix C). Fontana, being closer to the foothills of the San Gabriel Mountains, has a prevailing flow from the west-southwesterly to the east-northeast during the daytime reflecting flow towards the Cajon Pass and lighter flow from the northeast at night reflecting downslope winds draining from the San Gabriel Mountains.

### *Categories of Emission Sources*

Air pollutant emissions sources are typically grouped into two categories: stationary and mobile sources. These emission categories are defined and discussed in the following subsections.

**Fontana, California – 1981  
January 1-December 31; Midnight-11PM**



Note: Data taken from the Monitoring Station in Fontana, California, between January 1 and December 31, 1981. Calm winds: 18.03%. Direction of the colored bars show the direction the wind is blowing from, colors represent various wind speeds, and percentages marked on rings indicate the percentage that the wind blows from that direction and at that particular wind speed.

Wind Rose (Fontana)  
Figure III-2-1  
**Ontario, San Bernardino County, California**

### *Stationary Sources*

Stationary sources are divided into two major subcategories: point and area sources. Point sources consist of a single emission source with an identified location at a facility. A single facility could have multiple point sources located onsite. Stationary point sources are usually associated with manufacturing and industrial processes. Examples of point sources include boilers or other types of combustion equipment at oil refineries, electric power plants, etc. Area sources are small emission sources that are widely distributed, but are cumulatively substantial because there may be a large number of sources. Examples include residential water heaters; painting operations; lawn mowers; agricultural fields; landfills; and consumer products, such as barbecue lighter fluid and hair spray.

### *Mobile Sources*

Mobile sources are motorized vehicles, which are classified as either on-road or off-road. On-road mobile sources typically include automobiles and trucks that operate on public roadways. Off-road mobile sources include aircraft, ships, trains, and self-propelled construction equipment that operate off public roadways. Mobile source emissions are accounted for as both direct source emissions (those directly emitted by the individual source) and indirect source emissions, which are sources that by themselves do not emit air contaminants but indirectly cause the generation of air pollutants by attracting vehicles. Examples of indirect sources include office complexes, commercial and government centers, sports and recreational complexes, and residential developments.

### *Air Pollution Constituents*

Air pollutants are classified as either primary, or secondary, depending on how they are formed. Primary pollutants are generated daily and are emitted directly from a source into the atmosphere. Examples of primary pollutants include carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>) and nitric oxide (NO)—collectively known as oxides of nitrogen (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), particulates (PM-10 and PM-2.5) and various hydrocarbons (HC) or volatile organic compounds (VOC), which are also referred to as reactive organic gasses (ROG). The predominant source of air emissions generated by the Specific Plan development is expected to be vehicle emissions. Motor vehicles primarily emit CO, NO<sub>x</sub> and VOC/ROC/HC (Volatile Organic Compounds/Reactive Organic Compounds/Hydrocarbons).

Secondary pollutants are created over time and occur within the atmosphere as chemical and photochemical reactions take place. An example of a secondary pollutant is ozone (O<sub>3</sub>), which is one of the products formed when NO<sub>x</sub> reacts with HC, in the presence of sunlight. Other secondary pollutants include photochemical aerosols. Secondary pollutants such as ozone represent major air quality problems in the SCAB.

The Federal Clean Air Act of 1970, established the National Ambient Air Quality Standards (NAAQS). Six “criteria” air pollutants were identified using specific medical evidence available at that time, and NAAQS were established for those chemicals. The state of California has adopted the same six chemicals as criteria pollutants, but has established different allowable levels. The six criteria pollutants are: carbon monoxide, nitrogen dioxide, ozone, lead, atmospheric particulates, and sulfur dioxide. The following is a further discussion of the *criteria pollutants*, as well as volatile organic compounds.

**Carbon Monoxide (CO)** – A colorless, odorless toxic gas produced by incomplete combustion of carbon-containing substances. Concentrations of CO are generally higher during the winter months when meteorological conditions favor the build-up of primary pollutants. Automobiles are the major source of CO in the Basin, although various industrial processes also emit CO through incomplete combustion of fuels. In high concentrations, it can cause serious health problems in humans by limiting the red blood cells' ability to carry oxygen (SCAQMD 1993).

**Oxides of Nitrogen (NO<sub>x</sub>)** – Those that are important in air pollution are nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>). NO is a colorless, odorless gas formed by a combination of nitrogen and oxygen when combustion takes place under high temperatures and pressures. NO<sub>2</sub> is a reddish-brown gas formed by the combination of NO with oxygen. Combustion in motor vehicle engines, power plants, refineries and other industrial operations, as well as ships, railroads and aircraft, are the primary sources of NO<sub>x</sub>. NO<sub>2</sub> at atmospheric concentrations is a potential irritant and can cause coughing in healthy persons, can alter respiratory responsiveness and pulmonary functions in persons with preexisting respiratory illness, and potentially lead to increased levels of respiratory illness in children (EPA 2005).

**Ozone (O<sub>3</sub>)** – A colorless toxic gas that irritates the lungs and damages materials and vegetation. During the summer's long daylight hours, plentiful sunshine provides the energy needed to fuel photochemical reactions between NO<sub>2</sub> and ROG which result in the formation of O<sub>3</sub>. Conditions that lead to high levels of O<sub>3</sub> are adequate sunshine, early morning stagnation in source areas, high surface temperatures, strong and low morning inversions, greatly restricted vertical mixing during the day, and daytime subsidence that strengthens the inversion layer (all of which are characteristic of the Imperial Valley). Ozone represents the worst air pollution-related health threat in the SCAB as it affects people with preexisting respiratory illness as well reduces lung function in healthy people. Studies have shown that children living with the SCAB experience a 10-15% reduction in lung function (SCAQMD 1993).

**Lead (Pb)** – Lead concentrations once exceeded the state and federal air quality standards by a wide margin, but have not exceeded state or federal air quality standards at any regular monitoring station since 1982. Health effects associated with lead include neurological impairments, mental retardation, and behavioral disorders. At low levels, lead can damage the nervous systems of fetuses and result in lowered IQ levels in children (EPA 2005). Though special monitoring sites immediately downwind of lead sources recorded very localized violations of the state standard in 1994, no violations have been recorded at these stations since 1996. Unleaded gasoline has greatly contributed to the reduction in lead emissions in the SCAB. Since the proposed project will not involve leaded gasoline, or other sources of lead emissions, this criteria pollutant is not expected to be a factor with project implementation.

**Atmospheric Particulate Matter (PM)** – Made up of fine solid and liquid particles, such as soot, dust, aerosols, fumes, and mists. PM-10 consists of particulate matter that is 10 microns or less in diameter, and PM-2.5 (currently not a "criteria pollutant") consists of particulate matter of 2.5 microns or less in size. Both PM-10 and PM-2.5 can be inhaled

into the deepest part of the lung, attributing to health effects. The presence of these fine particles by themselves cause lung damage and interfere with the body's ability to clear its respiratory tract. Said particles can also act as a carrier of other toxic substances (SCAQMD 1993). The sources contributing to particulate matter pollution include road dust, windblown dust, agriculture, construction, fireplaces and wood burning stoves, and vehicle exhaust.

**Sulfur Dioxide (SO<sub>2</sub>)** – A colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. SO<sub>2</sub> can result in temporary breathing impairment in asthmatic children and adults engaged in active outdoor activities. When combined with PM, SO<sub>2</sub> can cause symptoms such as shortness of breath and wheezing and, with long-term exposure, lead to the exacerbation of existing cardiovascular disease and respiratory illnesses (EPA 2005). Although SO<sub>2</sub> concentrations have been reduced to levels well below state and federal standards, further reductions in SO<sub>2</sub> emissions are needed because SO<sub>2</sub> is a precursor to sulfate and PM-10.

**Reactive Organic Gases/Volatile Organic Compounds (ROG/VOC)** – It should be noted that there are no state or federal ambient air quality standards for VOCs because they are not classified as criteria pollutants. VOCs are regulated, however, because a reduction in VOC emissions reduces certain chemical reactions, which contribute to the formation of ozone. VOCs are also transformed into organic aerosols in the atmosphere, contributing to higher PM-10 and lower visibility levels. Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations of VOC because of interference with oxygen uptake. In general, ambient VOC concentrations in the atmosphere are suspected to cause coughing, sneezing, headaches, weakness, laryngitis, and bronchitis, even at low concentrations. Some hydrocarbon components classified as VOC emissions are thought or known to be hazardous. Benzene, for example, is a hydrocarbon component of VOC emissions that is known to be a human carcinogen.

### *Monitored Air Quality*

The Specific Plan site is located within SCAQMD Source Receptor Area (SRA) 33. The most recent published data for SRA 33 is presented in Table III-2-A. This data indicates that the baseline air quality conditions in the Specific Plan area include occasional events of very unhealthy air. However, the frequency of smog alerts has dropped significantly in the last decade. Ozone and particulates are the two most significant air quality concerns in the Specific Plan area. It is encouraging to note that ozone levels have dropped significantly in the last few years with less than one-fifth of the days each year experiencing a violation of the state hourly ozone standard since 1999. Locally, no second stage alert (0.35 ppm/hour) has been called by SCAQMD in the last ten years.

**Table III-2-A Source Receptor Area (SRA) 33 - Air Quality Monitoring Summary - 1997-2004**

	Pollutant/Standard Source: CARB 1/25/99	Monitoring Year							
		1997	1998	1999	2000	2001	2002	2003	2004
No. Days Exceeded	<b>Ozone:</b>								
	Health Advisory - 0.15 ppm	-	-	-	-	6	2	7	1
	California Standard:								
	1-Hour - 0.09 ppm	102	85	45	48	55	43	65	55
	Federal Primary Standards:								
	1-Hour - 0.12 ppm	32	39	14	7	18	6	26	9
	8-Hour - 0.08 ppm	65	50	31	27	39	30	48	38
	Max 1-Hour Conc. (ppm)	0.20	0.21	0.16	0.15	0.184	0.147	0.176	0.157
Max 8-Hour Conc. (ppm)	0.14	0.18	0.13	0.125	0.144	0.113	0.148	0.130	
No. Days Exceeded	<b>Carbon Monoxide:</b>								
	California Standard:								
	1-Hour - 20 ppm	0	0	0	0	0	0	0	0
	8-Hour - 9.0 ppm	0	0	0	0	0	0	0	0
	Federal Primary Standards:								
	1-Hour - 35 ppm	0	0	0	0	0	0	0	0
	8-Hour - 9.5 ppm	0	0	0	0	0	0	0	0
	Max 1-Hour Conc. (ppm)	8	6	5	5	4	5	5	4
Max 8-Hour Conc. (ppm)	6.0	4.8	4.0	4.3	3.25	3.3	4.6	3.3	
No. Days Exceeded	<b>Nitrogen Dioxide:</b>								
	California Standard:								
	1-Hour - 0.25 ppm	0	0	0	0	0	0	0	0
	Federal Standard:								
	Annual Mean - 0.053ppm	0	0	0	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.14	0.11	0.14	0.10	0.066	0.11	0.10	0.12	
No. Days Exceeded	<b>Sulfur Dioxide:</b>								
	California Standards:								
	1-Hour – 0.25 ppm	0	0	0	0	0	0	0	0
	24-Hour – 0.04 ppm	0	0	0	0	0	0	0	0
	Federal Primary Standards:								
	24-Hour – 0.14 ppm	0	0	0	0	0	0	0	0
	Annual Mean – 0.03 ppm	0	0	0	0	0	0	0	0
Max. 1-Hour Conc. (ppm)			0.01	0.02	0.01	0.03	0.01	0.01	
Max. 24-Hour Conc. (ppm)			0.010	0.010	0.010	0.010	0.004	0.006	
No. Days Exceeded	<b>Inhalable Particulates (PM-10):</b>								
	California Standards:								
	24-Hour - 50 µg/m <sup>3</sup>	21	20	37	26	27	25	27	29.3
No Days Exceeded	Annual Geometric Mean (µg/m <sup>3</sup> )	44.8	40.2	58.6	46.3	46.2	41.0	47.2	42.8
	Federal Primary Standards:								
	24-Hour – 150 µg/m <sup>3</sup>	1	0	1	0	1	0	0	0
	Annual Arithmetic Mean (µg/m <sup>3</sup> )	51.3	46.5	65.9	50.4	52.4	44.9	47.2	48.6
Max. 24-Hour Conc. (µg/m <sup>3</sup> )	208	92	183	124	166	91	98	118	
No Days Exceeded	<b>Inhalable Particulates (PM-2.5):</b>								
	Federal Primary Standards:								
	Annual Standard (15µg/m <sup>3</sup> )			-	-	-	-	-	-
	24-Hour – 65 µg/m <sup>3</sup>			4 <sup>a</sup>	2	2	0	1	1.8
	Annual Arithmetic Mean (µg/m <sup>3</sup> )			25.7 <sup>a</sup>	24.2	26.2	25.2	22.2	20.9
Max. 24-Hour Conc. (µg/m <sup>3</sup> )			121.5 <sup>a</sup>	73.4	71.2	64.8	98.1	86.1	

Note: - Pollutant not monitored/data not available.  
<sup>a</sup> Central San Bernardino Valley 2 air monitoring station (SRA34) data summaries used.  
<sup>d</sup> Central San Bernardino Valley 1 air monitoring station (SRA34) data summaries used.  
<sup>e</sup> Yes or No indicating whether or not the standard has been exceeded for that year.

Monitoring for PM-2.5 did not begin until 1999. Since then, the 1997 federal annual average standard for PM-2.5 ( $15 \mu\text{g}/\text{m}^3$ ) was upheld by the U.S. Supreme Court in February 2001. The state standard annual average standard for PM-2.5 ( $12 \mu\text{g}/\text{m}^3$ ) was finalized in 2003 and became effective on July 5, 2003.

PM-10 concentrations have been decreasing over the last ten years. The sources that contribute to exceedance of the PM-10 air quality standards include road dust, windblown dust, agriculture, construction, fireplaces and wood burning stoves, vehicle exhaust, and secondary ammonium nitrate. PM-2.5 particles are mostly manmade particles resulting from combustion sources. According to SCAQMD, the highest component of PM-2.5 pollution in the Project vicinity comes from nitrate ( $\text{NO}_3^-$ ) particulates. Nitrate produced by vehicles throughout the SCAB react with ammonium produced from local dairies to form ammonium nitrate particles, adding to a unique air quality problem in the local vicinity. Organic carbon particles generated from paints, degreasers and vehicles, are slightly elevated at the Rubidoux monitoring station, but are found at elevated levels throughout the SCAB.

### *Regulatory Setting*

The Federal and California ambient air quality standards (AAQS) establish the context for the local air quality management plans (AQMP) and for determination of the significance of a project's contribution to local or regional pollutant concentrations. The California and Federal AAQS are presented in Table III-2-A. The AAQS represent 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 diseases or illness and persons engaged in strenuous work or exercise, all referred to as "sensitive receptors." SCAQMD defines a "sensitive receptor" as a land use or facility such as residences, schools, child care centers, athletic facilities, playgrounds, retirement homes, and convalescent homes.

Both federal and state Clean Air Acts require that each non-attainment area prepare a plan to reduce air pollution to healthful levels. The 1988 California Clean Air Act and the 1990 amendments to the federal Clean Air Act (CAA) established new planning requirements and deadlines for attainment of the air quality standards within specified time frames which are contained in the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised, and approved over the past decade. The currently adopted clean air plan for the basin is the 1999 SIP Amendment, approved by the U.S. Environmental Protection Agency (EPA) in 2000.

The Air Quality Management Plan (AQMP) for the SCAB establishes a program of rules and regulations directed at attainment of the state and national air quality standards. The AQMP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections. The SCAQMD adopted an updated AQMP in August 2003, which outlines the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006 (SCAQMD 2003). The AQMP was forwarded to the California Air Resources Board (CARB) in October 2003 for review. If

approved, the AQMP was approved by CARB and sent to the EPA in January 2004. The EPA adopted the AQMP in 2005. California's SIP was revised to reflect this approval.

The California Air Resources Board maintains records as to the attainment status of air basins throughout the state, under both state and federal criteria. The portion of the SCAB within which the proposed project is located is designated as a non-attainment area for ozone and PM-10 under state standards, and as a non-attainment area for ozone, carbon monoxide, and PM-10 under federal standards.

### **Thresholds for Determining Significance**

Air quality impacts may be considered significant if the Specific Plan would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutants for which the project region is non-attainment under applicable federal or state ambient air quality standards (including releasing emissions that exceed quantitative threshold for ozone precursors);
- Expose sensitive receptors to substantial pollutants concentrations;
- Create objectionable odors affecting a substantial number of people.

### **Project Compliance with Existing Regulations**

The Air Quality Management Plan (AQMP) for the SCAB establishes a program of rules and regulations directed at attainment of the state and national air quality standards. The AQMP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments.

SCAQMD rules and regulations that apply to this project include SCAQMD Rule 403, which governs emissions of fugitive dust. Compliance with this rule is achieved through:

- Application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils,
- Covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph,
- Sweeping loose dirt from paved site access roadways,
- Cessation of construction activity when winds exceed 25 mph, and
- Establishment of a permanent, stabilizing ground cover on finished sites.

Rule 403 also requires projects that disturb 50 acres or more of soil or move 5,000 cubic yards of materials per day to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of this project, a Fugitive Dust Control Plan or Large Operation Notification would be required.

SCAQMD Rule 1113 governs the sale of architectural coatings and limits the VOC content in paints and paint solvents. Although this rule does not directly apply to the project, it does dictate the VOC content of paints available for use during the construction of the buildings.

### **Design Considerations**

Proposed traffic mitigation measures designed to reduce dust during construction and to reduce vehicular congestion during operation of the project will also reduce air quality impacts.

### **Environmental Impacts Before Mitigation**

*Threshold: The proposed project will conflict with or obstruct implementation of the applicable air quality plan.*

The Air Quality Management Plan (AQMP) for the South Coast Air Basin (SCAB) sets forth a comprehensive program that will lead the SCAB into compliance with all federal and state air quality standards. The AQMP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with the AQMP for development projects is determined by demonstrating compliance with local land use plans and/or population projections or evaluation of assumed emissions.

The existing 2003 AQMP was developed based on SCAG (Southern California Association of Governments) population projections for the region. The population projections made by SCAG are based on existing and planned land uses as set forth in the various general plans of local governmental jurisdictions within the region. The GPA for the NMC to the City of Ontario's General Plan was adopted in 1998. The project site is Sub-Area 25 of the GPA for the NMC and designated Low Density Residential, with a small portion of Medium and High Density Residential. Since the project will be developed with land use in accordance with the GPA, the project is in compliance with the AQMP.

*Threshold: The proposed project will violate any air quality standard or contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable increase in a criteria pollutant under non-attainment.*

Air quality impacts can be described in a short-term and long-term perspective. Short-term impacts will occur during site grading and project construction. Long-term air quality impacts will occur once the project is in operation.

Many air quality impacts from dispersed mobile sources (cars and trucks), i.e., the dominant pollution generators from the proposed project, often occur hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual source is generally immeasurably small. The SCAQMD has therefore, developed suggested surrogate significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. Air quality impacts can be analyzed on a regional and localized level. Regional air quality thresholds examine the effect of project emissions on the air quality of the basin, while localized air quality

impacts examine the effect of project emissions on the neighborhood around the project site. This report contains analysis of both regional and local air quality impacts from project construction (short-term) and operation (long-term).

The thresholds contained in the SCAQMD CEQA Air Quality Handbook are considered regional thresholds and are shown in Table III-2-B. These regional thresholds were developed based on the SCAQMD's treatment of a major stationary source.

**Table III-2-B SCAQMD CEQA Regional Significance Thresholds**

<b>Emission Threshold</b>	<b>Units</b>	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>PM-10</b>
Daily Threshold – Construction	lbs/day	75	100	550	150	150
Daily Threshold – Operations	lbs/day	55	55	550	150	150

#### *Regional Short-Term Impacts*

Short-term emissions consist of fugitive dust and other particulate matter, as well as exhaust emissions generated by construction-related vehicles. Short-term impacts will also include emissions generated during construction as a result of operation of personal vehicles by construction workers, grading, asphalt degassing, and architectural coating (painting) operations during construction.

Short-term emissions were evaluated using the URBEMIS 2002 for Windows version 8.7.0 for Windows computer program. The model evaluated emissions resulting from site grading and construction. Results of the modeling are summarized in Table III-2-C. The total construction period for the proposed project is expected to require approximately 10 years, from January 2006 to December 2015. The default parameters within URBEMIS were used and these default values reflect a worst-case scenario, which means that project emissions are expected to be equal to or less than the estimated construction emissions. In addition to the default values used, several assumptions relevant to model input for short-term construction emission estimates are:

- There are homes and an active dairy currently on-site. Therefore, the demolition of these existing structures was included in the analysis.
- 1 foot of topsoil from the dairy will be removed and hauled away.
- This project will be built in three phases. It is assumed in this analysis that the next phase will begin after the completion of the previous phase and there will be no overlap during construction.
- Phase 1 of the project consists of the construction of 291 single-family residential units and the 850-student elementary school and will take approximately 2.5 years to complete (July 2006 to December 2008).
- Phase 2 of the project consists of the construction of 309 single-family residential units and will take approximately 2.5 years to complete (January 2009 to June 2011).

- Phase 3 of the project consists of the construction of 165 single-family residential units and 645 condominium/townhouse units and will take approximately 3.5 years to complete (July 2011 to December 2014).

Table III-2-C Estimated Daily Construction Emissions

Activity/Year	Peak Daily Emissions (lb/day)				
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM-10
<b>SCAQMD Daily Construction Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>
<b>PHASE 1</b>					
<b>Construction 2006</b>					
Demolition	24.31	189.51	185.66	0.46	16.34
Site Grading	86.46	689.28	617.12	0.00	90.35
Building Construction <sup>1</sup>	79.69	607.14	588.50	0.00	27.67
Maximum <sup>2</sup>	86.46	689.28	617.12	0.46	90.35
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
<b>Construction 2007</b>					
Building Construction <sup>1</sup>	79.58	580.49	606.51	0.00	25.32
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
<b>Construction 2008</b>					
Building Construction <sup>1</sup>	583.12	617.47	720.32	0.01	25.30
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
<b>PHASE 2</b>					
<b>Construction 2009</b>					
Demolition	23.96	170.43	193.39	0.05	14.44
Site Grading	86.39	592.78	687.88	0.00	85.82
Building Construction <sup>1</sup>	77.27	513.64	624.91	0.00	21.01
Maximum <sup>2</sup>	86.39	592.78	687.88	0.05	85.82
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
<b>Construction 2010</b>					
Building Construction <sup>1</sup>	77.17	489.19	641.62	0.00	19.04
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
<b>Construction 2011</b>					
Building Construction <sup>1</sup>	575.05	549.78	736.02	0.01	21.02
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>

**Table III-2-C Estimated Daily Construction Emissions**

<b>PHASE 3</b>					
<b>Construction 2011</b>					
Demolition	23.84	157.84	196.76	0.05	13.86
Site Grading	86.68	567.52	712.09	0.02	78.93
Maximum <sup>2</sup>	86.68	567.52	712.09	0.05	78.93
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
<b>Construction 2012</b>					
Site Grading	86.68	567.52	712.09	0.02	78.93
Building Construction <sup>1</sup>	115.94	734.79	964.16	0.00	28.63
Maximum <sup>2</sup>	115.94	734.79	964.16	0.02	78.93
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
<b>Construction 2013</b>					
Building Construction <sup>1</sup>	115.94	734.79	964.16	0.00	28.63
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
<b>Construction 2014</b>					
Building Construction <sup>1</sup>	661.39	794.75	1,065.67	0.01	30.73
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>

Notes: See Appendix A of the Air Quality Impact Analysis for model output report.

<sup>1</sup> Building construction includes emissions from asphalt and painting also since those could all be occurring concurrently.

<sup>2</sup> Since demolition, site grading, and building construction (including painting and asphalt) occur independently of each other, the maximum emissions will be the highest emission amount for each criteria pollutant for demolition, grading, or building construction.

Evaluation of the above table indicates that all criteria pollutant emissions from construction of this project are above the SCAQMD recommended daily thresholds for ROG, NO<sub>x</sub>, and CO, during each year of every phase. The main source of ROG is from painting. The main source of CO and NO<sub>x</sub> is from construction vehicle exhaust. Since SCAQMD thresholds are exceeded in the short-term, significant impacts will occur with project construction.

Since this Specific Plan will be constructed in phases, there is the possibility that one or more of the earlier phases will be in operation while the later phase is being constructed. The maximum daily emissions from these overlapping phases are contained in Table III-2-D.

**Table III-2-D Estimated Maximum Daily Emissions (2009-2014)**

Activity/Year	Peak Daily Emissions (lb/day)				
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM-10
<b>2009</b>					
Phase 1 Operation	67.08	54.10	371.41	0.38	37.77
Phase 2 Construction	86.39	592.78	687.88	0.05	85.82
<b>Maximum</b>	<b>153.47</b>	<b>646.88</b>	<b>1059.29</b>	<b>0.43</b>	<b>123.59</b>
<b>2010</b>					
Phase 1 Operation	67.08	54.10	371.41	0.38	37.77
Phase 2 Construction	77.17	489.19	641.62	0.00	19.04
<b>Maximum</b>	<b>144.25</b>	<b>543.29</b>	<b>1013.03</b>	<b>0.38</b>	<b>56.81</b>
<b>2011</b>					
Phase 1 Operation	67.08	54.10	371.41	0.38	37.77
Phase 2 or 3 Construction	575.05	567.52	736.02	0.05	78.93
<b>Maximum</b>	<b>642.13</b>	<b>621.62</b>	<b>1107.43</b>	<b>0.43</b>	<b>116.7</b>
<b>2012</b>					
Phase 1 Operation	67.08	54.10	371.41	0.38	37.77
Phase 2 Operation	50.45	41.01	277.29	0.34	30.21
Phase 3 Construction	115.94	734.79	964.16	0.02	78.93
<b>Maximum</b>	<b>233.47</b>	<b>829.9</b>	<b>1612.86</b>	<b>0.74</b>	<b>146.91</b>
<b>2013</b>					
Phase 1 Operation	67.08	54.10	371.41	0.38	37.77
Phase 2 Operation	50.45	41.01	277.29	0.34	30.21
Phase 3 Construction	115.94	734.79	964.16	0.00	28.63
<b>Maximum</b>	<b>233.47</b>	<b>829.9</b>	<b>1612.86</b>	<b>0.72</b>	<b>96.61</b>
<b>2014</b>					
Phase 1 Operation	67.08	54.10	371.41	0.38	37.77
Phase 2 Operation	50.45	41.01	277.29	0.34	30.21
Phase 3 Construction	661.39	794.75	1,065.67	0.01	30.73
<b>Maximum</b>	<b>778.92</b>	<b>889.86</b>	<b>1,714.37</b>	<b>0.73</b>	<b>98.71</b>

Note: To ensure a worse-case analysis, the largest criteria emissions for either winter or summer for each year was used.

The short-term emissions during 2009 to 2014 will be higher than the construction emissions alone when operation of earlier completed phases is also considered. Emissions of ROG, NO<sub>x</sub>, and CO will exceed SCAQMD's regional significance thresholds. Therefore, the short-term emissions from project construction are considered significant.

*Regional Long-Term Impacts*

Long-term emissions are evaluated at buildout for the completed project at the end of construction. Operational emissions refer to on-road motor vehicle emissions from project buildout. Area Source emissions include stationary combustion emissions of natural gas used for space and water heating, yard and landscape maintenance, and consumer use of solvents and personal care products. URBEMIS 2002 computes operational and area source emissions based upon default factors and land use assumptions for each project.

Separate emissions were computed for both summer and winter.

**Table III-2-E Estimated Daily Project Operational Emissions**

Activity/Year	Peak Daily Emissions (lb/day)				
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM-10
<b>SCAQMD Daily Thresholds</b>	<b>55</b>	<b>55</b>	<b>550</b>	<b>150</b>	<b>150</b>
<b>Summer</b>					
Natural Gas	1.15	14.96	6.57	0.00	0.03
Hearth	0	0	0	0	0
Landscaping	4.65	0.16	30.40	0.34	0.12
Consumer Products	68.98	0	0	0	0
Architectural Coatings	37.16	0	0	0	0
Vehicles	71.29	59.07	661.72	0.80	121.69
<b>Maximum</b>	<b>183.23</b>	<b>74.19</b>	<b>698.69</b>	<b>1.14</b>	<b>121.84</b>
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
<b>Winter</b>					
Natural Gas	1.15	14.96	6.57	0.00	0.03
Hearth	0.58	9.91	4.22	0.06	0.80
Landscaping	4.65	0.16	30.40	0.34	0.12
Consumer Products	68.98	0	0	0	0
Architectural Coatings	37.16	0	0	0	0
Vehicles	54.25	84.94	618.34	0.65	121.69
<b>Maximum</b>	<b>166.77</b>	<b>109.97</b>	<b>659.53</b>	<b>1.05</b>	<b>122.64</b>
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>

Summer and winter emissions of ROG, NO<sub>x</sub>, and CO will exceed SCAQMD operational thresholds. Since both summer and winter operational emissions will exceed the significance threshold for at least one criteria pollutant, project impacts would be considered significant for long-term air quality impacts.

### *Localized Short-Term Impacts*

Recently, as part of the SCAQMD's environmental justice program, attention has been focused on localized effects of air quality. Staff at SCAQMD has developed localized significance threshold (LST) methodology that can be used by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts (both short-term and long-term). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA).

The emissions analyzed under the LST methodology are NO<sub>2</sub>, CO, and PM-10. For attainment pollutants, nitrogen dioxide (NO<sub>2</sub>) and CO, the LSTs are derived using an air quality dispersion model to back-calculate the emissions per day that would cause or contribute to a violation of any ambient air quality standard for a particular source receptor area. LSTs for NO<sub>2</sub> and CO are derived by adding the incremental emission impacts from the project activity to the peak background NO<sub>2</sub> and CO concentrations and comparing the total concentration to the most stringent ambient air quality standards. The most stringent standard for NO<sub>2</sub> is the 1-hour state standard of 25 parts per hundred million and for CO it is the 1-hour and 8-hour state standards of 9 parts per million (ppm) and 20 ppm respectively. For PM-10, which the SCAB is non-attainment, the operation LST is derived using an air quality dispersion model to back-calculate the emissions necessary to make an existing violation in the specific source receptor area worse, using the allowable change in concentration thresholds approved by the SCAQMD. For PM-10, the allowable change in concentration thresholds is 2.5 µg/m<sup>3</sup>. The LST analysis was performed using the ISCST3 computer model.

Based on current property ownership, it is anticipated that the southwest portion of the site will be developed in Phase 1, with the southeast portion of the site to be developed in Phase 2, and the northern portion of the site to be developed in Phase 3. Therefore, the residents of Phase 1 will be the closest sensitive receptors during Phase 2 construction and the residents of Phase 1 and 2 will be the closest sensitive receptors during the construction of Phase 3. In order to ensure a worst-case analysis, the maximum emissions of NO<sub>x</sub>, CO, and PM-10 in Table III-2-C were used.

For NO<sub>x</sub> and CO emissions, the maximum emissions occur in 2014 during the construction of Phase 3. Since the maximum daily area disturbed for Phase 3 is 24 acres, the mobile source emissions were modeled as multiple adjacent 50-meter by 50-meter volume sources with a release height of 5 meters along the southern boundary of Phase 3. Construction was estimated to occur for only 8 hours per day (between 8 a.m. and 4 p.m.). The initial horizontal and vertical plume standard deviations must be computed for each volume source modeled. According to the ISCST3 user's guide, the initial horizontal standard deviation ( $\sigma_y$ ) of individual volume sources should be estimated as the distance between adjacent volume sources divided by 2.15. In a similar manner, the ISCST3 user guide specifies that the source initial vertical standard deviation ( $\sigma_z$ ) for a surface-based source should be estimated as the height of the source divided by the same factor of 2.15. For truck sources during construction, the typical effective exhaust height is approximately 14 feet. Therefore, the LST volume source used 23.26 m (50m/2.15 = 23.26m) for  $\sigma_y$  and 1.99 m (14 feet = 4.27 m; 4.27m/2.15 = 1.99m) for  $\sigma_z$ . Additionally, the localized impacts

to existing residential uses south of the project site (across Bellegrave Avenue) from Phase 1 of construction was analyzed. The results show that the impacts from Phase 3 of construction are greater than from Phase 1 (Appendix B of the Air Quality Impact Analysis report); therefore, only the results from the construction of Phase 3 are reported here.

For PM-10 emissions, the maximum emissions occur during the construction of Phase 1. The nearest sensitive receptor during that time would be either across Mill Creek Avenue or Bellegrave Avenue. Since the maximum daily area disturbed for Phase 1 is 25 acres, the PM-10 emissions were modeled as an area source with dimensions of 320-meters by 320-meters. Construction was estimated to occur for only 8 hours per day (between 8 a.m. and 4 p.m.). The initial vertical dimension ( $\sigma_z$ ) was set at 1-meter.

A radial receptor grid was used to determine impacts. The grid was centered on the source and built in ten degree increments at the following downwind distances from the proposed project boundary: 25, 50, 100, 200, and 500 meters. Flat terrain was assumed. All receptors were placed within the breathing zone at 2-meters above ground level.

**Figure III-2-2 Short-Term Maximum 1-Hour NO<sub>x</sub> Concentration Contours**

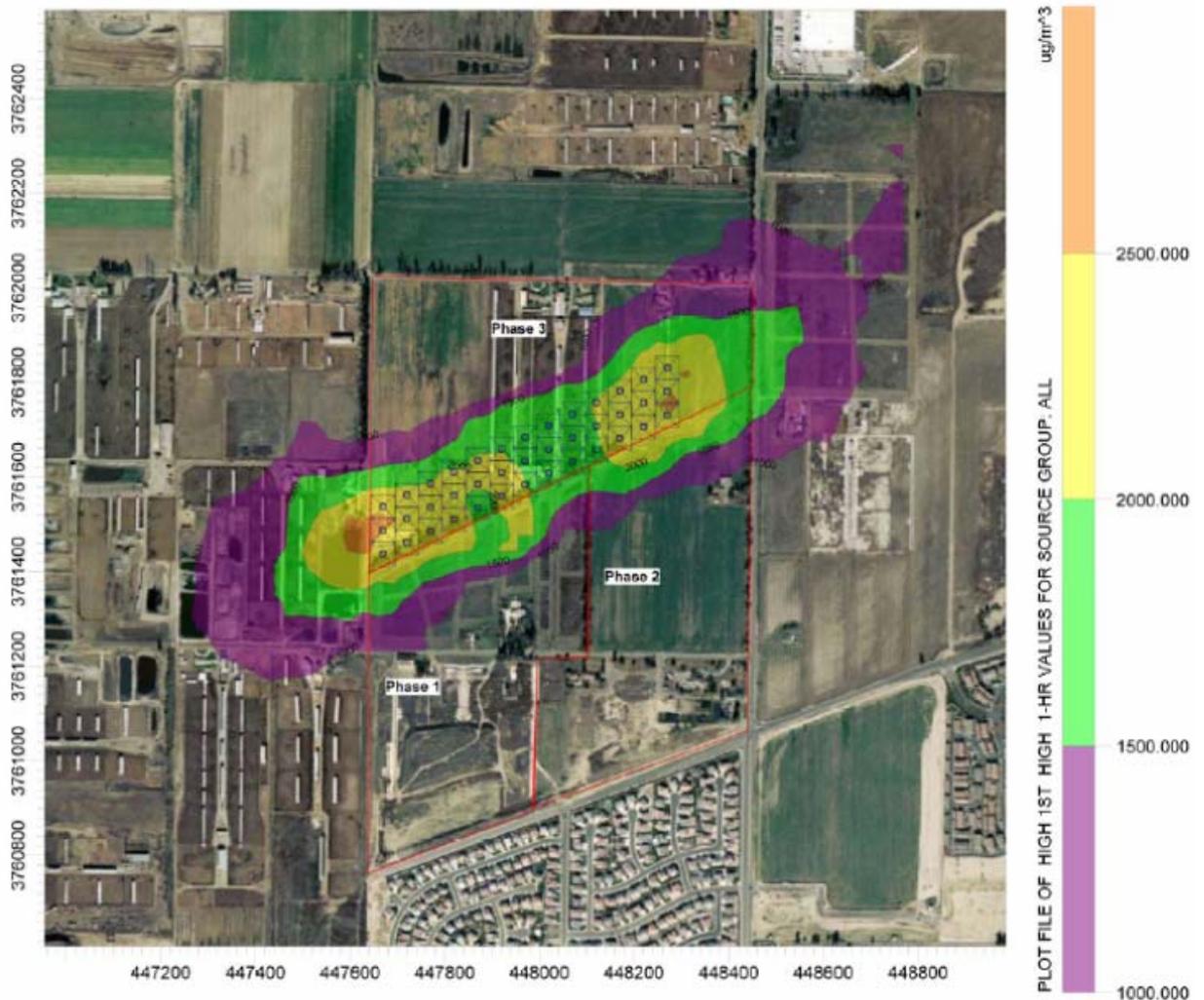
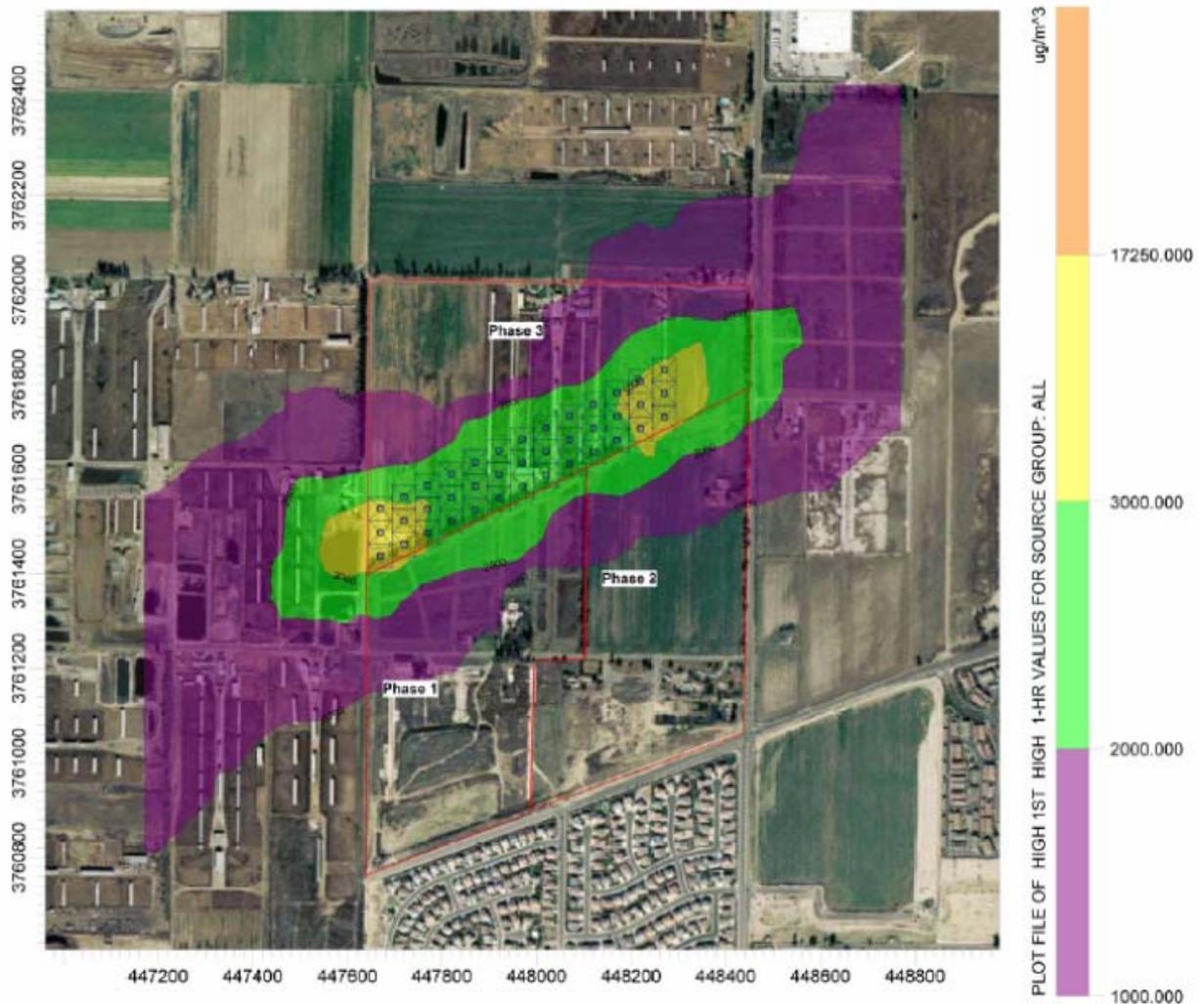


Figure III-2-2 shows the maximum 1-hour concentration from the dispersion of NO<sub>x</sub> emitted from the construction vehicles on the project site. The dark blue squares located in Phase 3 represent the multiple adjacent volume sources used to model 26 acres of construction activity. Combustion processes occurring from equipment yield NO<sub>x</sub> emissions, which is a combination of nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>). The majority of primary emissions are in the form of NO; however the conversion of NO to NO<sub>2</sub> occurs through reaction of NO with ozone (O<sub>3</sub>) and the reaction of NO with hydrocarbon radical species. Adverse health effects are associated with NO<sub>2</sub> and not NO, which is why the air quality standard is for NO<sub>2</sub> only.

In order to determine the localized impact, the monitored background NO<sub>2</sub> concentration must first be determined. Since NO<sub>2</sub> concentrations were not monitored in SRA 33, where the project site is located, the NO<sub>2</sub> concentrations in SRA 32 (Upland) and SRA 34 (Fontana) were used since they are the closest locations where NO<sub>2</sub> concentrations were monitored. For SRA 32, the maximum 1-hour NO<sub>2</sub> concentration in the last 3 years was 0.13 ppm and the maximum NO<sub>2</sub> concentration at SRA 34 was 0.12 ppm, which is less than at SRA 32, therefore, the maximum concentration of 0.13 ppm for SRA 32 was used. The Ambient Air Quality Standard (AAQS) for NO<sub>2</sub> is a 1-hour maximum concentration of 0.25 ppm. Therefore, the difference in concentrations is 0.12 ppm (226 µg/m<sup>3</sup>) and the project will have significant air quality impacts if NO<sub>2</sub> concentrations at the nearest sensitive receptor exceed this amount. In Figure III-2-2 all colored areas have NO<sub>x</sub> concentrations greater than 226 µg/m<sup>3</sup>. However, NO<sub>x</sub> emissions are simulated in the air quality dispersion model and the NO<sub>2</sub> conversion rate is treated by an NO<sub>2</sub>-to-NO<sub>x</sub> ratio, which is a function of downwind distance. According to the LST methodology developed by staff at SCAQMD, at 5,000 meters downwind, 100 percent conversion of NO-to NO<sub>2</sub> is assumed. The nearest sensitive receptor is 25m away. The NO<sub>x</sub> concentration at this location is approximately 3,000 µg/m<sup>3</sup> and the NO<sub>2</sub>-to-NO<sub>x</sub> ratio is approximately 0.053. Therefore, the sensitive receptor will be exposed to an NO<sub>2</sub> concentration of 159 µg/m<sup>3</sup>, which is less than the threshold of 226 µg/m<sup>3</sup>. Therefore, the project will not exceed the LST for NO<sub>2</sub> during construction.

**Figure III-2-3 Short-Term Maximum 1-Hour CO Concentration Contours**



For carbon monoxide (CO), there is an AAQS for both maximum 1-hour and 8-hour concentrations.

Figure III-2-3 shows the maximum 1-hour concentration from the dispersion of CO emitted from vehicles during project construction. In order to determine the localized impact, the monitored background CO concentration must first be determined. Since CO concentrations were not monitored in SRA 33, where the project site is located, the CO concentrations in SRA 32 and SRA 34 were used. For SRA 34, the maximum 1-hour CO concentration in the last 3 years was 5 ppm. The maximum 1-hour CO concentration at SRA 32 was 4 ppm, which is less than at SRA 34, therefore, the maximum concentration of 5 ppm for SRA 34 was used. The 1-hour AAQS for CO is a maximum concentration of 20 ppm. Therefore, the difference in concentrations is 15 ppm ( $17,250 \mu\text{g}/\text{m}^3$ ) and the project will have significant air quality impacts if 1-hour CO concentrations at the nearest sensitive receptor exceed this amount. As shown in Figure III-2-3, none of the areas will be exposed to 1-hour CO concentrations greater than  $17,250 \mu\text{g}/\text{m}^3$  (indicated by areas in orange). Therefore, it is evident that no on-site or off-site areas will experience 1-hour CO concentrations higher than the threshold value. In fact, the maximum 1-hour off-site CO concentrations will not exceed  $3,570 \mu\text{g}/\text{m}^3$ , which is much lower than the

threshold of  $17,250 \mu\text{g}/\text{m}^3$ . Therefore, the project will not exceed the LST for 1-hour CO concentrations during construction.

**Figure III-2-4 Short-Term Maximum 8-Hour CO Concentration Contours**

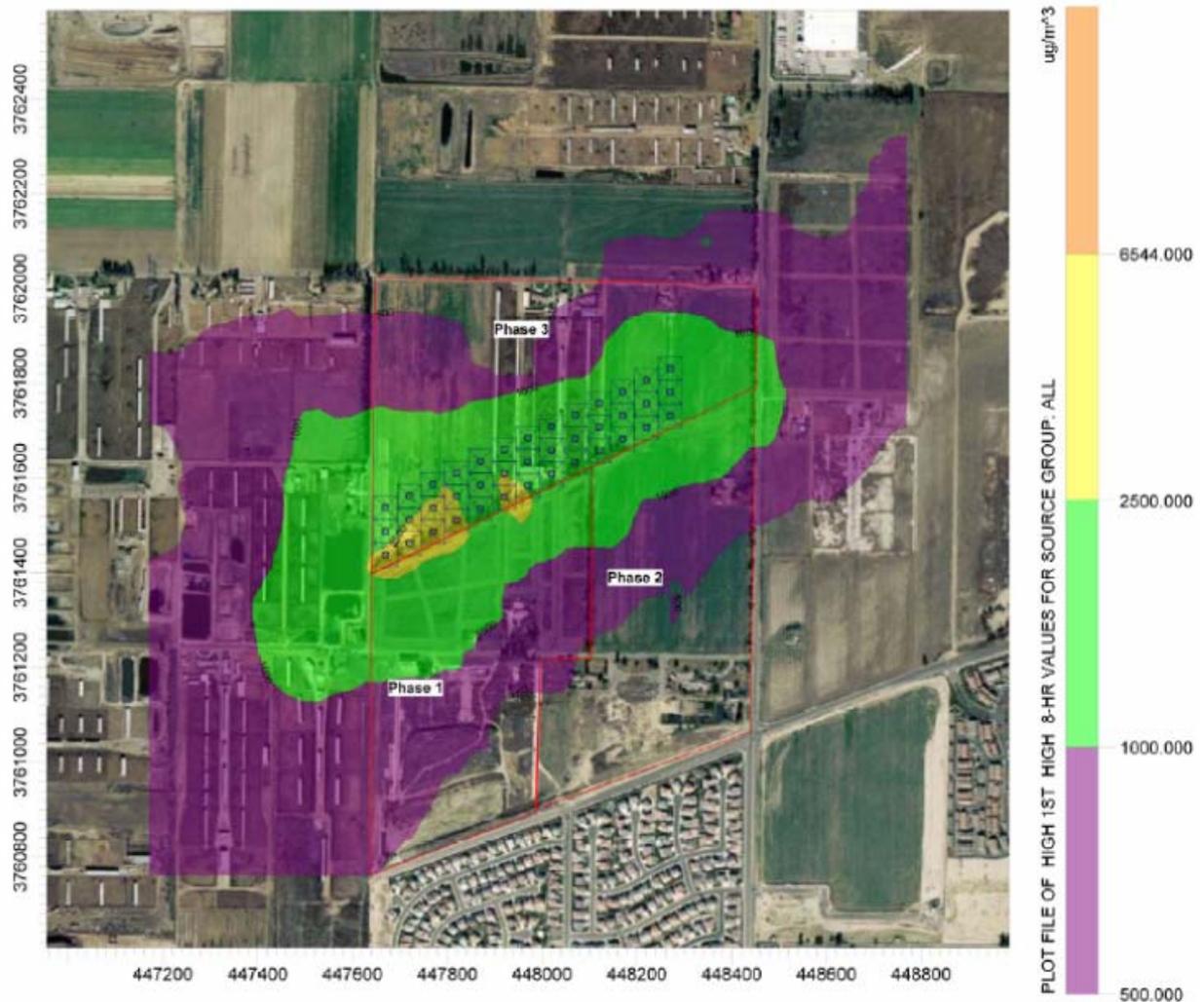
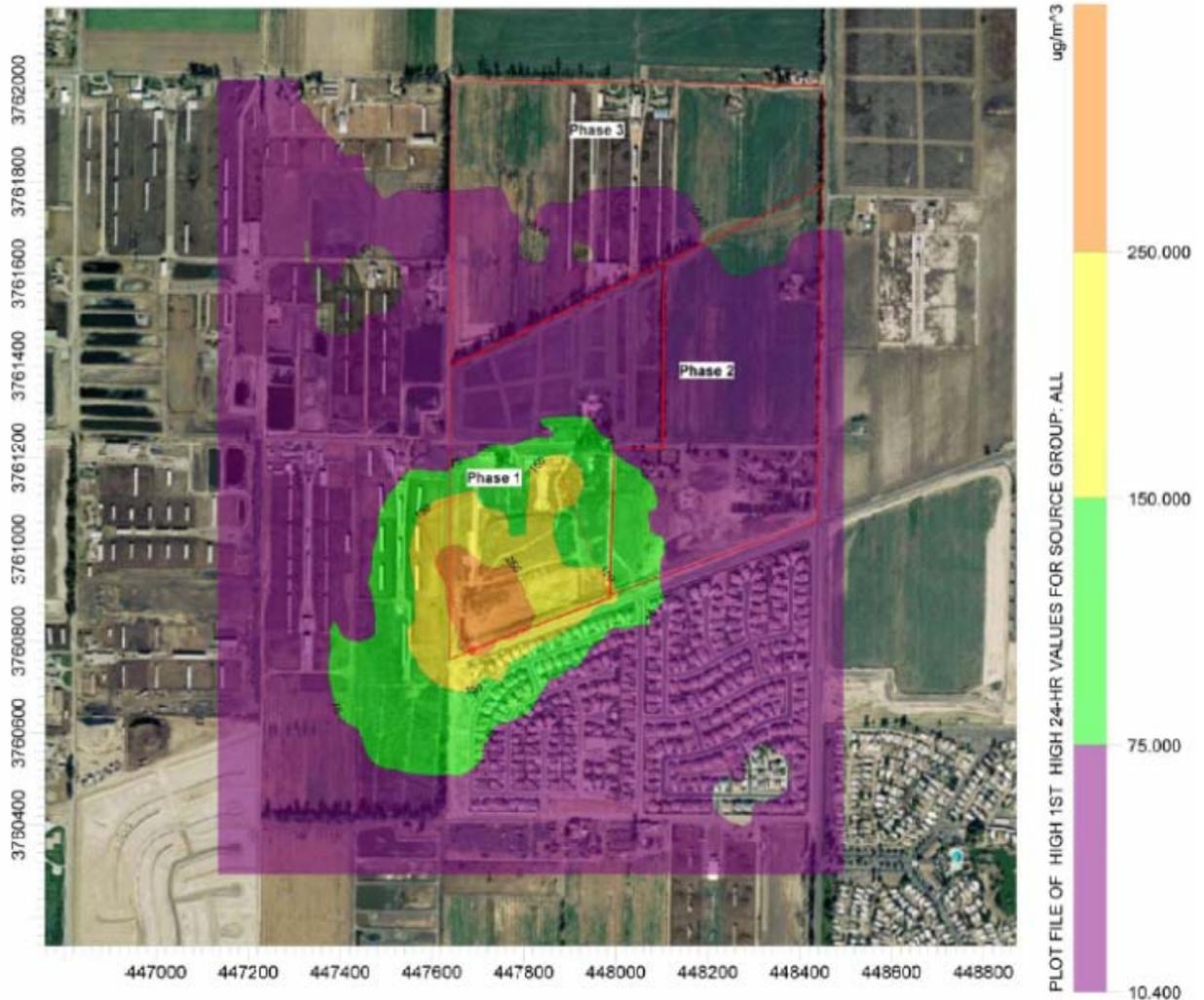


Figure III-2-4 shows the maximum 8-hour concentration from the dispersion of CO emitted from vehicles during construction. In order to determine the localized impact, the monitored background CO concentration must first be determined. Since CO concentrations were not monitored in SRA 33, where the project site is located, the CO concentrations in SRA 32 and SRA 34 were used. For SRA 34, the maximum 8-hour CO concentration in the last 3 years was 3.3 ppm. The maximum 8-hour CO concentration at SRA 32 was 2.9 ppm, which is less than at SRA 34, therefore, the maximum concentration of 3.3 ppm for SRA 34 was used. The 8-hour AAQS for CO is a maximum concentration of 9 ppm. Therefore, the difference in concentrations is 5.7 ppm ( $6,544 \mu\text{g}/\text{m}^3$ ) and the project will have significant air quality impacts if 8-hour CO concentrations at the nearest sensitive receptor exceed this amount. As shown in Figure III-2-4 none of the areas will be exposed to 8-hour CO concentrations greater than  $6,544 \mu\text{g}/\text{m}^3$  (shown by areas in orange). Therefore, it is evident that no on-site or off-site areas will experience 8-hour CO concentrations higher than the threshold value. In fact, the maximum 8-hour off-site CO

concentrations are less than 2,910 µg/m<sup>3</sup>, which is lower than the threshold of 6,544 µg/m<sup>3</sup>. Therefore, the project will not exceed the LST for 8-hour CO concentrations during construction.

**Figure III-2-5 Short-Term Maximum 24-Hour PM-10 Concentration Contours**



For PM-10, the basin is in non-attainment, therefore the LST for PM-10 during project construction was developed using a dispersion model to back-calculate the emissions necessary to exceed a concentration equivalent to 50 µg/m<sup>3</sup> averaged over five hours, which results in an equivalent concentration for PM-10 LST of 10.4 µg/m<sup>3</sup>, averaged over 24-hours. Therefore, the project will have significant air quality impacts if 24-hour PM-10 concentrations at the nearest sensitive receptor exceed this amount. For downwind distances from the boundary of the construction area to 100 meters, the following equation describes the change in PM-10 concentrations with distance:

$$C_x = 0.9403 C_0 e^{-0.0462 X}$$

Where:  $C_x$  is the predicted PM-10 concentration at X meters from the fence line  
 $C_0$  is the PM-10 concentration at the fence line as estimated by ISC-ST3  
 e is the natural logarithm  
 X is the distance in meters from the fence line

Concentrations are linearly interpolated between the two approaches for downwind distance from 100 meters to 500 meters.

The highest PM-10 concentration at the boundary is approximately  $275 \mu\text{g}/\text{m}^3$  (Figure III-2-5). The nearest sensitive receptor is approximately 25 meters away (south of Bellegrave Avenue). Therefore, based on the equation above, the PM-10 concentration at the sensitive receptor will be  $81.5 \mu\text{g}/\text{m}^3$ , which is higher than the threshold of  $10.4 \mu\text{g}/\text{m}^3$ . Therefore, project construction will cause localized PM-10 impacts to the nearest sensitive receptor.

Emissions during project construction will exceed the localized significance thresholds for PM-10 and is considered significant.

#### *Localized Long-Term Impacts*

This project involves the development of residential units and a school. The majority of the operational emissions are in the form of mobile source emissions, without any stationary sources present. Therefore, due to the lack of stationary source emissions, no long-term localized significance threshold analysis is needed.

#### *CO Hot Spot Analysis*

The traffic study for the Specific Plan (Webb Associates 2005) indicates that the study intersections currently operate at a level of service (LOS) ranging from A to F during peak hours. Taking into account the Project, the LOS of study intersections will range from B to E with the addition of project-generated traffic. The traffic study also includes various recommendations, which will be included in the Specific Plan design or as conditions of approval to the Specific Plan in order to improve the LOS of the intersections to C or better.

Given the traffic improvements needed, the Project has the potential to negatively impact the LOS on adjacent roadways. Where LOS is negatively impacted, CO can become a localized problem (“hot spot”) requiring additional analysis beyond total project emissions quantification. A CO hot spot is a localized concentration of CO that is above the state or federal 1-hour or 8-hour ambient air quality standards. Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. The SCAQMD recommends that projects with sensitive receptors or projects that could negatively affect LOS of existing roads use the screening procedures outlined in the SCAQMD CEQA Air Quality Handbook (SCAQMD 1993) to determine the potential to create a CO hot spot.

The SCAQMD CEQA Air Quality Handbook recommends using CALINE4 (Caltrans 1999) to estimate 1-hour CO concentration from roadway traffic. Input data for this model includes meteorology, street network information, vehicle counts on each link, fleet-average CO emission factors, and receptor locations. CALINE4 can be with user-input meteorological data or default worst-case meteorological data. For this study, default worst-case meteorological data was used. The link information required for CALINE4 is in the form of east and north (x,y) coordinates for the two ends of each link. Up to 20 links can be supplied. For each link, the vehicle counts for the peak traffic period were taken from the project-specific traffic study (Webb Associates 2005). The fleet average emission factors for CO are estimated using the EMFAC2002 computer program (CARB 2002).

CALINE4 was run using the peak evening rush-hour traffic counts in the project-specific traffic study (Webb Associates 2005) and default worst-case meteorology. According to staff at SCAQMD, intersections where the LOS decreases from LOS C with the project should be modeled. With the improvements included in the traffic study, none of the study intersections will operate at LOS C or worse.

However, when the cumulative projects are considered, there are thirteen intersections that will operate at LOS D, even with the identified improvements. The intersections modeled are:

- Milliken Avenue / SR-60 WB Ramps
- Milliken Avenue / SR-60 EB Ramps
- Hamner Avenue / Riverside Drive
- Archibald Avenue / Edison Avenue
- Haven Avenue / Edison Avenue
- Archibald Avenue / Merrill Avenue
- Haven Avenue / Merrill Avenue
- Cleveland Avenue / Merrill Avenue
- Hamner Avenue / Merrill Avenue
- Hamner Avenue / Bellegrave Avenue
- Hamner Avenue / Limonite Avenue
- I-15 SB Ramps / Limonite Avenue
- I-15 NB Ramps / Limonite Avenue

Calculations used as well as CALINE4 output files are included in Appendix C.

Emission factors for CO were estimated from EMFAC2002, which estimates emission factors by vehicle speed and vehicle class within the geographic area. According to the CO Hot Spots Protocol (Caltrans 1997), the average temperature for Riverside in January was found to be approximately 54.0 °F and the relative humidity was approximately 67%. Using these meteorological conditions, the vehicle emissions were calculated for 2007 by EMFAC2002. Additionally, in order to ensure a worse case scenario, the highest emission factor corresponding to a speed of 1 mph was used.

Receptors were located a distance of 3 meters from each roadway at the four corners of each intersection modeled. According to the Caltrans protocol, this represents a worse case scenario; therefore, no other sensitive receptors were modeled.

The predicted peak 1-hour CO concentrations at each receptor were determined by adding the background 1-hour CO concentrations to the modeled 1-hour CO concentration. The background CO concentration was obtained from SCAQMD. The peak 8-hour CO concentration was estimated by multiplying the peak 1-hour model estimate by the persistence factor for the Specific Plan and adding the ambient background 8-hour CO concentration. The persistence factor is the ratio between the maximum 1-hour and 8-hour measured CO concentration. Since meteorological data is available, the persistence factor was calculated from data from the latest 3 years in Table III-2-A and found to be 0.92. The results are presented in Table III-2-F by intersection where the receptor position with the highest CO concentration is shown.

**Table III-2-F CO Hotspot Analysis Results**

Intersection	1-Hour CO Concentration (ppm)		8-Hour CO Concentration (ppm)	
	Existing <sup>1</sup>	Project <sup>2</sup>	Existing <sup>1</sup>	Project <sup>2</sup>
<b>State Threshold</b>	<b>20</b>	<b>20</b>	<b>9</b>	<b>9</b>
<b>Federal Threshold</b>	<b>35</b>	<b>35</b>	<b>9.5</b>	<b>9.5</b>
Milliken Ave/ SR-60 WB Ramps	6.0	6.3	5.5	5.6
Milliken Ave/ SR-60 EB Ramps	6.1	6.6	5.6	6.0
Hamner Ave/ Riverside Dr	6.4	7.2	5.9	6.6
Archibald Ave/ Edison Ave	6.2	8.9	5.7	8.2
Haven Ave/ Edison Ave	5.5	5.9	5.0	5.4
Archibald Ave/ Merrill Ave	5.9	6.0	5.4	5.6
Haven Ave/ Merrill Ave	4.8	5.9	4.4	5.4
Cleveland Ave/ Merrill Ave	4.8	5.9	4.4	5.4
Hamner Ave/ Merrill Ave	6.3	6.5	5.8	6.0
Hamner Ave/ Bellegrave Ave	6.7	6.5	6.2	6.0
Hamner Ave/ Limonite Ave	7.1	6.7	6.5	6.2
I-15 SB Ramps/ Limonite Ave	7.0	6.9	6.4	6.3
I-15 NB Ramps/ Limonite Ave	7.0	7.0	6.4	6.4

Note: <sup>1</sup> Includes existing conditions only.

<sup>2</sup> Includes existing plus area growth plus project traffic.

For all of the intersections modeled, the CO emissions from project-generated traffic are less than the California and National (federal) thresholds of significance. Therefore, the Specific Plan will not result in CO hotspots or contribute to an exceedance of either the CAAQS or NAAQS for CO emissions and will not form any CO hotspots in the Specific Plan area.

Although the Specific Plan generated traffic will not result in any CO hotspots, the short-term construction and long-term operational emissions of the Specific Plan have been found to exceed the SCAQMD established thresholds of significance on both a regional and localized level. Therefore, this impact is considered significant. The GPA for the NMC Final EIR concluded that although mitigation might reduce pollution, potential impacts would likely result in both long- and short-term significant and cumulative unavoidable impacts. Therefore, findings herein are consistent with the GPA for the NMC Final EIR.

*Threshold:* The proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the Specific Plan region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).

The portion of the South Coast Air Basin within which the Specific Plan is located is designated as a non-attainment area for ozone and PM-10 under state standards, and as a non-attainment area for ozone, carbon monoxide, PM-10, and PM-2.5 under federal standards. The preceding analysis demonstrates that the Specific Plan's projected emissions are above the applicable SCAQMD thresholds for ROG, NO<sub>x</sub>, and CO. Since the Project area is non-attainment for ozone and ROG is a pre-cursor of ozone, any exceedance of the SCAQMD threshold for ROG will

result in cumulatively significant impacts to air quality. In addition, the Specific Plan exceeds the threshold for significance for CO for which the area is also a non-attainment zone; thus the Specific Plan will result in a cumulatively significant impact to air quality. Although the Specific Plan does not exceed the long term thresholds of significance for the emission of PM-10, because the area is a non-attainment area for PM-10 and PM-2.5 and the Specific Plan will result in short-term localized PM-10 impacts, the Specific Plan is considered to result in cumulative impacts to air quality and the impact is considered significant. The GPA for the NMC Final EIR concluded that although mitigation might reduce pollution, potential impacts would likely result in both long-and short-term significant and cumulative unavoidable impacts. Therefore, findings herein are consistent with the GPA for the NMC Final EIR. Because the GPA for the NMC Final EIR adequately addressed cumulative air quality impacts, pursuant to State CEQA Guidelines section 15130, subdivision (e), those impacts are not discussed further in the EIR.

*Threshold: The proposed project will expose sensitive receptors to substantial pollutants concentrations.*

The Specific Plan will expose sensitive receptors to substantial pollutant concentrations. Residential receptors within or adjacent to the Specific Plan site will be impacted by the short-term construction emissions generated by the Specific Plan. In addition, the Specific Plan's long-term impacts will impact the elementary school that is planned as part of the project, the project's residents, as well as adjacent residents. Therefore the project will expose sensitive receptors to substantial pollutant concentrations and the impact is considered significant.

*Threshold: The proposed project will create objectionable odors affecting a substantial number of people.*

Dairies generate a substantial amount of manure, which is stockpiled, spread and stored on the dairy and exposed to the open air. The animals on a dairy can also be a source of odor to the surrounding vicinity. Transition of dairy uses to residential uses will eliminate the source of existing odors resulting from the dairy operations. In the long term, the proposed project will have a beneficial impact related to odors in this instance.

However, the project presents the potential for generation of objectionable odors in the form of diesel exhaust during construction in the immediate vicinity of the project site. Impacts of construction-related odors can not be quantified because it is subjective to each person's sensitivity to smell. Recognizing the short-term duration and quantity of emissions in the project area, the project will not expose substantial numbers of people to objectionable odors. Impacts from short term construction odors are considered less than significant.

### **Proposed Mitigation Measures**

The GPA for the NMC Final EIR includes as its only air quality mitigation measure a detailed list of measures to address short-term construction-related emissions. The measures are included pursuant to SCAQMD Rule 403 and shall be required of this project as MM Air 1 through 9, below.

**MM Air 1:** During all construction activities, construction contractors shall use low emission mobile construction equipment where feasible to reduce the release of undesirable emissions.

**MM Air 2:** During all construction activities, construction contractors shall encourage rideshare and transit programs for project construction personnel to reduce automobile emissions.

**MM Air 3:** 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.

**MM Air 4:** 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.

**MM Air 5:** During all construction activities, construction contractors shall sweep on and off site streets (recommend water sweepers with reclaimed water) if ~~silt-visible soil~~ is carried over to adjacent public thoroughfares, as determined by the City Engineer to reduce the amount of particulate matter on public streets.

**MM Air 6:** 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.

**MM Air 7:** During grading and all site disturbances activities, ~~at the discretion of the City's Planning Director,~~ construction contractors shall suspend all grading operations during first and second stage smog alerts to reduce fugitive dust and combustion related emissions.

**MM Air 8:** During grading and all site disturbances 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.

**MM Air 9:** During all construction activities, the construction contractors shall maintain construction equipment engines by keeping them tuned according to manufacturers' specifications.

*In addition to the GPA for the NMC Final EIR mitigation measures and in order to reduce emissions from project construction equipment, the following mitigation measures shall be implemented:*

**MM Air 10:** During construction, mobile construction equipment will be properly maintained at an offsite location, which includes proper tuning and timing of engines. Equipment maintenance records and equipment design specification data sheets shall be kept on-site during construction.

**MM Air 11:** During construction, all contractors will be advised to prohibit all vehicles from idling in excess of ~~ten~~five minutes, both on-site and off-site.

**MM Air 12:** Configure construction parking to minimize traffic interference.

See also **MM Geo 1**, page III-5-8, which requires adherence to the City of Ontario's wind erosion permit.

**MM Air 13:** Contractors shall use high-pressure-low-volume (HPLV) paint applicators with a minimum transfer efficiency of at least 50% or other application techniques with equivalent or higher transfer efficiency, where feasible.

**MM Air 14:** Use architectural coatings with a VOC content lower than required under Rule 1113, where feasible.

**MM Air 15:** Construct/build with materials that do not require painting, where feasible.

**MM Air 16:** Use pre-painted construction materials, where feasible.

**MM Air 17:** The contractor shall provide truck drivers with materials showing where sensitive receptors, such as schools, are located, and when congestion can be expected so that the drivers can avoid these routes and/or times of day.

**MM Air 18:** Require construction equipment that meet or exceed Tier 2 standards; use emulsified diesel fuels; and equip construction equipment with oxidation catalysts, particulate traps, or other verified/certified retrofit technologies, etc., where feasible.

*In order to reduce emissions from project operation, the following mitigation measure shall be implemented:*

**MM Air 1319:** Local transit agencies shall be contacted to determine bus routing in the project area that can accommodate bus stops at the project access points and the project shall provide bus passenger benches and shelters at these project access points.

### **Summary of Project-Specific Environmental Effects After Mitigation Measures are Implemented**

In an effort to reduce estimated emissions, the mitigation measures listed above were considered. Although implementation of the above-listed mitigation measures will reduce project-generated emissions, there is no quantitative reduction associated with them; therefore, there is no change in the estimated emissions of the project.

There is no change in terms of exceeding the SCAQMD thresholds of significance related to short-term and long-term emissions. The project's short-term construction and long-term operation emissions will exceed the SCAQMD significance thresholds and are considered significant. A Statement of Overriding Considerations will be required prior to project approval. The GPA for the NMC Final EIR concluded that although mitigation might reduce pollution, potential impacts would likely result in both long- and short-term significant and cumulative unavoidable impacts. Therefore, findings herein are consistent with the GPA for the NMC Final EIR.

### **Summary of Cumulative Environmental Effects After Mitigation Measures are Implemented**

Implementation of the proposed Specific Plan and the future development planned for the New Model Colony would increase air pollution emissions in the SCAB as identified in the General Plan Amendment EIR for the New Model Colony and the EIR for the Esperanza Specific Plan. Analysis of the estimated short- and long-term emissions from this project shows that emissions of ROG, NO<sub>x</sub>, and CO during construction and operation will exceed SCAQMD daily thresholds. When considering the cumulative effects on air quality in the region, it is the long-term operational emissions that are of the most concern. Vehicular emissions from project-

generated traffic are the main contributor to criteria pollutant emissions. Since the portion of the South Coast Air Basin within which the project is located is designated as a non-attainment area for ozone and PM-10 under state standards, and as a non-attainment area for ozone, carbon monoxide, and PM-10 under federal standards, and the operational emissions from this project will exceed the SCAQMD daily thresholds, the Specific Plan's cumulative effects on air quality are considered significant and unavoidable and will require a Statement of Overriding Considerations. The GPA for the NMC FEIR was certified with overriding consideration findings related to the cumulative negative impact on regional air quality. No new issues have been raised by this project which were not considered in the GPA for the NMC FEIR. The statement of overriding considerations for this project will be consistent with the GPA for the NMC FEIR's findings. The discussion of cumulative impacts is limited because the Specific Plan is consistent with the plans used in the evaluation of each environmental issue area discussed here and in Section IV-1, Cumulative Environmental Effects. Because the GPA for the NMC Final EIR adequately addressed cumulative air quality impacts, pursuant to State CEQA Guidelines section 15130, subdivision (e), those impacts are not discussed further in the EIR.

### 3. BIOLOGICAL RESOURCES

The focus of the following discussion addresses potential impacts related to habitat conservation plans, migratory corridors, direct or indirect habitat modification effecting endangered or threatened species and sensitive or special status species. Discussions related to riparian habitat and wetlands are found in Section II, Effects Found Not Significant. For the purposes of potential impacts to biological resources, no difference exists between the use of the 10-acre school site for a school or for houses, so this issue is not addressed in the following analyses.

A General Biological Resources Assessment of the entire proposed project site was prepared by Ecological Sciences, Inc., in May 2005. Previously, surveys have been conducted for portions of the site (Ecological Sciences, Inc., January 2003 and L&L Environmental, Inc., January 2002). Focused surveys for the Delhi sands flower-loving fly (DSF) were conducted in 2001 and 2002 by L&L Environmental, Inc. within the Armada, LLC portion of the Specific Plan (refer to Figure I-2-3, Property Ownership) and in 2005 by Larry Munsey International within the Armada, LLC and Amberhill Development, LTD portions of the Specific Plan. Biotic resources of the project area are described herein from information compiled in these reports (biological survey reports prepared for the project site are included in Appendix D). Biological assessments were conducted as required by the Settlement Agreement described on page III-3-14 and included in Appendix D. Any additional biological studies that may be needed to address sensitive species are identified in the Mitigation Measure section on page III-3-22.

#### Setting

Historically, the project area has been exposed to widespread and severe levels of human-related disturbances such as long-standing dairy and agricultural-related uses. The site contains existing structures associated with dairy operations (sheds, feedlots, etc.), several residences, cultivated areas, ruderal areas, a detention basin, and multiple abandoned structures and remnant foundations. A vast majority of the site ( $\pm 99\%$ ) is dominated by invasive, non-native, and ornamental plant species. Extensive amounts of soil and debris dumping are present, primarily in the southern portion of the site. Existing residential development is located to the south, and agricultural areas are located to the east, north, and west (refer to Figure I-2-4, Aerial Photograph and biological survey reports contained in Appendix D).

#### *Vegetation*

No natural or native plant communities are present on the  $\pm 223$ -acre site, and only a few scattered remnants of native vegetation remain due to long-standing agricultural uses. All on-site areas are disturbance-produced habitats, and as such, have much lower diversity and a higher percentage of non-native plants than do native plant communities. The long-standing agricultural uses have essentially excluded most native shrubs and forbs.

The site supports mostly ruderal plant associations comprised of non-native opportunistic species such as annual grasses and weedy herbs. Plant species present on the site include Russian thistle (*Salsola tragus*), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), mustard (*Hirschfeldia* and/or *Brassica* sp.), cheeseweed (*Malva parviflora*), tree tobacco (*Nicotiana glauca*), pigweed (*Chenopodium album*), horehound (*Marrubium vulgare*), puncture vine (*Tribulus terrestris*), prickly lettuce (*Lactuca serriola*), Bermuda grass (*Cynodon dactylon*), jimson weed (*Datura wrightii*), and golden crownbeard (*Verbesina enceliodes*). In addition, gum

trees (*Eucalyptus* sp.) and gum tree windrows are present in several locations. Ornamental species such as mulberry (*Morus* sp.), sweetgum (*Liquidambar* sp.), oleander (*Nerium oleander*), ash (*Fraxinis* sp.), and Mexican fan palm (*Washingtonia robusta*) were recorded on site. Native species recorded included Palmers pigweed (*Amaranthus palmeri*), fleabane (*Conyza boniariensis*), curly dock (*Rumex crispis*), and spiny cocklebur (*Xanthium spinosum*). The General Biological Resources Assessment prepared by Ecological Sciences, Inc. in 2005 (Appendix D) contains a complete list of plant species detected on the project site.

#### *Common Wildlife*

Discussed below are common wildlife species observed during field surveys of the project site. Sensitive wildlife species potentially occurring on the project site are discussed subsequently under *Sensitive Biological Resources*. The General Biological Resources Assessment prepared by Ecological Sciences, Inc. in 2005 (Appendix D) contains a complete list of common wildlife species detected on the project site.

No amphibians were observed on the site during the May 2005 site survey, and none are expected due to lack of suitable aquatic habitat. Common reptilian species which might occur in the vicinity include only the western fence lizard (*Sceloporus occidentalis*) and side-blotched lizard (*Uta stansburiana*). Direct observations of birds recorded during surveys of the project site included common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), Brewer's blackbird (*Euphagus cyanocephalus*), morning dove (*Zenaida macroura*), rock dove (*Columba livia*), western kingbird (*Tyrannus verticalis*), black phoebe (*Saynoris nigricans*), western meadowlark (*Sturnella neglecta*), European starling (*Sturnus vulgaris*), and house finch (*Carpodacus mexicanus*). The special-status loggerhead shrike (*Lanius ludovicianus*) was also recorded. Common raptor (birds of prey) species observed during the field surveys include turkey vulture (*Cathartes aura*) and red-tailed hawk (*Buteo jamaicensis*). The site supports several narrow windrows of eucalyptus trees that provide potentially suitable nesting habitat for some raptor species, though no raptor nests (or nests of any kind) were observed during the May 2005 field survey. The open ruderal habitats on site also provide some foraging opportunities for raptors. Many raptor species are considered sensitive by resource agencies, and are discussed under *Sensitive Biological Resources*.

Mammal species directly observed, or of which sign was detected, included California ground squirrel (*Spermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*), Botta's pocket gopher (*Thomomys bottae*), and domestic dog (*Canis familiaris*). Based on the focused DSF survey effort conducted on ±70-acres of the Armada, LLC portion of the site in 2001 and 2002 (L&L Environmental, Inc.), 74 insect species were recorded. Insect diversity on site is considered moderate.

#### *Sensitive Biological Resources*

Special status plant species are those that are listed as Threatened or Endangered, proposed for listing as Endangered or Threatened, or are Candidate species for listing under the federal or state Endangered Species Acts, or are considered species of special concern by federal or state resource agencies. In addition, plants included on Lists 1, 2, 3, or 4 of the California Natural Plants Society (CNPS) inventory are also considered of special-status. The potential for special-status plant species known from the site vicinity to occur on the project site are summarized in Table III-3-A. As identified in this table, no special-status plants were recorded on the project

site, and no such plants are expected to occur due to the high level of recurring surface disturbances and overall absence of suitable habitat on the property due to long-standing agricultural uses. The occurrence potential of special-status plant species on the project site was based on an evaluation of the existing habitat, occurrence records of special-status species in the site vicinity, and results of reconnaissance-level surveys of the site.

Special status wildlife species are those that are listed as Threatened or Endangered, proposed for listing as Endangered or Threatened, or are Candidate species for listing under the federal or state Endangered Species Acts, or are considered species of special concern by federal or state resource agencies. In addition, wildlife species designated as California Fully Protected or considered state Special Animals are also considered special status. One special-status species, the loggerhead shrike (*Lanius ludovicianus*), was recorded on site during the May 2005 field survey. Two other sensitive species, the burrowing owl (*Athene cunicularia*) and the white-tailed kite (*Elanus leucurus*), were recorded on site in one or more previous field surveys. Only the burrowing owl would be expected to breed on the site. Several additional species were deemed to have a moderate or high occurrence potential to occur on site even though they were not observed during the May 2005 survey. These species include the Northern harrier (*Circus cyaneus*), Ferruginous hawk (*Buteo regalis*), Golden eagle (*Aquila chrysaetos*), California horned lark (*Eremophila alpestris actia*) and the San Diego black-tailed jackrabbit (*Lepus californicus benettii*). Special-status wildlife species potentially occurring on the project site, however not detected during the May 2005 biological survey of the site, are summarized in Table III-3-B.

The Delhi Sands flower-loving fly (DSF) (*Rhaphiomidas terminatus abdominalis*) is currently listed as endangered under the federal Endangered Species Act. The geographic distribution of the DSF is restricted to areas having a specific sandy substrate type classified as Delhi Series soils; commonly known as “Delhi Sands.” A review of the Soil Survey of San Bernardino County, Southwestern Part, California (1980) indicates that the site contains Delhi sands (Db) and Hilmar fine sandy loam (Hr). Hilmar soils are not ordinarily associated with potential DSF habitat. Most of the exposed surface soils present are associated with the large detention basin located in the southwestern portion of the site. An artificial mound of soil debris is located north of the basin, presumably associated with recent excavation of the area. Most of this area now supports consolidated/compacted soils from recent heavy equipment/debris dumping activities. No suitable substrate consistent with potential DSF habitat is present in this area.

Protocol surveys were conducted for DSF in 2001 and 2002 by L & L Environmental, Inc. on the Armada, LLC portion of the Specific Plan. From these surveys it was determined that only very poorly suitable habitat for the DSF occurs within a small portion of this area of the Specific Plan. No DSF adults, eggs, larvae or pupae were observed during these focused surveys in 2001 and 2002. Focused surveys were conducted in 2005 by Larry Munsey International within the Armada, LLC and Amberhill Development, LTD portions of the Specific Plan. No DSF or SDF sign (i.e., discarded pupal cases) were observed on the site during this effort. Also, the DSF was not detected by Larry Munsey International during surveys conducted on a nearby site during surveys conducted in 2003 and 2004.

The majority of these species are not expected to occur on site, or have a low to moderate occurrence potential due to lack of suitable habitat and the extremely disturbed nature of the site from long-standing agricultural uses. The occurrence potential of special-status wildlife species was based on an evaluation of existing on-site habitats, occurrence records of sensitive wildlife species in the site vicinity, results of on-site surveys, and pertinent literature review.

**Table III-3-A  
Special-Status Plant Species Known to Occur in the Site Vicinity<sup>1</sup>**

Scientific and Common Name	Status			Habitat Requirements	Flowering Period	Potential Occurrence
	Federal	State	CNPS			
Munz's Onion <i>Allium munzii</i>	FE	CT	1B	Chaparral, sage scrub, grassland, woodlands with clay soils	March - May	<b>Not Expected:</b> suitable habitat not present.
San Jacinto Valley crownscale <i>Atriplex coronata notatior</i>	FE	--	1B	Alkali flats, playas	April- August	<b>Not Expected:</b> suitable habitat not present
California Orcutt grass <i>Orcuttia californica</i>	FE	CE	1B	Meadows, vernal pools	April - June	<b>Not Expected:</b> suitable habitat not present
Parish's brittle-scale <i>Atriplex parishii</i>	FSC	--	1B	Alkali meadows, chenopod scrub, playas	June – October	<b>Not Expected:</b> suitable habitat not present.
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	FE	CE	1B	Vernal pools, scrub, woodland, grasslands with clay soils	March - June	<b>Not Expected:</b> suitable habitat not present.
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	FSC	--	1B	Playas, vernal pools	February- June	<b>Not Expected:</b> suitable habitat not present.
Little mousetail <i>Myosurus minimus</i> var. <i>apus</i>	FSC	--	1B	Vernal pools	March- June	<b>Not Expected:</b> suitable habitat not present.
Spreading navarretia <i>Navarretia fossalis</i>	FT	--	1B	Meadows, vernal pools	April- June	<b>Not Expected:</b> suitable habitat not present.
Smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	FSC	--	1B	Alkaline grasslands, meadows, playas, scrub habitats	April- September	<b>Not Expected:</b> suitable habitat not present
Paniculate tarplant <i>Deinandra paniculata</i>	--	--	4	Coastal scrub, valley and foothill grassland; usually vernal mesic	April- November	<b>Not Expected:</b> suitable habitat not present
Slender-horned spineflower <i>Dodecahema leptoceras</i>	FE	CE	1B	Chaparral, alluvial fan sage scrub; terraces and washes	April- June	<b>Not Expected:</b> suitable habitat not present
San Diego ambrosia <i>Ambrosia pumila</i>	FPE	--	1B	Chaparral, coastal scrub, grasslands, vernal pools with sandy loam or clay soils (20- 415M)	May- September	<b>Not Expected:</b> suitable habitat not present
Johnston's rock cress <i>Arabis johnstoni</i>	--	--	1B	Chaparral, lower montane coniferous forest; often on eroded clay	February- June	<b>Not Expected:</b> suitable habitat not present on site; known from fewer than 10 occurrences in the southern San Jacinto Mountains
Davidson's saltscale <i>Atriplex serenana</i> var. <i>davidsonii</i>	--	--	1B	Coastal bluff scrub, coastal scrub/alkaline; 10- 200 meters in elevation	April- October	<b>Not Expected:</b> suitable habitat not present on site
Nevin's barberry <i>Berberis nevinii</i>	FE	CE	1B	Chaparral, cismontane woodland, coastal scrub, riparian scrub/ sandy or gravelly soils	March- April	<b>Not Expected:</b> suitable habitat not present on site; fewer than 1,000 plants likely remain

**Table III-3-A (Continued)**

Scientific and Common Name	Status			Habitat Requirements	Flowering Period	Potential Occurrence
	Federal	State	CNPS			
Munz’s mariposa lily <i>Calochortus palmeri</i> var. <i>munzii</i>	--	--	<b>1B</b>	Chaparral, lower montane Chaparral, lower montane	June- July	<b>Not Expected:</b> suitable habitat not present on site; known from only a few locations in the San Jacinto Mountains.
Vail Lake ceanothus <i>Ceanothus ophiochilus</i>	<b>FE</b>	<b>CE</b>	<b>1B</b>	Chaparral (gabbroic or pyroxenite- rich outcrops)	February- March	<b>Not Expected:</b> suitable habitat not present on site; known from only three occurrences near Vail Lake.
Many- stemmed dudleya <i>Dudleya multicaulis</i>	--	--	<b>1B</b>	Chaparral, coastal scrub, valley and foothill grassland/ often clay soils	April- July	<b>Not Expected:</b> suitable habitat not present on site
Santa Ana River woollystar <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	<b>FE</b>	<b>CE</b>	<b>1B</b>	Coastal scrub (alluvial fan)	June- September	<b>Not Expected:</b> suitable habitat not present on site; outside species known range; known only from Santa Ana River.
San Jacinto Mountains bedstraw <i>Galium angustifolium</i> ssp. <i>jacinticum</i>	--	--	<b>1B</b>	Lower montane coniferous forest	June- August	<b>Not Expected:</b> suitable habitat not present on site; known from only three occurrences in Lake Fulmor and Black Mountain area of the San Jacinto Mountains.
Heart- leaved pitcher sage <i>Lepechinia cardiophylla</i>	--	--	<b>1B</b>	Closed cone coniferous forest, chaparral, cismontane woodland	April- July	<b>Not Expected:</b> suitable habitat not present on site; known in California from fewer than ten occurrences.
San Miguel savory <i>Satureja chandleri</i>	--	--	<b>1B</b>	Chaparral, cismontane woodland, coastal scrub, riparian woodland, grasslands/ rocky, gabbroic or metavolcanic soils	March- July	<b>Not Expected:</b> suitable habitat not present on site
Wright’s trichocoronis <i>Trichocoronis wrightii</i> var. <i>wrightii</i>	--	--	<b>2</b>	Meadows and seeps, marshes and swamps, riparian scrub, vernal pools/ alkaline soils	May- September	<b>Not Expected:</b> suitable habitat not present on site
Intermediate mariposa lily <i>Calochortus weedii</i> var. <i>intermedius</i>	<b>FSC</b>	--	<b>1B</b>	Chaparral, coastal scrub, Chaparral, coastal scrub, dry, rocky, open slopes	May- September	<b>Not Expected:</b> suitable habitat not present on site
Plummer’s mariposa lily <i>Calochortus plummerae</i>	<b>FSC</b>	--	<b>1B</b>	Chaparral, coastal scrub, grasslands; often associated with granitic soils	May- July	<b>Not Expected:</b> suitable habitat not present on site
South Coast saltscale <i>Atriplex pacifica</i>	<b>FSC</b>	--	<b>1B</b>	Coastal bluff scrub, playas, chenopod scrub	May- July	<b>Not Expected:</b> suitable habitat not present on site
Coulter’s saltbush <i>Atriplex coulteri</i>	--	--	<b>1B</b>	Coastal bluff scrub, coastal scrub, valley/foothill grasslands; alkaline and clay soils	March- October	<b>Not Expected:</b> suitable habitat not present on site

**Table III-3-A (Continued)**

Scientific and Common Name	Status			Habitat Requirements	Flowering Period	Potential Occurrence	
	Federal	State	CNPS				
Parry’s spineflower <i>Chorizanthe parryi</i> ssp. <i>parryi</i>	FSC	--	3	Chaparral and coastal scrub; associated with sandy or rocky openings.	April- June	<b>Not Expected:</b> suitable habitat not present on site	
Long- spined spineflower <i>Chorizanthe polygonoides</i> var. <i>longispina</i>	FSC	--	1B	Chaparral, sage scrub, grasslands, often with clay soils	April- July	<b>Not Expected:</b> suitable habitat not present on site	
California spineflower <i>Mucronea californica</i>	--	--	4	Chaparral, sage scrub, grasslands, often with clay soils	March- August	<b>Not Expected:</b> suitable habitat not present on site	
Palmer’s grapplinghook <i>Harpagonella palmeri</i>	FSC	--	2	Chaparral, grasslands, sage scrub with clay soils	March- April	<b>Not Expected:</b> suitable habitat not present on site	
Round- leaved filaree <i>Erodium macrophyllum</i>	--	--	2	Cismontane woodland, valley and foothill grassland with clay soils	March- May	<b>Not Expected:</b> suitable habitat not present on site	
Graceful tarplant <i>Holocarpha virgata</i> ssp. <i>elongata</i>	FSC	--	4	Woodlands, grasslands, scrub habitats	August- November	<b>Not Expected:</b> suitable habitat not present on site	
Robinson’s pepper- grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	--	--	1B	Chaparral and coastal scrub; dry soils	January- July	<b>Not Expected:</b> suitable habitat not present on site	
California muhly <i>Muhlenbergia californica</i>	--	--	4	Chaparral, coastal scrub, lower montane coniferous forest; moist conditions	July- September	<b>Not Expected:</b> suitable habitat not present on site	
Chaparral sand verbena <i>Abronia villosa</i> var. <i>aurita</i>	--	--	1B	Chaparral, coastal scrub with sandy soils	January- August	<b>Not Expected:</b> suitable habitat not present on site	
Salt spring checkerbloom <i>Sidalcea neomexicana</i>	--	--	2	Chaparral, coastal scrub, lowermontane coniferous forest; moist conditions	March- April	<b>Not Expected:</b> suitable habitat not present on site	
Southern California black walnut <i>Juglans californica</i> var. <i>californica</i>	--	--	4	Chaparral, cismontane woodland, coastal sage scrub	March- May	<b>Not Expected:</b> suitable habitat not present on site	
Vernal barley <i>Hordeum intercedans</i>	--	--	3	Coastal dunes, coastal scrub, grasslands (saline flats and depressions)	March- June	<b>Not Expected:</b> suitable habitat not present on site	
<b>Federal</b>				<b>State</b>		<b>CNPS</b>	
FE: Federally Endangered	FPT: Federally Proposed	CE: State Endangered	1A: Plants presumed extinct in California.				
FT: Federally Threatened Species	Threatened	CT: State Threatened	1B: Plants rare and endangered in California and elsewhere				
FPE: Federally Proposed Endangered	FC: Federal Candidate Species	CR: State Rare	2: Plants rare and endangered in California, but more common elsewhere				
	FSC: Federal Species of Concern		3: Taxa about which more information is needed				
			4: Plants of limited distribution				

Note: (1) Data based on review of CNDDDB (2005), CNPS (2003) electronic databases, and other pertinent literature sources.

**Table III-3-B  
Special- Status Wildlife Species Known to Occur in the Site Vicinity<sup>1</sup>**

Scientific and Common Name	Status		Habitat Requirements	Potential Occurrence
	Federal	State		
<b>INVERTEBRATES</b>				
Riverside fairy shrimp <i>Streptocephalus wootoni</i>	FE	--	Swales, vernal pools, and basins within grasslands and sage scrub habitats	<b>Not Expected:</b> suitable habitat not present on site.
Vernal pool branchinecta <i>Branchinecta lynchi</i>	FT	--	Grassland vernal pools	<b>Not Expected:</b> suitable habitat not present on site.
Delhi sands flower-loving fly <i>Rhaphiomidas terminatus abdominalis</i>	FE	--	Delhi soils with sparse vegetation	<b>Not Expected:</b> suitable habitat not present on site; not recorded during focused surveys in 2001-2002 and 2005.
<b>AMPHIBIANS AND REPTILES</b>				
Western spadefoot toad <i>Scaphiopus hammondi</i>	--	CSC	Relatively open grasslands, scrublands, and woodlands with fine, loose soil	<b>Not Expected:</b> suitable breeding habitat not present on site
San Diego horned lizard <i>Phrynosoma coronatum blainvillii</i>	FSC	CSC	Relatively open grasslands, scrublands, and woodlands with fine, loose soil	<b>Not Expected:</b> suitable habitat not present on site.
Orange- throated whiptail <i>Cnemidophorus hyperythrus beldingi</i>	FSC	CSC	Relatively open grasslands, scrublands, and woodlands with fine, loose soil	<b>Not Expected:</b> suitable habitat not present on site
Coastal western whiptail <i>Cnemidophorus tigris multiscutatus</i>	--	◆	Sage scrub, chaparral, grassland	<b>Not Expected:</b> suitable habitat not present on site.
Northern red diamond rattlesnake <i>Crotalus ruber ruber</i>	--	CSC	Sage scrub, chaparral, grasslands	<b>Not Expected:</b> suitable habitat not present on site.
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	--	CSC	Permanent or nearly permanent bodies of water with basking sites	<b>Not Expected:</b> suitable habitat not present on site
San Bernardino ringneck snake <i>Diadophis punctatus modestus</i>	FSC	--	Woodlands, shrublands, mesic areas with wood/ rock debris	<b>Not Expected:</b> suitable habitat not present on site.
San Diego mountain kingsnake <i>Lampropeltis zonata pulchra</i>	FSC	CSC	Forests and shrublands	<b>Not Expected:</b> suitable habitat not present on site.
Coast patch-nosed snake <i>Salvadora hexalepis virgultea</i>	FSC	CSC	Shrublands with low structure and minimum density; friable soils	<b>Not Expected:</b> suitable habitat not present on site
Rosy boa <i>Lichanura trivirgata</i>	FSC	--	Desert and chaparral with moderate to dense vegetation and rocky cover	<b>Not Expected:</b> suitable habitat not present on site

Table III-3-B (Continued)

Scientific and Common Name	Status		Habitat Requirements	Potential Occurrence
	Federal	State		
<b>BIRDS</b>				
White-tailed kite (nesting) <i>Elanus leucurus</i>	MNBMC	CFP	Open vegetation and uses dense woodlands for cover	<b>High Potential:</b> recorded foraging on-site in 2001 by L& L Env. , no suitable nesting habitat. Not recorded on site in 2002-03, or 2005.
Northern harrier (nesting) <i>Circus cyaneus</i>	--	CSC	Coastal salt marsh, freshwater marsh, grasslands, and agricultural fields	<b>Moderate Potential:</b> possibly forages over portions of the site; no suitable nesting habitat.
Swainson's hawk <i>Buteo swainsoni</i>	--	CT	Breeds in stands with few trees such as juniper, riparian areas. Forages over grasslands, agricultural fields supporting rodent populations	<b>Low Potential:</b> may occasionally forage over the site during migration; no suitable nesting habitat present.
Ferruginous hawk (wintering) <i>Buteo regalis</i>	FSC, MNBMC	CSC	Grasslands, agricultural fields, and open scrublands	<b>Moderate Potential:</b> possibly forages over the site as seasonal migrant; does not breed in area.
Bald eagle <i>Haliaeetus leucocephalus</i>	FT	CE	Ocean shore, lake margins & rivers for both nesting and wintering	<b>Not Expected:</b> suitable habitat not present
Golden eagle (nesting & wintering) <i>Aquila chrysaetos</i>	--	CSC, CFP	Mountains, deserts, and open country	<b>Moderate Potential:</b> may occasionally forage over the site; no suitable nesting habitat present
Sharp-shinned hawk (nesting) <i>Accipiter striatus</i>	--	CSC	Woodlands; forages over chaparral and scrublands	<b>Low Potential:</b> may occasionally forage over the site; no suitable nesting habitat present.
Cooper's hawk <i>Accipiter cooperii</i>	--	CSC	Dense stands of live oaks and riparian woodlands.	<b>Low Potential:</b> may occasionally forage over the site; no suitable nesting habitat present.
Prairie falcon (nesting) <i>Falco mexicanus</i>	--	CSC	Grasslands, savannas, rangeland, agricultural fields, and desert scrub; requires sheltered cliff faces for shelter	<b>Low Potential:</b> may forage over the site in winter; no suitable nesting habitat present on site.
Merlin (wintering) <i>Falco columbarius</i>	--	CSC	Open habitats	<b>Low Potential :</b> may forage over the site in winter; no suitable nesting habitat present on site.
Burrowing owl (burrow sites) <i>Athene cucularia</i>	FSC, MNBMC	CSC	Grasslands and open scrub	<b>High Potential:</b> recorded on-site in 2001; suitable foraging and potential nesting habitat present on site. Not recorded on site in 2002- 2003.

Table III-3-B (Continued)

Scientific and Common Name	Status		Habitat Requirements	Potential Occurrence
	Federal	State		
Long-eared owl <i>Asio otus</i>	--	CSC	Riparian bottomlands to tall willows and cottonwoods; oaks along stream courses	<b>Not Expected:</b> suitable habitat not present on site.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT (pacific coastal population)	CSC	Sandy beaches, salt pond levees and shores, gravelly or friable soils for nesting	<b>Not Expected:</b> suitable habitat not present.
Mountain plover (wintering) <i>Charadrius montanus</i>	--	CSC	Agricultural areas, fallow fields, grasslands, prairies	<b>Low Potential :</b> may forage over the site in winter; no suitable nesting habitat present on site.
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE	CE	Willow dominated riparian habitat with dense understory	<b>Not Expected:</b> suitable riparian habitat not present on site.
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	FE	--	Riparian habitats along rivers, streams, or other wetlands usually with standing water	<b>Not Expected:</b> suitable riparian habitat not present on site.
Yellow warbler <i>Dendroica petechia</i>	--	CSC	Riparian thickets and woodlands	<b>Not Expected:</b> suitable riparian habitat not present on site.
Yellow-breasted chat <i>Icteria virens</i>	--	CSC	Riparian thickets and riparian woodlands with dense understory	<b>Not Expected:</b> suitable riparian habitat not present on site.
California horned lark <i>Eremophila alpestris actia</i>	--	CSC	Grasslands, disturbed areas, agriculture fields, and beach areas	<b>High Potential:</b> potentially suitable foraging habitat present; no nesting habitat.
California coastal gnatcatcher <i>Poliophtila californica californica</i>	FT	CSC	Coastal sage scrub in areas of flat or gently sloping terrain	<b>Not Expected:</b> suitable habitat not present on site.
Loggerhead shrike <i>Lanius ludovicianus</i>	--	CSC	Grasslands with scattered shrubs, trees, fences or other perches	<b>Observed:</b> suitable habitat present; not expected to nest on site
S. California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	--	CSC	Coastal sage scrub, grasslands	<b>Not Expected:</b> suitable habitat not present on site.
Grasshopper sparrow <i>Ammodramus savannarum</i>	MNBMC	--	Coastal sage scrub, grassland	<b>Not Expected:</b> suitable habitat not present on site.
Bell's sage sparrow <i>Amphispiza belli belli</i>	MNBMC	CSC	Coastal sage scrub, chaparral	<b>Not Expected:</b> suitable habitat not present on site.
Tricolored blackbird (wintering) <i>Agelaius tricolor</i>	--	CSC	Marshes for nesting; forages in fields and scrub habitats	<b>Not Expected:</b> suitable habitat not present on site
<b>MAMMALS</b>				
Long-eared myotis <i>Myotis evotis</i>	FSC	--	Found in nearly all brush, woodland, and forest habitats from sea level to at least 9,000 feet	<b>Low Potential:</b> marginal potential foraging and roosting habitat.

Table III-3-B (Continued)

Scientific and Common Name	Status		Habitat Requirements	Potential Occurrence
	Federal	State		
Small-footed myotis <i>Myotis ciliolabrum</i>	FSC	--	Arid wooded and brushy uplands near water from sea level to at least 9,000 feet	<b>Low Potential:</b> marginal potential foraging and roosting habitat.
Fringed myotis <i>Myotis thysanodes</i>	FSC	--	Utilizes open habitats and early successional stages, streams, lakes, and ponds from sea level to at least 9,350 ft.	<b>Not Expected:</b> lack of potential foraging and roosting habitat; easily disturbed by human presence
Long-legged myotis <i>Myotis volans</i>	FSC	--	Found in nearly all brush, woodland, and forested habitats from sea level to around 9,000 ft.; a bat primarily of coniferous forests	<b>Not Expected:</b> lack of potential foraging and roosting habitat.
Yuma myotis <i>Myotis yumanensis</i>	FSC	CSC	Found in a variety of habitats; optimal habitats are open forests and woodlands with sources of water over within to feed	<b>Low Potential:</b> marginal potential foraging and roosting habitat.
Spotted bat <i>Euderma maculata</i>	FSC	CSC	Deserts, scrublands, chaparral, and coniferous woodlands; highly associated with prominent rock features	<b>Not Expected:</b> lack of potential foraging and roosting habitat.
Pale big-eared bat <i>Corynorhinus townsendii pallescens</i>	FSC (Full Specis)	CSC (Full Species)	Utilizes a variety of communities, including conifer and oak woodlands and forests, arid grasslands and deserts, and high-elevation forests and meadows	<b>Not Expected:</b> lack of potential foraging and roosting habitat; very sensitive to human disturbances.
Pallid bat <i>Antrozous pallidus</i>	--	CSC	Arid habitats, including grasslands, shrublands, woodlands, and forests; prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging	<b>Low Potential:</b> marginal potential foraging and roosting habitat.
Western mastiff bat <i>Eumops perotis</i>	FSC (ssp. <i>californicus</i> )	CSC	Primarily arid lowlands and coastal basins with rugged, rocky terrain, along with suitable crevices for day-roosts; primarily a cliff-dweller	<b>Low Potential:</b> marginal potential foraging and roosting habitat .known to occasionally occur in buildings under certain circumstances
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	--	CSC	Grasslands, shrublands	<b>Moderate Potential:</b> may occasionally utilize agricultural fields.
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	--	CSC	Open shrublands, sandy areas	<b>Not Expected:</b> suitable habitat not present on site.
Dulzura pocket mouse <i>Chaetodipus californicus fformalis</i>		CSC	Coastal scrub, chaparral, grassland	<b>Not Expected:</b> suitable habitat not present on site.
Los Angeles pocket mouse <i>Perognathus longimembris brevinasus</i>	FSC	CSC	Grasslands, open sage scrub	<b>Not Expected:</b> suitable habitat not present on site.

**Table III-3-B (Continued)**

Scientific and Common Name	Status		Habitat Requirements	Potential Occurrence
	Federal	State		
San Bernardino kangaroo rat <i>Dipodomys merriami parvus</i>	FE	CSC	Coastal scrub, chaparral, grassland	<b>Not Expected:</b> suitable habitat not present.
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	FE	CE	Grasslands, open sage scrub	<b>Not Expected:</b> suitable habitat not present on site
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	--	CSC	Moderate to dense sage scrub; rocky Outcrops	<b>Not Expected:</b> suitable habitat not present on site.
Southern grasshopper mouse <i>Onychomys torridus ramona</i>	FSC	CSC	Alkali desert scrub, desert riparian areas and a variety of other desert habitats; succulent scrub, wash, riparian, mixed chaparral	<b>Not Expected:</b> suitable habitat not present on site.
American badger <i>Taxidea taxus</i>	--	◆	Drier open stages of shrub, forest, and herbaceous habitats with friable soils	<b>Not Expected:</b> suitable habitat not present on site.

Federal		State	
FE: Federally Endangered	FC: Federal Candidate for listing as threatened or endangered	CE: California Endangered	CP: California Protected
FT: Federally Threatened	FSC: Federal Species of Concern- <i>not formally protected under law</i>	CT: California Threatened	CSC: California Special Concern
FPE: Federally Proposed Endangered	MNBMC: Migratory Nongame Birds of Management Concern (not shown for federally listed or proposed threatened or endangered species)	CCE: California Candidate (Endangered)	◆: California Special Animal (species with no official federal or state status, but are included on CDFG's Special Animals list)
FPT: Federally Proposed Threatened		CCT: California Candidate (Threatened)	
		CFP: California Fully Protected	

Note: (1) Data based on review of CNDDDB (2005) and other pertinent literature sources. For most taxa the CNDDDB is interested in sightings for the presence of resident populations. For some species (primarily birds), the CNDDDB only tracks certain parts of the species range or life history (e.g., nesting locations). The area or life stage is indicated in parenthesis after the common name.

### **Thresholds for Determining Significance**

Impacts on biological resources may be considered potentially significant if the proposed project would:

- Adversely affect any endangered or threatened species and any species identified as candidate, sensitive, or special status local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Interfere substantially with the movement of any resident or migratory fish or wildlife species; substantially diminish habitat for fish, wildlife, or plants 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.

### **Project Compliance with Existing Regulations**

The United States Fish and Wildlife Service (FWS), pursuant to the Federal Endangered Species Act (ESA), prohibits "take" of endangered or threatened listed species. This protection prohibits all direct or indirect harm to any listed species. Thus, if a listed species is present on the project site and take of the species cannot be avoided, the project proponent must obtain an incidental take permit under Section 10 of the ESA, or incidental take authorization through Section 7 Consultation, from the FWS.

California Endangered Species Act (Fish and Game Code 2050 *et seq.*) (CESA) establishes that it is the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that state agencies should not approve projects which would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. CESA requires state lead agencies to consult with the Department of Fish and Game (CDFG) during the CEQA process to avoid jeopardy to threatened or endangered species.

The Federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Sections 3503, 3503.5, and 3800 prohibit the take, possession, or destruction of any birds, their nests or eggs. The MBTA prohibits individuals to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention for the protection of migratory birds or any part, nest, or egg of any such bird." (16 U.S. Code 703) The project proponent will be required to comply with the MTBA and California Fish and Game Code, which prohibits the take of migratory and native bird species that may utilize the site.

In accordance with the Mitigation Fee Act (California Government Code, Section 66000 *et seq.*), City of Ontario established a development impact fee for development in the New Model Community (NMC). The primary purpose of the fee is to acquire and restore mitigation lands to offset impacts to species now living in the NMC and impacts to existing open space. Fees collected will be used to advance the goals, objectives and policies set forth in the general plan amendment (GPA) for the NMC adopted in 1998 and any subsequent GPA. Residential, commercial, and industrial development is currently required to pay \$4,320 per acre for the acquisition of open space. Therefore, the proposed project will pay approximately \$799,200 for open space acquisition based upon the current fee. Fees in place at the time of development will apply.

The proposed Specific Plan is also subject to the applicable terms and conditions of the Settlement and General Release Agreement (Agreement), November 28, 2001 (Ontario, 2002). The purpose of the Agreement is to settle and release fully and completely all claims of Endangered Habitats League and Sierra Club (Petitioners) in a law suit against the City of Ontario (the Respondent) commenced in February, 1998 (Ontario, 2002). The Agreement addressed and established a means to provide mitigation for certain potential future environmental effects that could result from development occurring in Annexation Area 163 and covered potential environmental impacts in Annexation Area 163 to the Burrowing Owl, the DSF, raptor foraging and wildlife habitat, loss of open space, and actual and potential habitat and agricultural lands. The Agreement also covered other sensitive species, both listed and non-listed, that inhabit or may inhabit similar habitat in Annexation Area 163.

### **Design Considerations**

No specific design measures were implemented to avoid or reduce potentially significant impacts to biological resources.

### **Environmental Impacts Before Mitigation**

*Threshold: Have substantial adverse effects, 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 the U.S. Fish and Wildlife Service*

Those species listed in Tables III-3-A and III-3-B above, as "not expected" or "low potential" would not likely be found on the site or utilize the site due to the lack of appropriate habitat characteristics and/or the degree of disturbance on the site. As these species are not expected on the site or to use the site, development of this site for project implementation would not significantly affect these species. Direct impacts to these species from project implementation are less than significant. Although the site has been degraded from long-standing agricultural uses the site may still provide marginal foraging habitat for wildlife. The loss of potential foraging habitat for raptors and other wildlife, an indirect impact from project implementation, is reduced to a less than significant impact by payment of the established mitigation fees. These mitigation fees will be used to acquire and restore mitigation lands to offset potential indirect impacts to these species.

**Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*): Federally Endangered**

The Delhi sands flower-loving fly is found primarily on fine, sandy soils, often with wholly or partially consolidated dunes. These soil types are generally classified as the “Delhi” series (primarily Delhi fine sand). The habitat for this species is restricted to western Riverside and San Bernardino Counties, along the former floodplains of Lytle Creek and the Santa Ana River. This species is present year round, but is only visible above ground when it emerges as an adult for foraging and mating in August and September. The remainder of the year is spent as an egg, pupa, and subsequent molt stages until adulthood. The habitat for this species has historically been limited and agricultural practices and ongoing development of the San Bernardino Valley area has resulted in the extent of Delhi sands being further reduced. The species is listed as Endangered by the Service. The California Department of Fish and Game has not formally designated this species.

As mapped in the Soil Survey of San Bernardino County, Southwestern Part, California the site contains Delhi sands (Db) and Hilmar fine sandy loam (Hr). Hilmer soils, which are not ordinarily associated with potential DSF habitat. Most of the exposed surface soils present are associated with the large detention basin located in the southwestern portion of the site (portion of the Armada property). An artificial mound of soil debris is located north of the basin, presumably associated with recent excavation of the area. Most of this area now supports consolidated/compacted soils from recent heavy equipment/debris dumping activities. No suitable substrate consistent with potential DSF habitat is present in this area. Protocol surveys were conducted for DSF in 2001 and 2002 on the Armada, LLC portion of the Specific Plan and a protocol survey was also conducted in 2005 within the Armada, LLC and Amberhill Development, LTD portions of the Specific Plan. No DSF adults, eggs, larvae or pupae or sign (i.e., discarded pupal cases) were observed during the survey efforts. Therefore, project impacts to this species are considered to be less than significant in the Armada and Amberhill portions of the site.

The northern portion of the Specific Plan, or the Pietersma property, contains mapped Delhi fine sandy soils. These properties contain active dairy, cultivated fields, and a few residences. As outlined in the General Biological Habitat Assessment prepared by Ecological Sciences, Inc. (2005) the entire site, including the Pietersma property, does not contain suitable habitat for the DSF. The species was not detected in focused surveys conducted from 2001-2005 on the southern portions of the specific plan area and is not expected to occur on the Pietersma site. The proposed project is not expected to result in direct adverse impacts to the DSF. Because the project site does not contain suitable habitat for the species, development of this site would not constitute a loss of habitat for the species and therefore would not add to the cumulative loss of habitat for this species.

***The Burrowing Owl (*Athene cunicularia*): Federal Species of Concern, Federal Migratory Nongame Birds of Management Concern, California Species of Special Concern***

The burrowing owl, a federal Species of Concern and state Species of Special Concern, has a "high potential" of occurrence on the project site, and therefore of being directly and/or indirectly impacted by development of the site. This species was recorded on the project site in 2001 during focused DSF surveys (L&L Environmental 2001) but has not been observed again onsite since this initial observation. The burrowing owl is known to utilize less than optimal and/or

disturbed conditions and because of the migratory nature of the species and the fact that these owls may utilize multiple burrows throughout any given year, there is a relatively high potential for burrowing owls to utilize the site in the future even though they were not observed on site in recent surveys. Therefore, if burrowing owls occupy the site when grading and construction will begin these activities could result in displacement of burrowing owls from the site or even loss of individual owls and eggs or young if active nests are present and grading will occur during the breeding season (generally March through August). Implementation of mitigation measure **MM Bio 1**, outlined below, will reduce potentially significant impacts to the burrowing owl from project implementation to less than significant levels.

**Loggerhead Shrike** (*Lanius ludovicianus*): *California Species of Special Concern*

The loggerhead shrike is known to forage over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, dairy operations, alluvial deposits, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs. Individuals like to perch on posts, utility lines and often use the edges of denser habitats. In some parts of its range, pasture lands have been shown to be a major habitat type for this species, especially during the winter season and breeding pairs appear to settle near isolated trees or large shrubs. The highest density occurs in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats; it occurs only rarely in heavily urbanized areas, but is often found in open cropland (<http://ecoregion.ucr.edu/full.asp?>).

The loggerhead shrike was observed during field surveys conducted in 2005 by Ecological Sciences, Inc. Although the site contains suitable foraging for this species loggerhead shrike are not expected to nest onsite due to the lack of suitable nesting habitat. The proposed project is not expected to result in direct impact to the loggerhead shrike. The proposed project would however result in an indirect impact to this species by eliminating foraging habitat. This loss habitat is reduced to a less than significant impact by payment of the established mitigation fees. These mitigation fees will be used to acquire and restore mitigation lands to offset potential indirect impacts from this project.

**White-tailed kite** (*Elanus leucurus*): *Federal Migratory Nongame Bird of Management Concern, California Fully Protected Species*

The white-tailed kite (*Elanus leucurus*) is an uncommon to fairly common in local areas of the coastal portion of Southern California. It also occurs as a rare visitor and occasional nesting species in the western edge of the desert. It is only rarely found in the eastern parts of the desert. The white-tailed kite inhabits open country. It preferentially forages in grasslands, agricultural fields, marshes, and even roadside borders where rodent prey is abundant. Since it hunts on the wing, relying on visual observation of its prey, it prefers open, flat country. Nesting habitat is commonly large stands of woodland near open fields. The historical range of this species occurs from South America up to southern North America. After an early 20th increase in population, this species seems to have slowed in juvenile recruitment, and has experienced steep declines in local populations. The white-tailed kite is present in southern California year round.

Raptors and all migratory bird species, whether listed federally or not, receive protection under the Migratory Bird Treaty Act (MBTA) of 1918. Nesting habitat for the white-tailed kite is also protected by CDFG Section 355, which brings the state of California into agreement with the provisions of the MBTA.

The white-tailed kite was observed during focused DSF surveys in 2001 (L&L Environmental 2001) but was not observed during the 2002, 2003 and 2005 surveys. White-tailed kite was determined to have a "high potential" for occurrence on site. The site contains suitable foraging habitat but does not contain suitable nesting habitat. The proposed project is not expected to result in direct impacts to the white-tailed kite but would result in indirect impacts from the loss of foraging habitat for this species. This loss of habitat is reduced to a less than significant impact by payment of the established mitigation fees. These mitigation fees will be used to acquire and restore mitigation lands to offset potential indirect impacts from this project.

**California horned lark** (*Eremophila alpestris actia*): *California Species of Special Concern*

Within southern California, California horned larks breed primarily in open fields, (short) grasslands, and rangelands. Grasses, shrubs, forbs, rocks, litter, clods of soil, and other surface irregularities provide cover (<http://ecoregion.ucr.edu/full.asp?>). The California horned lark was not observed on the site during any of the field surveys. However, because this species is known to utilize active agricultural areas throughout project vicinity, it is considered to have "high potential" to utilize the project site for foraging activities. No nesting habitat is present on-site, therefore, the proposed project will not result in direct adverse impacts to the California horned-lark. The proposed project would result in the loss of foraging habitat for this species. This loss habitat is reduced to a less than significant impact by payment of the established mitigation fees. These mitigation fees will be used to acquire and restore mitigation lands to offset potential indirect impacts from this project.

**Northern harrier** (*Circus cyaneus*): *California Species of Special Concern*

This species inhabits grasslands, marshes, wet meadows, scrub areas, and agricultural lands. Like an owl, the harrier uses its round, sound-reflecting facial ruff to locate prey by sound. It can be seen flying low to the ground as it hunts over open grassland, agricultural fields, and coastal and freshwater marshes. Harriers build flimsy nests on the ground or in thick low-growing vegetation. As with many species, urbanization, and agricultural development have led to population declines, however, the species can occur with relatively high frequency and abundance in the region, and is relatively widely distributed throughout Southern California. This species was deemed by resource agencies to be too widespread and common to warrant listing as threatened or endangered, and as such, has no current state or federal listing status.

The northern harrier was not observed on site during surveys conducted for this project. The site does not contain suitable nesting habitat for this species and the proposed project is not anticipated to result in direct adverse impacts to the northern harrier. The northern harrier is considered to have "moderate potential" to occur onsite due to the presence of potential foraging habitat. The proposed project would result in the loss of foraging habitat for this species. This loss habitat is reduced to a less than significant impact by payment of the established mitigation fees. These mitigation fees will be used to acquire and restore mitigation lands to offset potential indirect impacts from this project. Impacts to open fields where foraging activities may occur are

considered cumulative impacts and are discussed in Section IV, Mandatory CEQA Topics of this DEIR. Following implementation of biological mitigation measures, cumulative impacts related to raptor foraging and nesting habitat are considered less than significant.

**Golden eagle (*Aquila chrysaetos*): California Species of Special Concern, California Fully Protected Species**

Within southern California, the golden eagle favors grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys and uses rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, and cliffs and rock outcrops. Nesting is primarily restricted to rugged, mountainous country. Secluded cliffs with overhanging ledges and large trees are used for cover. Perhaps it is more common in Southern California than in north regions. Golden eagles are sparsely distributed throughout most of California, occupying primarily mountain and desert habitats (<http://ecoregion.ucr.edu/full.asp?>).

Although relatively uncommon, the golden eagle has a moderate potential to forage over the project site due to the presence of suitable prey species (rabbits and other small mammals) and because the species is known to occur in the project vicinity. However, no suitable nesting habitat is present on the project site. The proposed project is not expected to result in direct adverse impacts to the golden eagle. The proposed project however will likely result in the loss of foraging habitat for this species. This loss habitat is reduced to a less than significant impact by payment of the established mitigation fees. These mitigation fees will be used to acquire and restore mitigation lands to offset potential indirect impacts from this project.

**Ferruginous Hawk (*Buteo regalis*): Federal Species of Concern, Federal Migratory Nongame Bird of Management Concern, California Species of Special Concern**

The ferruginous hawk is an occupant of open dry country and will perch on badger mounds or hillocks when trees or posts are not available. It requires large, open tracts of grasslands, sparse shrub, or desert habitats with elevated structures for nesting. Within Southern California, ferruginous hawks typically winter in open fields, grasslands, and agricultural areas (<http://ecoregion.ucr.edu/full.asp?>).

Because the project site and surrounding vicinity exhibit suitable foraging habitat for the ferruginous hawk, it is considered to have a moderate potential to occur within the project site. However, given the site's geographic location, the species is not expected to nest onsite. The proposed project will not result in direct adverse impacts to the Ferruginous hawk. The proposed project however will likely result in the loss of foraging habitat for this species. This loss habitat is reduced to a less than significant impact by payment of the established mitigation fees. These mitigation fees will be used to acquire and restore mitigation lands to offset potential indirect impacts from this project.

**San Diego black-tailed jackrabbit (*Lepus californicus bennettii*): California Species of Special Concern**

The black-tailed-jackrabbit occupies many diverse habitats, but primarily is found in arid regions supporting shortgrass habitats. Jackrabbits typically are not found in high grass or dense brush where it is difficult for them to locomote, and the openness of open scrub habitat probably is

preferred over dense chaparral. Jackrabbits are common in grasslands that are overgrazed by cattle and they are well adapted to using low-intensity agricultural habitats (<http://ecoregion.ucr.edu/full.asp?>). Because the San Diego black-tailed jackrabbit is known to utilize agricultural areas in the surrounding vicinity, it is considered to have a moderate potential to occur within the project site. Although it may occur on site, the proposed project is not expected to result in significant direct impacts to the jackrabbit due to its mobility and adaptability. The proposed project would result in the loss of habitat for this species. This loss habitat is reduced to a less than significant impact by payment of the established mitigation fees. These mitigation fees will be used to acquire and restore mitigation lands to offset potential indirect impacts from this project.

### ***Foraging and Nesting Habitat***

Approximately 40-45% of the proposed 223 acre project site is currently open grazing fields and pastureland. The quality of the vegetation and other aspects of foraging habitat are greatly diminished on the project site due to discing and grazing. The loss of these pastures as a result of development of the proposed project could have indirect adverse effects on raptor species, such as white-tailed kite, northern harrier, ferruginous hawk, golden eagle, burrowing owl, as well as mammals of concern like the San Diego black-tailed jackrabbit, by adding to a cumulative loss of potential habitat areas in the project vicinity.

The project, as proposed, will also eliminate some or all of the windrows of eucalyptus trees located along the south boundary of the Pietersma property and along the existing easterly edge of the Armada, LLC property. Ornamental species such as mulberry (*Morus* sp.), sweetgum (*Liquidamber* sp.), oleander (*Nerium oleander*), ash (*Fraxinis* sp.), and Mexican fan palm (*Washingtonia robusta*) were also recorded on the project site, around residential units. According to the most recent biological assessment, potentially occurring sensitive raptor species are not expected to breed and nest in the area. However, some more common species may potentially nest in the windrows (e.g., red-tailed hawk). Development of the project site in conjunction with other development in the area will result in a cumulative loss of potential foraging and nesting habitat for raptors in the project area.

According to the City of Ontario New Model Colony (NMC) General Plan Amendment, it is likely that most of the 8,200-acre NMC area will be converted to urban land uses and that there will be a net loss of raptor habitat. It cannot be predicted how much of the area will remain as agricultural land, as the policies in the General Plan are mainly intended to prevent new urban developments from adversely impacting current agricultural activities. However, these policies are not intended for raptor conservation. The mitigative value of the policies (Policy 18.1-18.3) are considered minimal and do not reduce the potential impacts to raptors or other species to less than significant levels (NMC, GP EIR). This issue was overridden in the City of Ontario New Model Colony General Plan Amendment Final EIR. The statement of override was contested in a lawsuit filed by the Endangered Habitats League, *et al.*, following certification of the GPA for the NMC Final EIR, which is considered legally adequate. A settlement was reached and the terms within the Settlement Agreement addressed and mitigated for cumulative losses of raptor nesting and foraging habitat through the establishment of mitigation fees. The proposed project will be subject to pay these fees and therefore, potential cumulative impacts related to raptor foraging and nesting habitat are considered less than significant.

*Threshold: Interfere substantially with the movement of any resident or migratory fish or wildlife species; or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery.*

Wildlife movement corridors link together areas of suitable habitat for wildlife species. The combination of topography and other natural factors, in addition to urbanization, has fragmented or separated large open space areas throughout the project vicinity. The fragmentation of natural habitat creates isolated ‘islands’ of habitat that may not provide sufficient area to accommodate sustainable populations of wildlife. Wildlife corridors, therefore, provide for a beneficial accommodation of species, that otherwise would be separated by rugged terrain, changes in vegetation by human disturbance, or by the encroachment of urban development.

The project site is not considered an essential component of any regional movement corridor for wildlife species that would serve as a link between large open space areas. No distinct wildlife corridors could be identified on the property and habitat fragmentation has already occurred in the areas surrounding the site due to agricultural practices, housing development, and road construction. The use of this site by migratory bird and wildlife species is limited by the lack of suitable habitat, current and past land uses, and roads that make up the site boundaries. The proposed project will not substantially interfere with the movement of resident or migratory fish or wildlife species or established corridors; impacts are less than significant.

*Threshold: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

According to the City of Ontario NMC General Plan Amendment, there are no specific local policies or ordinances established to protect biological resources that would relate to the project site. The project will be subject to the settlement related to the GPA for the NMC lawsuit regarding wildlife and habitat preservation. Therefore, this issue is considered to be less than significant.

*Threshold: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community conservation Plan, or other approved local, regional, or state habitat conservation plan.*

The project site is not part of any existing biological reserve or biological conservation planning area and has not been proposed as part of the potential conservation lands now being analyzed for the region. Accordingly, this threshold does not apply to the project and the issue is considered to be less than significant.

The County of San Bernardino is in the process of developing the San Bernardino Valley-wide Multi-Species HCP (MSHCP). The MSHCP encompasses approximately 500 square miles containing six unique habitat types, six state endangered or threatened species, 13 federally endangered or threatened species, and over 53 species of special concern. San Bernardino County, through their Natural History Museum staff, has been conducting biological and botanical surveys for the past several years in order to identify habitat needs and requirements for the various sensitive species in the planning area. However, at this time, the plan has not been drafted and no applicable provisions can be used for this EIR.

### **Proposed Mitigation Measures**

*Burrowing owls are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) and CDFG Code sections 3503, 3503.5, and 3800 and are considered a Species of Special Concern by the California Department of Fish and Game. These sections prohibit take, possession, or destruction of birds, their nests, or eggs. The following mitigation measure shall be implemented to eliminate or reduce potentially significant impacts to burrowing owls.*

**MM Bio 1:** There is a possibility of owl colonization within the project site prior to site grading. To ensure that no direct loss of individuals occurs, mitigation will be carried prior to initiation of on-site grading activities for each development phase. A pre-construction survey for resident burrowing owls shall be conducted by a qualified biologist. The survey shall be conducted 30 days prior to construction activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site shall be resurveyed for owls.

If owls are determined to be present within the construction footprint, they shall be captured and relocated. If non-breeding owls must be moved away from the disturbance area, passive relocation techniques will be used. The pre-construction survey and any relocation activity shall be conducted in accordance with the CDFG Report on Burrowing Owl Mitigation, 1995. According to CDFG guidelines, mitigation actions will be conducted from September 1 to January 31, which is prior to the nesting season. However, burrowing owl nesting activity is variable, and as such the time frame will be adjusted accordingly. Should eggs or fledglings be discovered in any owl burrow, the burrow cannot be disturbed (pursuant to CDFG guidelines) until the young have hatched and fledged (matured to a stage that they can leave the nest on their own).

Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by the Department of Fish and Game verifies through non-invasive methods that either: a) the adult birds have not begun egg-laying and incubation; or b) the juveniles from the occupied burrows are foraging independently and are capable of independent survival. If a biologist is unable to verify one of the above conditions, then no disturbance shall occur within 300 feet of the burrowing owl's nest during the breeding season to avoid abandonment of the young.

Passive relocation can be used to exclude owls from their burrows (outside the breeding season or once the young are able to leave the nest and fly) by installing one-way doors in burrow entrances. These one-way doors allow the owl to exit the burrow, but not enter it. These doors should be left in place 48 hours to ensure owls have left the burrow. Artificial burrows should be provided nearby. The project area should be monitored daily for one week to confirm owl use of burrows before excavating burrows in the impact area. Burrows should be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible pipe should be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow.

**MM Bio 2:** The project proponent shall be required to pay City of Ontario open space mitigation fees. Fees collected will be used “to acquire and restore mitigation lands to offset impacts to species now living in the New Model Community and impacts to existing open space”, according to the City of Ontario Development Impacts Fee Calculation Report and the Settlement and general Release Agreement. Development is currently required to pay \$4,320 per

acre. Therefore, the proposed project will pay approximately \$963,360 for open space acquisition based upon the current fee.

**MM Bio 3:** While project impacts to individual raptor species were considered to be not significant, the following mitigation measure will also be incorporated in order to eliminate or reduce any potential impacts to raptors and/or migratory birds. Construction and/or removal of windrow trees will occur outside of the nesting season (February 1 through August 31). If tree removal activities must occur during the breeding season, the mitigation measure in MM Bio 4 shall be implemented.

**MM Bio 4:** If project construction activities involving heavy equipment and/or windrow tree removal are to occur during the nesting/breeding season (between February 1<sup>st</sup> and August 31<sup>st</sup>) of potentially occurring sensitive bird species, a pre-construction field survey shall be conducted by a qualified biologist to determine if active nests of species protected by MBTA or CDFG are present in the construction zone or within a buffer of 500 feet. Pre-construction nesting/breeding surveys shall be conducted in all CDFG jurisdictional areas and within windrow trees. If no active nests are found during the survey, construction activities may proceed.

If active nests are located during the pre-construction surveys, no grading, heavy equipment, or tree removal activities shall take place within at least 500 feet of an active listed species or raptor nest, 300 feet of other sensitive bird nests (non-listed), and 100 feet of most common songbird nests.

#### **Summary of Project-Specific Environmental Effects After Mitigation Measures are Implemented**

After mitigation measure MM Bio1 identified above is implemented, potential adverse impacts associated with burrowing owls on the project site will be reduced to less than significant levels. Implementation of MM Bio 2 through 4 will reduce potential direct adverse impacts associated with loss of foraging and nesting habitat for raptors and migratory birds and/or potential direct impacts to less than significant levels.

#### **Summary of Cumulative Environmental Effects After Mitigation Measures are Implemented**

The project, as proposed, will eliminate some or all of the windrows of eucalyptus trees located along the property boundaries and open fields throughout the site. In the long term, development of the project site in conjunction with other development in the GPA for the NMC area will result in cumulative losses of potential foraging and nesting habitat. The discussion of cumulative impacts is limited because the Specific Plan is consistent with the plans used in the evaluation of each environmental issue area discussed here and in Section IV-1, Cumulative Environmental Effects.

According to the GPA for the NMC, it is likely that most of the NMC area will be converted to urban land uses and that there will be a net loss of raptor habitat. It cannot be predicted how much of the area will remain as agricultural land, as the policies in the General Plan are mainly intended to prevent new urban developments from adversely impacting current agricultural

activities. However, these policies are not intended for raptor conservation. The mitigative value of the policies (Policy 18.1-18.3) are considered minimal and do not reduce the potential impacts to raptors or other species to less than significant levels (GPA for the NMC EIR). This issue was overridden in the City of Ontario Sphere of Influence General Plan Final EIR. The statement of override was contested in a lawsuit filed by the Endangered Habitats League, et al., following certification of the GPA for the NMC Final EIR. Terms within the Settlement Agreement addressed and mitigated for cumulative losses of raptor nesting and foraging habitat through the establishment of mitigation fees. The proposed project will be subject to pay these fees (MM Bio 2) and avoid disturbance of nesting raptors (MM Bio 3 and 4). Therefore, cumulative impacts related to raptor foraging and nesting habitat are considered less than significant.

## 4. CULTURAL RESOURCES

The focus of the following discussion is related to the potential impacts to onsite historic and archaeological resources, paleontologic resources, as well as archaeological human remains and archaeological religious uses of the project site, if any, and the project's potential to alter those resources through construction and operation. For the purposes of potential impacts to cultural resources, no difference exists between the use of the 10-acre school site for a school or for houses, so this issue is not addressed in the following analyses.

### **Setting**

#### *Natural Setting*

The Esperanza Specific Plan project site includes approximately 223 acres located on the boundary between the City of Ontario and Riverside County, at the northwesterly intersection of Bellegrave Avenue and Hamner/Milliken Avenue. The region exhibits Delhi sands soil type and the Hilmar series sands type that has been heavily impacted by agricultural tilling and the introduction of cattle manure into the topsoil. Bedrock is several hundred feet below the present ground surface.

On-site topography is very flat with slightly raised areas adjacent to the old Eucalyptus windbreaks located diagonally, along the south boundary of the Pietersma property and along the existing westerly right-of-way of Hamner/Milliken Avenue. The elevation of the project area ranges from about 720 feet at the northern edge to about 690 feet in the southwestern corner.

#### *Cultural and Historical Setting*

The following information about Cultural and Historical Setting is attributable to and summarized from several sources including: the GPA for the NMC; Historic Context for the New Model Colony Area; Phase I Archaeological Survey and Paleontological Records Search of the Westra Dairy Residential Project, Ontario, CA; American Local History Network Website for San Bernardino County; Ontario California Resource Guide: History, and the Pasadena City College Los Angeles River Project: History.

The Esperanza Specific Plan project site is located in an area that was historically occupied by Native Americans. For several thousand years before San Bernardino County was created, many Native American peoples inhabited the area. These included (in broad terms) the Serrano in the mountains and high desert, the Cahuilla in the San Gorgonio Pass and San Jacinto and Santa Rosa Mountains (now mostly in Riverside County), Chemehuevi and Mojave along the Colorado River, and to a smaller extent, the Gabrielinos in the southwest area of the county, which now includes the City of Ontario. The Gabrielinos were known to roam widely in their search for food but always gravitated to sites for their villages mainly because of the location of water sources. They relied heavily on the water for their daily activities. The earliest known records of European contact with Southern California Native Americans date to the mid-1500s, representing the early explorations of the Spanish. When Spain claimed California for its own, the Spaniards began putting a series of missions in what was then called Alta California. While no missions were ever built in what would become San Bernardino County, the San Bernardino County area played a vital role during the mission period. The San Gabriel mission claimed lands

in what is now the San Bernardino Valley, the Cajon Pass, and the San Gorgonio Pass. These lands were used for grazing of the large herds of cattle and sheep that belonged to the missions. In 1776, and again in 1778, Juan Bautista de Anza, an army captain charged with discovering an overland route from the Mexican state of Sonora to San Gabriel and Los Angeles, passed through the southwestern corner of San Bernardino County, near present-day Ontario. Also during the 1770s, Father Garces traversed the Mojave Desert and entered coastal Southern California through the Cajon Pass.

California's Mission Period lasted until the early 1830s, when Mexico, having taken over California from Spain 10 years earlier, secularized the missions, and began doling out the vast mission holdings to influential citizens known to the governors of California. The "grants" were called ranchos, and many of the ranchos in San Bernardino County have lent their names to modern-day locales: Chino, Cucamonga, San Bernardino, and the San Gorgonio Pass. The Specific Plan is located within the Rancho Santa Ana del Chino and immediately adjacent to the former Rancho Jurupa, located in what is now Riverside County. The rancho period lasted until the Mexican War of 1846–1848. Alta California became a state of the United States of America in 1850. Although the new U.S. government confirmed many of the existing rancho land titles, large land grants for new ranchos were not awarded. The free range cattle ranching activities of the Spanish and Mexican periods eventually came to an end as agriculture replaced the herds.

In 1850, when the first California legislature met to divide the new state of California into its original 27 counties, the area that would become San Bernardino County was then in the huge San Diego County. A year later, it became part of the expanding Los Angeles County. But in April, 1853, a bill was introduced to divide off the eastern portion of Los Angeles County—and San Bernardino County was born. Although San Bernardino County had its area cut 2 more times since its creation (in 1872, a large portion in the north was given to Inyo County, and in 1893 the southernmost sliver was divided off to form part of Riverside County), San Bernardino County remains the largest county in the United States today.

Disastrous floods of 1861-62 wiped out communities and ranches directly adjacent to the Santa Ana River and destroyed the rich vegetative bottomlands of the river, replacing them with a sandy wasteland (L&L, 2002). This forced ditch rebuilding and these were extended upstream to catch water before it seeped into the ground. After the flooding, it was two years before rain fell on the area. The drought and the flood altered the agricultural mechanisms in the area forever. Once known as "Wineville," areas north and east of the project site had been planted in grapes and the land in what is now Mira Loma was settled in 1882. In 1930, the name was changed to Mira Loma, due to prohibition and because of national attention to a series of murders committed in a Wineville ranch.

By the 1880s, San Bernardino County was served by two transcontinental railroad lines, the Southern Pacific and an offshoot of the Central Pacific. In the 1870s, navel oranges were planted at Riverside (then in San Bernardino County), found to do extremely well, and opened up the San Bernardino Valley to several ventures which over the next 30 years would be built around farming activities such as vineyards and citrus orchards. The completion of the railroads and the burgeoning citrus industry converged to create a land boom in the valley. About thirty of these farming communities were incorporated in the last twenty years of the nineteenth century, including Ontario, Chino, Upland, and Redlands.

The Model Colony of Ontario was started as a private venture in 1881 by George Chaffey and his brother, William. The Chaffey brothers purchased 6,000 acres that would eventually become the cities of Ontario and Upland. As with Riverside and some other fortunate communities in these inland valleys, the Chaffey's created a mutual water company in which each landowner became a stockholder. Unique to Ontario was the set-aside of land within the community for an agricultural college. By 1883, Chaffey College was constructed as the first college in San Bernardino County. Ontario incorporated in 1891. The City limits did not include the proposed project area, however, which remained in open grazing and other agricultural uses.

The dairy industry moved into the Chino Valley in three phases or eras, each reflective of a particular historic period in dairy farming. As described in the Draft City of Ontario Historic Context for the New Model Colony Area, September 2004 (Appendix E), the three definable historic periods include: 1) the pre-1930 rural residential or free-grazing dairy properties, 2) the 1930–1949 dry lot dairying with mechanization, and 3) post-1950 scientific, large capacity dairies. The earliest period occurred between 1900 and 1930 and consisted of free grazing cattle located on lots smaller than 9 acres that were likely located near Riverside Drive or Euclid Avenue, or a few streets south or east from these major arterials. The second wave of dairies in the Chino Valley occurred between 1930 and 1949. Early in this period lot sizes remained small, but by the end of this era, larger lots were the norm. Whereas earlier phase dairies were operated by one family with no more than one house on a parcel, by the end of the second era, multiple generations lived on the farms, many more cattle were present and more mechanization was seen. Post 1950 dairies were much larger and often encompassed many parcels totaling 40 acres or more. Thus, it is important for follow-up surveys for historic resources to evaluate farms as a whole, not on a parcel by parcel basis.

By the 1950s, Ontario was experiencing a massive post-war housing boom along with the rest of Southern California. The rapid decline in agricultural land spurred the San Bernardino Board of Supervisors in 1967 to designate 14,000 acres of agricultural land located south and west of the City of Ontario as an “agricultural preserve.” This area was mostly used as dairy farms by Dutch, Basque and Portuguese farmers, and included the proposed project site. By the 1980s, this area had become a world-class dairy area with more cows per acre and higher milk yields than anywhere else in the world. Escalating dairy operation costs and another housing boom caused the long-term agricultural uses of these lands to be forfeited and in 1999, 8,200 acres of the agricultural preserve were annexed into the City of Ontario, 5,000 acres were annexed by the City of Chino, and the City of Chino Hills annexed the remaining acres. Ontario named its portion of the former San Bernardino County Agricultural Preserve the “New Model Colony,” after the original “Model Colony” established by the Chaffey brothers.

### **Thresholds for Determining Significance**

Impacts related to cultural resources may be considered significant if the proposed project would:

- Cause a substantial adverse change in the significance of an historical resource as defined in California Code of Regulations § 15064.5, the City of Ontario Historic Context for the New Model Colony Area, September 2004, and the Historic Preservation Ordinance (Title 26 of the City of Ontario Development Code);

- Cause a substantial adverse change in the significance of an archaeological resource as defined in California Code of Regulations §15064.5;
- Disturb any human remains, including those interred outside of formal cemeteries.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;

The City of Ontario has further defined levels of integrity of historic resources within the NMC to assist with determining the significance of impacts to a particular resource and recommended mitigation approaches when adverse changes will occur as a result of a proposed action. These guidelines are found in Ontario's Historic Context for the New Model Colony Area (Appendix E). In addition to CEQA, this Historic Context document and the City's Historic Preservation Ordinance are used as the basis for the following analyses of impacts to potentially historic resources and the development of mitigation measures.

### **Project Compliance with Existing Regulations**

*The National Historic Preservation Act Standards and Guidelines for Section 106 Consultation (NHPA).* Section 106 of the NHPA requires a Federal Agency head with jurisdiction over a federal, federally assisted, or federally licensed undertaking to take into account the effects of the agency's undertaking on properties included in or eligible for the National Register of Historic Places (NRHP) and, prior to approval of an undertaking, to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on the undertaking. The proposed project is being privately developed, funded and owned, and does not include/affect any NRHP listed or eligible properties. Therefore, it does not fall under federal jurisdiction or require federal assistance so the Section 106 consultation process does not apply.

*California Environmental Quality Act (CEQA).* Sections 21083.2 and 21084.1 of CEQA deal with the definition of a historical resource, unique archeological resource and non-unique archaeological resource. Section 21083.2 directs the lead agency to determine whether the project may have a significant effect on unique archaeological resources. If the lead agency determines that the project may have a significant effect on unique archaeological resources, the environmental impact report shall address the issue of those resources. Section 21084.1 directs the lead agency to determine whether the project may have a significant effect on historical resources, irrespective of the fact that these historical resources may not be listed or determined to be eligible for listing in the California Register of Historic Resources, a local register of historical resources or they are not deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1.

*Native American Graves Protection and Repatriation Act (NAGPRA).* NAGPRA is a Federal law that provides for the protection of Native American graves and an opportunity for the repatriation of appropriate human remains or cultural items. Cultural items include associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony. The excavation and inadvertent discovery provisions of NAGPRA apply only to Federal and tribal lands. Under NAGPRA, tribal lands are lands (including private lands) within the exterior boundaries of an Indian reservation. If Native American remains are discovered during a construction project and the project is not located on Federal or tribal land, then the excavation and inadvertent discovery

provisions of NAGPRA do not apply. The proposed project is not located on Federal or tribal lands. Therefore, the provisions of NAGPRA would not apply. However, other State and local cultural preservation and cemetery laws do apply.

*Health and Safety Code Section 7052 and 7050.5.* Section 7052 of the California Health and Safety Code states that disturbance of Indian cemeteries is a felony. There are no known Indian cemetery sites within the Project area. Section 7050.5 of the California Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are found to be Native American, the coroner must contact the California Native American Heritage Commission.

*SB 18, California Tribal Consultation Guidelines.* The State of California Governor's Office of Planning and Research developed these guidelines in order to provide guidance to cities and counties on the process for consulting with Native American Indian tribes during the adoption or amendment of local general plans or specific plans (defined in Government Code §65450 et seq.). SB 18 requires local agencies to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process thereby providing tribes an opportunity to participate in local land use decisions at an early planning stage. Tribal consultation and notice requirements of SB 18 took effect on March 1, 2005, however this project is not subject to the provisions of SB 18 because the processing of the project applications and the NOP for the EIR preceded that date.

*Historic Preservation Ordinance of the City of Ontario.* The Historic Preservation Ordinance (Title 26 of the City of Ontario Development Code) contains criteria and procedures for the designation of historic resources, such as Historic Landmarks, Historic Districts, Architectural Conservation Areas and Automatic Designations. It identifies a set of criteria for determining if a potentially historic structure that is threatened by major modifications or demolition is a Tier I, Tier II or Tier III structure, with Tier I and II structures being of the highest historic value for preservation. The Ordinance establishes required mitigation measures and mitigation fees if major modifications or demolitions are approved. It also contains guidelines for converting existing space within historic structures to other uses, and for new development of new buildings within historic districts or areas.

### **Design Considerations**

The proposed Esperanza Specific Plan has not been designed to specifically avoid potential project impacts to historic or archaeological resources within the project site, as none have been identified. All structures and surface features are proposed to be demolished.

## **Environmental Impacts Before Mitigation**

*Threshold: The proposed project would cause a substantial adverse change in the significance of an historical resource as defined in California Code of Regulations § 15064.5, the City of Ontario Historic Context for the New Model Colony Area, September 2004, and the Historic Preservation Ordinance (Title 26 of the City of Ontario Development Code).*

Pursuant to Section 15064.5, “historical resource” generally means a resource listed in, or determined eligible for, listing in the California Register of Historical Resources; a resource included in a local register of historical resources or identified as significant in an historical resource survey; or any object, building, structure, site, area, place, record, or manuscript which the lead agency determines to be historically significant. Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired. The “local agency,” City of Ontario, determines significance, within the City as a whole, based on its Historic Preservation Ordinance and, within the NMC in particular, based on the Historic Context for the New Model Colony Area.

The evaluation of potential historic resources included three increasingly more detailed sources/approaches including: records searches at the appropriate Archaeological Information Centers and review of the Phase I Archaeological Survey, reconnaissance level surveys of structures and the development of an historic context and criteria for determining the significance of resources within the NMC, and preparation of Form B site surveys.

### **Records Search and Phase I Archaeological Survey**

A records search from the Archaeological Information Center (AIC) of the San Bernardino County Museum was requested and provided for the Esperanza Specific Plan (formerly Legacy) site (see Appendix E). The search indicated that a total of nine (9) cultural resources surveys had been conducted in the past within the vicinity of the project site. None of the surveys identified found prehistoric archaeological resources, nor did the surveys identify properties listed or eligible for the National Register. The search indicated the possible presence of approximately five historic structures and one pending historic archaeological site as indicated on topographic maps and aerial photographs from various years dating from 1892 through 1932. It was determined by the AIC that the likelihood of finding prehistoric archaeological resources was moderate but that the likelihood of finding historic archaeological and historic resources was high.

A Phase 1 Archaeological Survey and Paleontological Records Search was conducted by L&L Environmental, Inc. (L&L), January 10, 2002, on four parcels that are part of the proposed Specific Plan project (APNs 218-252-004, 218-252-005, 218-332-001 and 218-332-002) that constitute approximately 40 percent of the total project area. The survey also covered the one-mile radius area, which covered the entire project site. Research concluded that no federal or state significant historical resources are located within the project site (See Appendix E).

### ***Reconnaissance Surveys and Historic Context***

In addition to the L&L project-specific archaeological survey, and in response to these recommendations and to provide for the appropriate disposition of historic resources within the

NMC, the City of Ontario hired Galvin & Associates to prepare the City of Ontario Historic Context for the New Model Colony Area (Historic Context), September 2004 (Appendix E), and to conduct field research and primary record reconnaissance surveys for all potentially historic resources existing within the NMC. The Historic Context reports the history, defines the historic eras, architectural styles, uses, and siting relationships for the prime interpretive period of the dairy industry in the NMC. For each era it defines what constitutes a site/structure of “high,” “moderate” or “low” integrity. Structures and sites of moderate or high integrity may have historic value individually or may be a valid contributor to a future historic district. Two distinct historic districts are identified by Galvin & Associates within the Historic Context. The first includes the entire NMC which represents an historic district unified by geographic location. The dairies located within the Esperanza Specific Plan site would be associated and may contribute to this type of historic district. The second historic district described by Galvin is characterized by unified building type/style, specifically 1920-1940 Art Deco or Streamline Moderne milking parlors. The project site includes no milking parlors of these styles which are still in reasonably good condition or are good representations of these styles.

According to the Draft Historic Context for the New Model Colony Area, “potential contributors to this district are those dairy farms located within the project study area that exhibit the essential minimum characteristics of at least one of the three periods of development of the dairy industry in the NMC area and retain a modest or high level of integrity as a property type representing that context.” Only one parcel within the Specific Plan includes a potentially historic structure as described below (APN: 21825209). Another parcel (APN: 21825207) within the Specific Plan includes some dairy-related structures that date from the 1960s and 1970s.

#### *Form B Level Site Surveys*

To determine if potentially historic structure is historically significant, a State of California Department of Parks and Recreation Building, Structure and Object Record form (Form B or B Form) was prepared by Melissa Rees, Architectural Historian, Statistical Research, Inc. for the potentially historic property in June of 2006 (see Appendix E). A revised Form A was also prepared and can be found in Appendix E. This detailed analysis determined that the 1955 house does not meet the criteria established in the Historic Context for historic significance within the dairy farming contexts established for the NMC or as a significant resource as an individual ranch style residence. The Form B analysis also found that the house is not eligible for listing on the California Register of historic places due to its lack of integrity and non-original elements.

The only structure identified as 50 years or older is a circa 1955 residence. The residence is located at 11111 E. Edison Avenue on the west side of Milliken Avenue slightly west of the center of the northern property boundary and faces north. See Primary Record, Forms A and B, located in Appendix E. It is constructed in the Minimal Traditional style and is a one story, compound box plan. The structure was originally located in Artesia, California and was relocated to this site in Ontario circa 1971. Therefore, it does not have its original foundation or chimney and has been re-roofed with non-period shingles. There is a modern detached garage located adjacent to the house.

### *Evaluation of All Properties*

The potentially historic residence on site was evaluated for significance based on the Historic Context and CEQA criteria. The importance or significance of a structure is evaluated in terms of historical or architectural context as defined by theme, period, and geographic scope. The “integrity” of the historic resource refers to the wholeness or condition of its historic site relationships, original architectural elements, and relationship to original setting. The Historic Context recommends the establishment of a historic district with a primary interpretive period of 1920-1940, and establishes three broad themes or periods of significance within the NMC, within which most properties were developed, as follows:

#### Pre-1930 Rural Dairy Property

The minimum characteristics that are necessary to identify a pre-1930 dairy property as associated with its identified historic context are: a residence that dates to the period 1900-1930 in an architectural style that exhibits little alteration, a barn (either crib barn, large barn with loft, or early milking parlor, or one of each), a circular driveway, and open space to the rear of the property. The property could have a detached-car garage, but this characteristic is not essential.

#### 1930-1949 Dry Lot to Mechanized Dairy Properties

The minimum characteristics that are necessary to identify a 1931 to 1949 dairy property as associated with its identified historic context are: at least one residence that dates to the period 1931-1949 in a Craftsman, folk Vernacular, minimal traditional, or early Ranch architectural style that exhibits little alteration, an Art Deco or Streamline Moderne milking parlor, a circular driveway, geometrically spaced rows of pole structures and other related dairy facilities, and open space to the rear of the property. The property would have either a detached garage or a garage attached to the main residence.

#### Post-1950 Dairy Property

The minimum characteristics that are necessary to identify a post-1950 dairy property as associated with its identified historic context are: at least one large residence that dates to this period in the Ranch architectural style that exhibits little alteration, a large ‘herringbone’ style milking parlor designed in the Ranch style, a circular driveway, numerous geometrically spaced rows of pole structures and other related dairy facilities, and a vast expanse of open space to the rear of the property.

In addition, the house was evaluated against CEQA Criteria 1 through 4 which are used, in part, to determine eligibility for listing on the California Register of Historic Places. The site or structure must meet the criteria and have integrity with respect to that criteria. A farm or building would be significant: under Criteria 1 if it contributed to the broad pattern of California history and cultural heritage; under Criteria 2 if it was associated with the lives of persons important to California’s past; under Criteria 3 if it embodied the distinctive characteristics of an architectural type, period, region, or method of construction, or if it represented the work of a master or possess high artistic value; and under Criteria 4 if it would yield additional information important in prehistory or history.

The structure on-site is in good condition but does not meet the criteria established in the Historic Context or the City’s Historic Preservation Article (Article 26 of the municipal code) as

a “contributing resource” to the possible future 1920-1940 historic district. Nor does it represent a unique or significant historic resource as a Post-1950 Dairy Property. As an independent structure of the Ranch style, it lacks architectural integrity due to the non-original elements such as the foundation and chimney.

The 1894 USGS Corona North Quadrangle provided by AIC shows several trails/roads crossing the project site. It also shows what appear to be structures. Due to the extensive use of the site for agricultural purposes including dairying and crop production, evidence of any trails or historic structures from that time has been destroyed. Neither the L&L Environmental survey nor the City’s historic resources survey for the preparation of the Historic Context document discovered these potential cultural resources. Therefore, no impacts are expected.

The proposed project will remove all structures on the site. Other than the 1955 structure described above, the existing structures were built after 1968 or so, and this precludes the existing structures and concrete foundations from qualifying as potentially historic (50 years or older), and do not represent *Unique* and/or *Significant* structures worthy of preservation per CEQA and NEPA respectively. Loss of modern elements will not require mitigation. All potential impacts to historic resources are considered less than significant.

*Threshold: Cause a substantial adverse change in the significance of an archaeological resource as defined in California Code of Regulations, Section 15064.5.*

During the Phase 1 Archaeological resource survey conducted by L&L, no previously recorded sites, no new sites, and no isolated artifacts were observed within the project area. Nearly the entire modern ground surface within the area south of Eucalyptus Avenue is heavily disturbed, while the northern portion is almost entirely tilled or under active dairy use. There is no evidence that historic or prehistoric cultural deposits exist on-site. Because of the lack of archaeological sites within and near the project area, monitoring by a qualified project archaeologist is not required or recommended during all brushing, grubbing, and earthmoving phases of the project. The letter from the San Bernardino County Museum Archaeological Information Center identified a “moderate” potential for previously unknown prehistoric archaeological resources.

The California Native American Heritage Commission (NAHC) responded in a letter dated August 11, 2005 to contact by the City of Ontario regarding the Ontario Esperanza Plan and did not identify the existence of, or the probable likelihood, of Native American human remains or of other items associated with Native American burials within the project site. Tribal contacts identified by the NAHC have also been contacted and noticed of the availability of this draft EIR. Although impacts to archaeological resources will likely be less than significant, potential impacts to previously unknown resources could occur during excavation/grading. To avoid potential significant impacts to previously unknown archaeological resources, mitigation measures are included below.

*Threshold: Disturb any human remains, including those interred outside of formal cemetery.*

The proposed project site development is not expected to disturb any human remains. No formal cemeteries exist on the project site. Although not common in the historic period of this area, small family burial plots could exist due to the location of former farms on-site. Historically, the site has been tilled and disturbed regularly which also reduces the likelihood of finding buried

remains. The California Native American Heritage Commission (NAHC) received the Notice of Preparation on the Specific Plan and no response was received identifying the existence of, or the probable likelihood of, sacred sites, which might indicate the probability of finding Native American human remains within the project. There is a low potential for adverse environmental impacts to human remains, including those interred outside of formal cemetery. Therefore, although this issue is considered less than significant, appropriate mitigation is provided herein to address unforeseen discovery.

*Threshold: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.*

A archeological survey records check for paleontological resources was conducted by L&L, Inc. in January 2002, and it was determined that no previously-recorded fossil resource localities are located within the project area, but extinct taxa have been found in this type of alluvium deposit (*Older Pleistocene Alluvium*) that underlay the site. The nearest known fossil locality is located about four miles north of the property.

The survey determined that excavation of previously undisturbed Older Pleistocene Alluvium is highly likely to bear fossils. There is the likelihood of extensive excavation required for much of the project site to remove manure and other organic materials for soil stability purposes. Should the project's grading and/or excavation activities exceed 5 feet in depth (L&L, Inc 2002), the effects of the project on paleontological resources may be significant and a mitigation program is recommended.

### **Proposed Mitigation Measures**

*To reduce potential impact to previously unknown archeological resources or human remains, the following mitigation measures apply:*

**MM Cul 1:** Should any cultural and/or archaeological resources be accidentally discovered during construction, construction activities shall be moved to other parts of the project site and a qualified archaeologist shall be contacted to determine the significance of these resources. If the find is determined to be an historical or unique archaeological resource, as defined in Section 15064.5 of the CEQA Guidelines, then procedures outlined in Section 15064.5 of the CEQA Guidelines shall be followed. Additionally, Ontario's Local CEQA Guidelines provide that [c]uration may be an appropriate mitigation measure for an artifact that must be removed during project excavation or testing. (Local CEQA Guidelines, Section 5.13.)

**MM Cul 2:** If human remains are uncovered at any time, all activities in the area of the find shall be halted by the developer or its contractor and the County Coroner shall be notified immediately pursuant to CA Health & Safety Code Section 7050.5 and CA PRC Section 5097.98. If the Coroner determines that the remains are of Native American origin, the Coroner shall proceed as directed in Section 15064.5(e) of the CEQA Guidelines.

*The following measures shall be implemented to eliminate or reduce potentially significant impacts to paleontological resources.*

**MM Cul 3:** Since grading plans have not yet been prepared to establish how deep excavation is needed, prior to the issuance of grading permits, and as recommended in the Phase I Cultural and Paleontological Resources Assessment for this site, a qualified paleontologist shall be retained to prepare a Paleontological Resources Survey of the project site, for approval by the City. Following City approval of the PRMTP, grading and construction activities may proceed in compliance with the provisions of the approved PRMTP.

The PRMTP shall include the following measures:

- a. Identification of those locations within the project site where paleontological resources are likely to be uncovered during grading.
- b. A monitoring program specifying the procedures for the monitoring of grading activities by a qualified paleontologist or qualified designee.
- c. If fossil remains large enough to be seen are uncovered by earth-moving activities, a qualified paleontologist or qualified designee shall temporarily divert earth-moving activities around the fossil site until the remains have been evaluated for significance and, if appropriate, have been recovered; and the paleontologist or qualified designee allows earth-moving activities to proceed through the site. If potentially significant resources are encountered, a letter of notification shall be provided in a timely manner to the City, in addition to the report (described below) that is filed at completion of grading.
- d. If a qualified paleontologist or qualified designee is not present when fossil remains are uncovered by earth-moving activities, these activities shall be stopped and a qualified paleontologist or qualified designee shall be called to the site immediately to evaluate the significance of the fossil remains.
- e. At a qualified paleontologist or qualified designee's discretion and to reduce any construction delay, a construction worker shall assist in removing fossiliferous rock samples to an adjacent location for temporary stockpiling pending eventual transport to a laboratory facility for processing.
- f. A qualified paleontologist or qualified designee shall collect all significant identifiable fossil remains. All fossil sites shall be plotted on a topographic map of the project site.
- g. If the qualified paleontologist or qualified designee determines that insufficient fossil remains have been found after fifty percent of earthmoving activities have been completed, monitoring can be reduced or discontinued.
- h. Any significant fossil remains recovered in the field as a result of monitoring or by processing rock samples shall be prepared, identified, catalogued, curated, and accessioned into the fossil collections of the San Bernardino County Museum, or another museum repository complying with the Society of Vertebrate Paleontology standard guidelines. Accompanying specimen and site data, notes, maps, and photographs also shall be archived at the repository.
- i. Within 6 months following completion of the above tasks, a qualified paleontologist or qualified designee shall prepare a final report summarizing the results of the mitigation program and presenting an inventory and describing the scientific

significance of any fossil remains accessioned into the museum repository. The report shall be submitted to the City Planning Department and the museum repository. The report shall comply with the Society of Vertebrate Paleontology standard guidelines for assessing and mitigating impacts on paleontological resources.

**Summary of Project-Specific Environmental Effects After Mitigation Measures are Implemented**

With the implementation of mitigation measures listed above, potential unforeseeable significant adverse environmental effects to archaeological and paleontological resources will be reduced to below the level of significance. Potential impacts to historic resources were determined to be less than significant.

**Summary of Cumulative Environmental Effects After Mitigation Measures are Implemented**

Due to long-term disturbance and the lack of known unique archaeological sites/resources or paleontological resources in the area make it unlikely that this project will impact any such resources individually. This also would be the case for other projects in the NMC and surrounding areas. Therefore, no cumulative effect is expected related to archaeological or paleontological resources.

## 5. GEOLOGY/SOILS

The focus of the following discussion relates to the potential impacts related to fault zones, liquefaction zones, groundshaking zones, landslides, ground subsidence, slopes, soils, and wind erosion. The information was obtained via a review of SID Geotechnical, Inc. (6/30/98) soils analysis and the Updated Geotechnical Study by GeoSoils, Inc. (10/12/01) for the proposed project site (Appendix I). For the purposes of potential impacts related to geology and soils, no difference exists between the use of the 10-acre school site for a school or for houses, so this issue is not addressed in the following analyses.

### Setting

SID Geotechnical, Inc. (6/30/98) conducted a subsurface exploration of the area south of Eucalyptus Avenue and east of Cleveland Avenue to determine the composition of onsite soils. This study overlaps with a portion of the proposed project site (Armada ownership). The report found that the soils within the project site are variable in composition but mainly consist of organics and manure from approximately zero to 12 inches thick, interspersed with alluvial deposits. Using eleven exploratory trenches, SID Geotechnical found subsurface materials ranged in composition from sandy silt, silty sand, clayey sand, to sand.

Additional reconnaissance-level geotechnical evaluation was conducted by GeoSoils, Inc. in October of 2001. This study covered a larger portion of the Specific Plan site including the Amberhill ownership.

Soils mapping by the USDA Natural Resources Conservation Service, 1998, shows two types of soil within the project boundaries. They are the Delhi Fine Sands (Db) soil series and the Hilmar Loamy Fine Sand (Hilmar) soil series. As shown on Figure III-5-1, Db soils represent approximately 31% of the site, and Hilmar soils represent approximately 69% of the site. Delhi soils and Hilmar soils typically have rapid permeability. Both soils are sandy in texture. The project site has been used for dairy activities since the early 1960s, which has resulted in a topsoil layer containing high levels of organic matter that covers these mapped soils.

The Generalized Geologic Map (Figure III-5-2) from the City of Ontario GPA for the NMC FEIR (10/1997) shows that the project site lies within an area of Eolian Sand (Qhs) that is characteristically comprised of wind-deposited sand having fine to medium sized grains. The potential for wind erosion from northerly windstorms is therefore, considered High to Very High.

Topographically, the project site is relatively flat with elevations ranging from 680 feet above mean sea level (msl) to 720 feet msl. The site gently slopes from the northeast to the southwest. The depth to groundwater was estimated by GeoSoils, Inc. (10-12-01) to be 125 feet below the surface. Therefore, near surface groundwater is not expected on the project site and the potential for liquefaction is considered negligible.

Southern California is characterized by its high levels of seismic activity. This project will be designed to withstand the constant potential of groundshaking from nearby faults, especially the San Andreas Fault by adherence to the Uniform Building Code (UBC). No known active or potentially active faults cross the project site and none exist within the Sphere of Influence. The nearest Type B fault is the Chino-Central Ave. (Elsinore) fault zone, located approximately 6.9

miles south of the project site. The nearest type A fault is the Cucamonga Fault, located approximately 12.5 miles north of the project site. A Type A fault is defined as an active fault with a larger displacement and moment magnitude than a Type B fault that has a comparatively lesser degree of activity. The City of Ontario Sphere of Influence FEIR regards groundshaking as a potential constraint on any project and building designs will reflect applicable building codes.

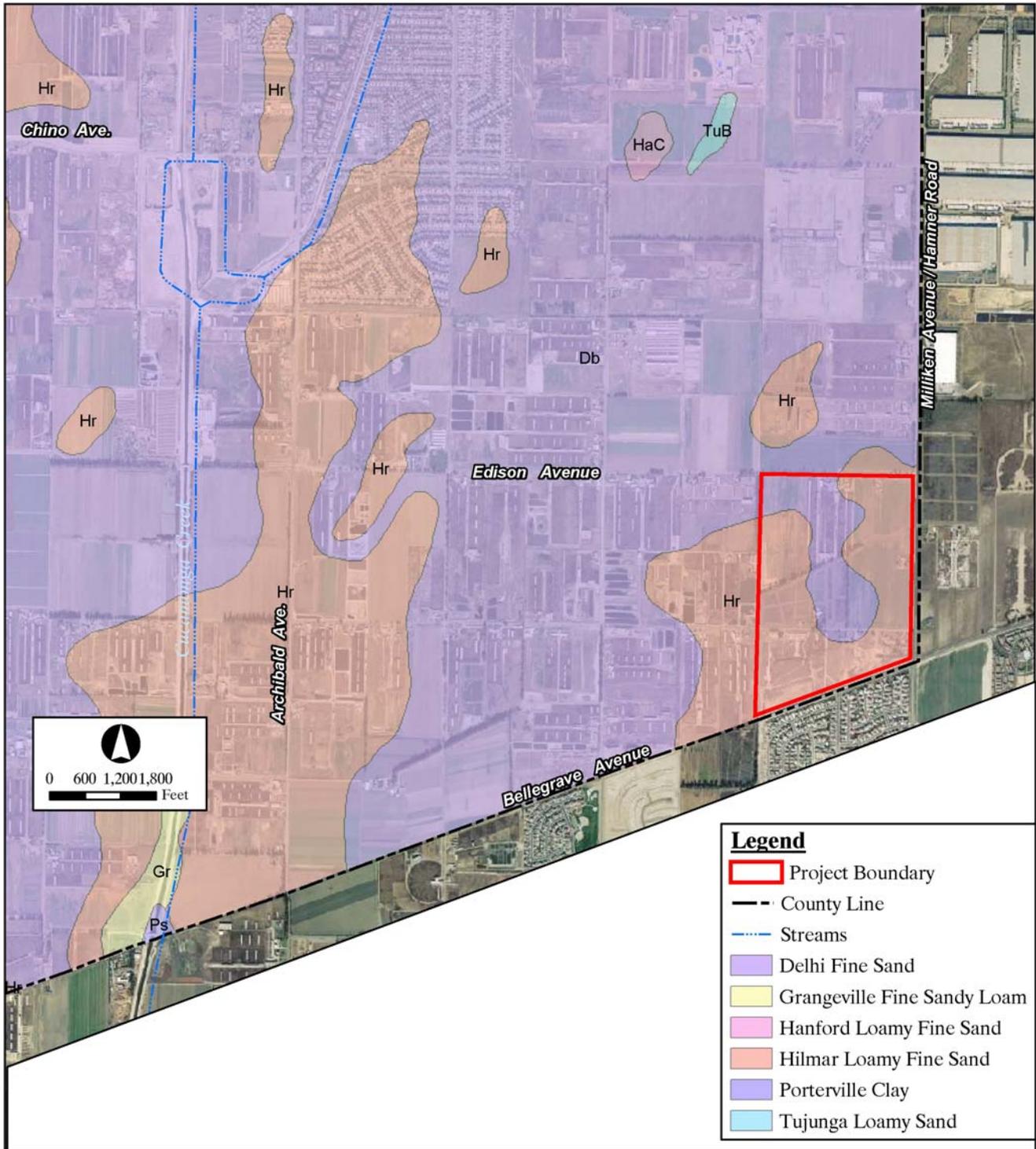
### **Thresholds for Determining Significance**

Impacts on geology and soils may be considered potentially significant if the proposed project would exhibit:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map issued by the state Geologist for the area or based on other substantial evidence of a known fault (see Division of Mines and Geology Special Publication 42);
  - ii) Strong seismic ground shaking;
  - iii) Seismic-related ground failure, including liquefaction; or
  - iv) Landslides.
- Result in substantial soil erosion or loss of topsoil and/or windblown sand;
- Be located on a geologic unit or soil that is unstable or would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

### **Project Compliance with Existing Regulations**

The Uniform Building Code (UBC) establishes regulations for the design of structures for things such as excessive damage related to seismic conditions. Building construction plans that are developed within the Specific Plan area will be required to comply with all applicable standards of the UBC. General Plan Amendment policies 19.1.1, 19.1.2, 19.2.1, 19.2.2, 19.3.1 and 19.3.2 call for standards for investigations and surveys for projects in the tentative tract and development plan stages, to determine the hazard potential related to seismicity, liquefaction, subsidence, and slope stability.

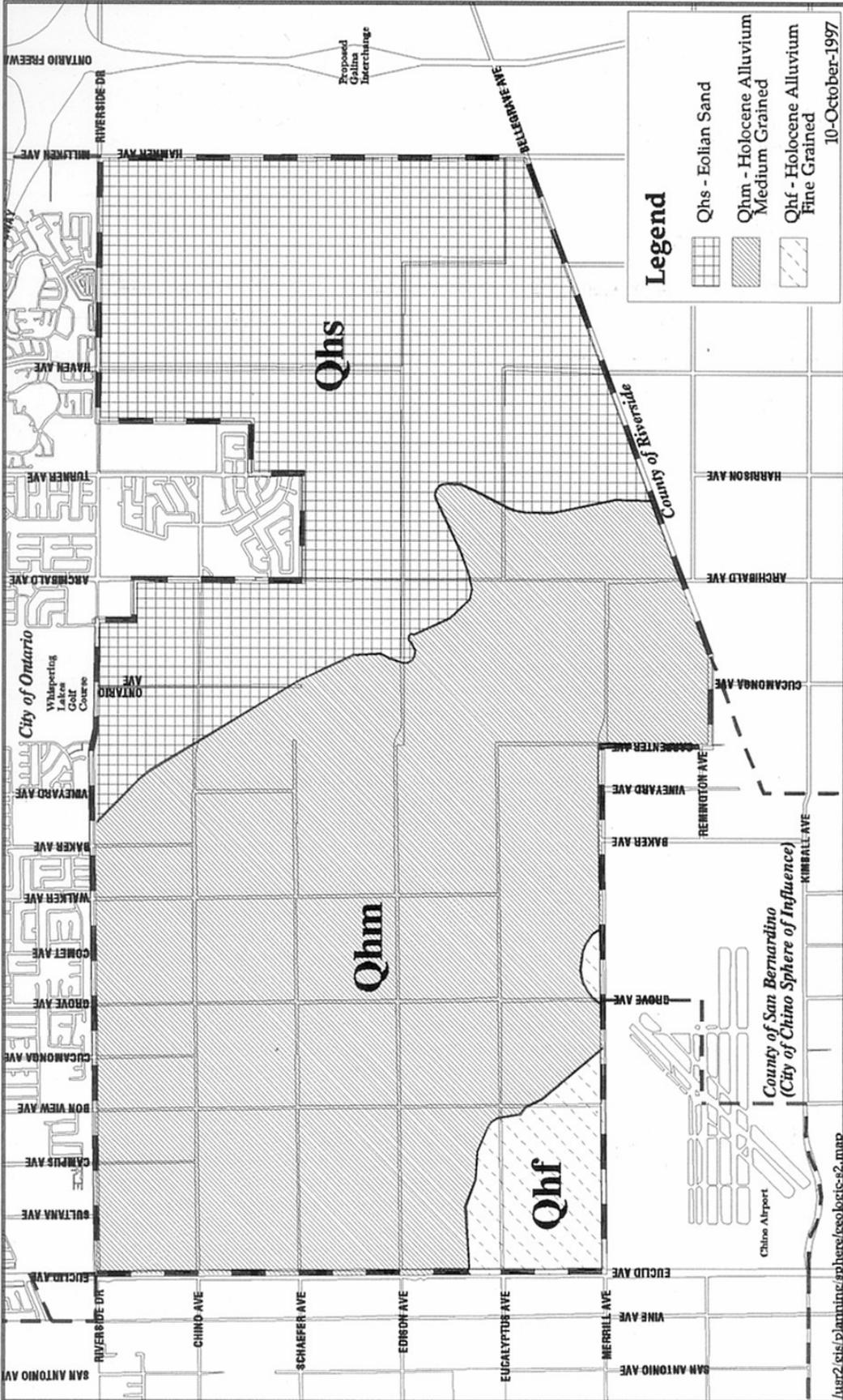


Source: USDA Natural Resources Conservation Service, 1998



## Soils

Figure III-5-1



Source: Ontario General Plan, 1997



Esperanza Specific Plan Draft EIR  
 General Geology Map



Figure III-5-2

The Ontario GPA for the NMC FEIR states that soil erosion in the form of blown sand into and out of the area is addressed by the issuance of specific permits and by various methods of dust control. The City of Ontario requires a permit for activities greater than 1 acre in size that will cause the release of wind blown sand. Application for the permit will be made to the Building Official on City forms and payment of fees will comply with Section 2, Ordinance 2138, as amended by Section 1, Ordinance 2548. The Building Official sets the standards to minimize wind erosion. The project will comply with these City policies and permit requirements.

Several other applicable GPA for the NMC policies are applicable and are discussed below.

*Policy 21.1.1. Require that structures be sited and designed to prevent adverse funneling of wind onsite and on adjacent properties.*

Implementation of this policy requires that individual tract maps must include building orientation which avoids this effect.

*Policy 22.1.3. Require proposed development projects to determine if the project would be located in or near areas with significant erosion potential or soil engineering problems. Require proposed project applications to include a detailed discussion regarding the types of soil and locations, erosion potential or soil engineering problems, and erosion control plans. Mitigation plans must address methods to be used during all phases of project development, implementation, and operation.*

This policy will be implemented by individual projects under the Specific Plan by requiring site-specific soils and geotechnical reports. Each future project is required to obtain an NPDES stormwater permit for construction activities that will require implementation of best management practices to control water erosion. Implementation also requires extensive landscaping within the Neighborhood Edges that should mitigate adverse wind erosion impacts. See also the Air Quality section for discussion about AQMD Rule 403 and other requirements that deal with wind erosion.

*Policy 22.1.5. Require development applicants to certify that all deleterious materials, particularly organic residue from dairy, farming, or agricultural activity, have been removed, properly disposed, and will not impact the development during the project's life.*

This policy will be implemented by future projects under the Specific Plan by requiring compliance with pre-existing City requirements for removal of deleterious materials resulting from agricultural operations and by the completion of the mitigation measures included herein..

### **Design Considerations**

As identified in the Specific Plan, final design of all development areas will include appropriate landscaping for all exposed land surfaces which will eliminate the potential for blow sand to be generated after project development is complete.

As outlined in the Esperanza Specific Plan, grading will generally consist of the removal of any manure left over from the dairy operations. Overall excavation of the project site will consist of

approximately 4,430 cubic yards per acre of cut and fill, including manure removal, over excavation, shrinkage, and subsidence.

### **Environmental Impacts Before Mitigation**

*Threshold:* The project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map issued by the state Geologist for the area or based on other substantial evidence of a known fault (see Division of Mines and Geology Special Publication 42); ii) Strong seismic ground shaking; iii) Seismic-related ground failure, including liquefaction; or iv) Landslide.

The project does not lie within an identified Alquist-Priolo Earthquake Zone. As previously stated, the nearest known faults are approximately 6-10 miles away from the NMC. Nevertheless, in most areas of Southern California, residents can expect to be exposed to groundshaking during earthquake events. Compliance with UBC standards will minimize any potential detrimental impacts on buildings and persons resulting from tectonic activity.

The topography of the project site is virtually flat, and the potential for landslides is considered not significant.

Liquefaction occurs when saturated, cohesionless soils convert from a solid to a near liquid state during severe groundshaking. Liquefaction requires three conditions: severe groundshaking, shallow groundwater, and cohesionless soils. According to the Phase I report for the project site, the depth to groundwater in this portion of the Chino Basin is approximately 200-250 feet below the surface; therefore, the potential for liquefaction is considered not significant.

*Threshold:* The proposed project would result in substantial soil erosion or loss of topsoil and/or windblown sand.

Erosional loss of sediments will be a potential problem during every stage of construction, since soils at the project site have sandy textures and have a high potential for wind erosion unless a protective cover is in place. Grading, trenching, construction vehicles and other construction activities will result in the movement of onsite soils, and may have the potential to cause an increase in erosion and loss of topsoil, via wind and/or water, unless mitigation is incorporated.

Each proposed tentative tract within the Specific Plan will be required to have coverage under the state's General Permit for Construction Activities, and develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP identifies Best Management Practices (BMPs) to be implemented during all phases of development in order to achieve an effective combination of sediment and erosion control that will reduce or eliminate unauthorized storm water and non-storm water discharges. In addition to erosional losses in storm water and non-storm water runoff, wind-erosion must also be minimized using control measures such as phasing grading operations, covering stockpiles, revegetating exposed surfaces in a timely manner, and applying water for dust control (see Air Quality section related to Rule 403 compliance and Hydrology section related to SWPPP compliance). Compliance with these regulations should reduce the level of erosion resulting from surface runoff to less than significant levels.

*Threshold: The project would be located on a geologic unit or soil that is unstable or would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.*

Soils at the site are generally considered to be compressible due to their textures and/or organic matter content. Development on these soils typically requires excavation and backfilling in order to attain stable building surfaces. Project implementation will include excavation, backfilling, trenching and grading activities. These activities will be required to comply with the most stringent Uniform Building Code (UBC), and applicable City of Ontario ordinances. Through compliance with these policies, implementation of the proposed project will not result in the increased probability of damage to on- or off-site buildings by ground or soil failure. Impacts related to grading and construction activities are considered less than significant.

Soil with an organic matter content exceeding 2 percent by volume does not act as suitable fill for a construction site and causes the soil to be unstable. Impacts from high soil organic matter are considered significant unless mitigation is incorporated. Possible mitigation includes removal of the manure-laden soils from the site. Dairy stockpiles and active manure-covered areas would be removed by the dairy operator at the time of dairy closure per dairy operating requirements and permits with the Regional Water Quality Control Board. Such removal of manure was not considered part of the proposed project, but rather considered normal dairy operations. However, after the dairies close, it is assumed that land under former feed lots, etc. will still contain far in excess of the amount of organic matter in the soil than is allowed for development purposes. Therefore, the transport of soils must be evaluated from the standpoint of disposal in an appropriate location and the air emissions created by the transport vehicles. The air quality analysis evaluated the removal of one (1) foot of topsoil from former dairy areas and used the air model's defaults for distances traveled which is a 20-mile round trip for such hauling vehicles (See Air Quality, Section III-2).

*Threshold: The project would put people and structures at risk from expansive soils.*

Expansive soils have high clay contents and expand when wet. Repeated cycles of wetting and drying in these soils causes structures in contact with them to be compromised. Hilmar and Delhi series soils at the project site are characterized by their sandy texture and inability to hold moisture. Therefore, the potential for expansive soils is not considered significant.

*Threshold: The project would place septic tanks in soils that cannot maintain the functions of the septic tank and leach line system.*

The project includes installation of a complete sewer system that does not require the use of septic tanks. In fact, the septic tanks and leach lines that are currently onsite will be removed prior to construction. Therefore, impacts from soils that are unsuitable for handling septic tanks are not considered significant.

### **Proposed Mitigation Measures**

**MM Geo 1:** To address potential wind erosion effects, prior to construction, all grading and other construction activities will apply for and adhere to the permit given by the City of Ontario and enforced by the Building Official found in Title 6, Chapter 12, sections 6-12.01 – 6-12.07. The permit lasts for one (1) year, therefore, all construction lasting for a period of more than one calendar year from the date of issue will reapply for the permit and pay the current annual fee. At a minimum, the permit prohibits the disturbance of the surface or subsurface of more than one (1) acre of land without meeting permit requirements which can include such things as the application of soil stabilizers and limitations on grading activities during wind events.

**MM Geo 2:** To assure soils suitable for construction, site materials should be tested for organics and excavated to a minimum of 4 feet where soils generally become denser. Actual removal depths will be determined during grading when subsurface conditions are exposed. GeoSoils, Inc (10/12/01) also recommends that soft and compressible colluvial and alluvial soils be removed prior to grading.

Per recommendations of GeoSoils Inc. in the Updated Geotechnical Study, partial to complete removal of manure will be required, as soils with high concentrations of cow manure are generally unsuitable to be used as fill. Onsite soils may be used for fill if the organic matter content is diluted to less than 2 percent using underlying soils with no more than 1 percent of the organic content being from manure.

**MM Geo 3:** Any soil to be used as fill, whether currently onsite or imported, should be approved by the soil engineer or his/her representative prior to their placement. To properly assess and address the suitability of on-site soils to be used as fill, a geotechnical evaluation shall be performed by a qualified professional prior to the approval of the Tentative Tract map or site plan for a given phase of development. This evaluation will include an analysis of the organic matter content of soils on the site. If the organic matter content of the soils is greater than 2 percent when mixed with subsurface soils and/or imported fill, then manure will be removed from the site prior to grading operations.

**MM Geo 4:** To reduce the risk of ground cracking, manure shall be removed from the site, such that the organic matter content of on-site soils shall not exceed 2 percent (a 2 percent total organic content is allowed, of which no more than 1 percent can be manure) in the building foundation areas when mixed with underlying clean soils and imported fill. Onsite soils that will be used as onsite fill that contain organic contents will be diluted by mixing with underlying clean soils. The mix will be continuously sampled and tested during grading so that the fill does not exceed the recommended limit of 2 per cent of organics per total volume of fill. The soil engineer will observe the placement of all fill and take sufficient tests to monitor the moisture content and the uniformity and degree of compaction obtained.

As referenced in this EIR, the mitigation proposed in Section 6, Hazards and Hazardous Materials will also mitigate for the management of organics in the soil. These measures will bring the impact of organics in the soil to a threshold below the level of significance.

**Summary of Project-Specific Environmental Effects After Mitigation Measures are Implemented**

All potential significant adverse environmental effects related to geology and soils are reduced to below the level of significance identified for the project following implementation of the proposed mitigation measures outlined above and in the Hazards Section, III-6.

**Summary of Cumulative Environmental Effects After Mitigation Measures are Implemented**

As defined in Section 15355 of the CEQA Guidelines, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. The discussion of cumulative impacts is limited because the Specific Plan is consistent with the plans used in the evaluation of each environmental issue area discussed here and in Section IV-1, Cumulative Environmental Effects. The impacts from all of the proposed New Model Colony projects will be similar to the impacts created by the Specific Plan. It is not known which other construction sites in proximity to the project site will be active at the time of construction of this project. Due to the fact that all construction in the City will be subject to the UBC, City inspections, and other standards that will reduce possible impacts from each development to less than significant levels; cumulative impacts resulting from seismic activity, constructing on unstable soils, and blown sand are expected to be less than significant.

## 6. HAZARDS/HAZARDOUS MATERIALS

Hazards associated with the current and former use of the project site for agriculture, specifically dairies, were identified in the Notice of Preparation as having the potential to create significant environmental impacts. The following section of the EIR focuses on hazards associated with the proposed residential use of the project site. For the purposes of potential impacts associated with hazards or hazardous material, no significant difference exists between the use of the 10-acre school site for a school or for houses, so this issue is not addressed in the following analyses.

### **Setting:**

The following is a brief summary of the Final Phase I Environmental Site Assessment performed by Petra Geotechnical, Inc., December 16, 2004 and the Phase I Environmental Site Assessment by David J. Tanner & Associates, January 9, 2003 (Appendix G), and the Geotechnical Reports Prepared by SID Geotechnical and GeoSoils, Inc. (Appendix I) for the property owned by Armada, LLC, and former Westra Dairy Farms site. The subject site includes approximately 75 acres located east of Mill Creek (Cleveland) Avenue, north of Bellegrave Avenue and Eucalyptus Avenue bisects the central portion of this particular site. The site extends west approximately halfway towards Milliken Avenue. The final Phase I document evaluated, via a records search, site reconnaissance, interviews, review of aerial photographs and historical maps, whether there is a potential for certain hazardous materials to exist on the properties. The property currently owned by the Pietersma family, located in the northern portion of the Specific Plan area, was not evaluated in this Phase I or the geotechnical reports. The current use of the Pietersma site includes cultivation and dairy farming. It can be projected that the types of hazards and hazardous materials identified in the Phase I report and geotechnical reports prepared for the southern two properties would be similar on the northern property with respect to agriculture-related issues and issues associated with the age of existing structures, however, as required in MM Haz 1, herein, the City requires Phase I assessments and CEQA compliance for all properties prior to Tentative Tract approvals.

The project site has been used for agricultural activities since the 1950s and for dairy activities since approximately 1967. Throughout the vacant south/southwestern portion of the site, residential, biological, and inorganic hazardous materials dumping has occurred. During site reconnaissance, Petra Geotechnical identified the subject site to include abandoned dairy and agricultural land, concrete, block, and brick foundations (former dairy and residential structures), a 5,000-gallon metal water tank and water well located near the foundation, an empty concrete pool, empty pond with a wood bridge, large retention basin and dirt pile (from the retention basin) and low-lying vegetation covered the land. The inorganic hazardous materials that were identified onsite include a diesel fuel tank, old paint cans (emptied and their contents spilled on the ground), a diesel pump, gas pump and piping, one 55-gallon grease drum and one 55-gallon drum marked “corrosive.” Also, there are spots where soil staining is obvious. There are four one-story homes (occupied) and two foundations for homes; one of these has a residential pool and earth pond. These homes use or used leach lines and septic tanks for sewerage.

In June 2000, several residential tract developers experienced methane accumulation and surface cracking on sites of former dairies in the Eastvale/Corona Valley area of Western Riverside County, less than 2 miles from the proposed project site. Due to the historical presence of dairies on the project site, methane accumulation in the subsurface has been identified by the City of

Ontario as a potential problem when dairies are removed and replaced with residential, commercial, and/or industrial structures.

Methane generation and accumulation in soil is a result of the decomposition of organic matter (i.e., manure) in oxygen deficient conditions. Methane gas is a tasteless, colorless, and odorless gas which, when under pressure, can migrate upward through underground passages such as utility conduits, vaults, and/or natural fractures in bedrock. Methane gas can accumulate in basements, crawl spaces, utility vaults, or any confined space with little ventilation. Concentrations greater than 20,000 parts per million (ppm) of methane are considered potentially explosive.

Ground cracking was also experienced in the Eastvale area after sites had been rough graded and allowed to set for a period of time. The ground cracks in Eastvale appeared very similar to desiccation (drying) cracks often seen on lots constructed with expansive soil. The exact nature and cause of the ground cracks in Eastvale, on former dairy sites, is unknown. However, it is speculated that the cracking is a result of the interaction of organic material (manure) and native soils. The cracking is thought to be a result of shrinkage of organic-rich soils. It is possible that manure contains high moisture content and as the soil dries out over time, it shrinks, resulting in surficial cracks.

Another potential for hazardous materials on agricultural land can result from the use of pesticides, herbicides and fertilizers. Pesticides may have been used by past and current farmers within the specific plan area to control insects and other pests in both field crops and as a part of regular dairy operations (i.e., fly control). Herbicides and/or fertilizers may have been used in the crop production areas. The highest concentrations of pesticides/herbicides are detected in shallow soils. The Phase I report does not consider pesticide residue as a “recognized environmental condition,” as defined by the American Society of Testing and Materials. The presence of recognized environmental conditions at a site may warrant additional research, site investigation, and/or action. The Phase I report states that potential pesticide and/or herbicide residues are “not considered to represent a significant environmental risk with respect to the property,” therefore, further investigation is not warranted and potential impacts are considered less than significant.

The project site is located approximately 3 1/3 miles from both the Chino Airport and Ontario International Airport, so no hazards associated with air traffic are anticipated.

### **Thresholds for Determining Significance**

Impacts from hazards and hazardous materials may be considered potentially significant if the proposed project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

- Emit hazardous emissions or handle hazards or acutely hazardous materials, substances, or waste within one quarter mile of an existing or proposed school site.
- Be located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or environment.
- Be located within an airport land use plan or where such a plan has not been adopted, within two (2) miles of a public or private airport, would the project result in a safety hazard for people working or residing in the project area.
- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.
- Create a significant hazard to the public or the environment through ground cracking or the presence or release of unsafe levels of methane gas on the project site.

### **Project Compliance with Existing Regulations**

Pursuant to the City of Ontario Municipal Code Section 9-2.0435 (L), “a methane gas assessment shall be prepared by a licensed professional with expertise in soil gas assessments for subdivisions proposed on former dairies, poultry ranches, hog ranches, livestock feed operations and similar facilities to determine the presence of methane gas within the project boundary. The methane gas assessment shall identify monitoring and mitigation strategies and approaches. All mitigation measures/plans and specifications shall be reviewed and approved by the City of Ontario.” The proposed specific plan area will be subject to this City requirement.

The California Department of Toxic Substances Control (DTSC) is responsible for the monitoring and control of hazardous materials throughout the state. Identification, removal and/or remediation of all potentially hazardous materials found on site shall be handled pursuant to applicable provisions of California law as required by DTSC. Locally, the San Bernardino County Fire Department Hazardous Materials Division, and the City of Ontario Fire Department Hazardous Materials Division are responsible for working with the state to identify, permit, and monitor the clean up of all hazardous materials within their jurisdictions.

The City of Ontario maintains a Household Hazardous Waste and Oil Recycling Program that allows residents to take their household hazardous waste to a collection center free of charge. The household hazardous waste center accepts the following household hazardous wastes from residents: motor oil and oil filters, chemical drain cleaners, auto and household batteries, auto and furniture polish, household cleaners, pool and hobby supplies, weed killers, pesticides and fertilizers, paints and paint thinner. The Household Hazardous Waste Collection Center is located at Fire Station #3, 1408 East Francis Street. Future residents of the Specific Plan will be notified, as all residents of the City are notified, of the availability of this service.

### **Design Considerations**

The proposed project is not designed to specifically avoid or reduce potential impacts related to hazards or hazardous materials.

### **Environmental Impacts Before Mitigation**

*Threshold: The proposed project will create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.*

The proposed project is a residential community that will not generate hazardous materials other than those typically associated with household products. There will be no transport of non-construction related hazardous materials to or from the project site.

*Threshold: The proposed project will create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.*

The proposed project is a residential community that will not generate hazardous materials other than those typically associated with household products. There will be no transport of non-construction related hazardous materials to or from the project site.

The presence of diesel powered farm equipment, abandoned 55 gallon drums, abandoned storage tanks, minor soil stains and agricultural use of the site are an indication that petroleum products, insecticides, and pesticides may have been used on-site. If known and unknown hazardous materials/situations on site are not mitigated, future residents could be exposed to hazards or hazardous materials resulting in potentially significant impacts. Such potentially significant impacts could include such things as asbestos and lead from building materials and paints in older structures, pesticides from past agricultural uses, or other hazardous materials used or dumped on the site.

*Threshold: The proposed project will emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one quarter mile of an existing or proposed school.*

The closest existing schools is Sky County Elementary School, Jurupa Unified School District (JUSD), located approximately 1.8 miles east of the project site and Colony High School located about 1 mile northwest of the project site. The proposed Esperanza Specific Plan project also includes a future elementary school.

The presence of diesel-powered farm equipment, abandoned 55 gallon drums, abandoned storage tanks, minor soil stains, and agricultural use of the site are indications that petroleum products, insecticides, and pesticides may have been used on-site. If known and unknown hazardous materials/situations on site are not mitigated, future students could be exposed to hazards or hazardous materials resulting in potentially significant impacts. Such potentially significant impacts could include such things as asbestos and lead from building materials and paints in older structures, pesticides from past agricultural uses, or other hazardous materials used or dumped on the site.

*Threshold: The proposed project is located on a site which is included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or environment.*

Government Code section 65962.5 requires the California Environmental Protection Agency to develop at least annually a listing of potential and confirmed hazardous waste sites throughout

the State of California. This database (CORTESE) is based on input from 14 different sources. The project site is not included on a list of sites at which hazardous materials have been released.

Petra Geotechnical, Inc. performed a Regulatory Agency Record Search of the State ASTM (American Standard of Testing Material) and the State or Local ASTM Supplemental (Appendix B of Phase I report). Three sites located on the surveyed property were reported as being potential environmental hazards. However, the records showed that these sites have been removed or closed by the appropriate agency and will, therefore, present no environmental hazard. The records search reported a leaking Underground Storage Tank(s) (UST) on the Westra Dairy Farm site containing diesel fuel on 9/13/1999. The report indicates that the spill affected the soil only (not groundwater) and that the case was closed on 4/24/2000. The two other hazardous sites/permits are associated with the treatment and removal of dairy wastes, one at the former Westra Dairy and the other at the AG-Milk Dairy Ranch. In addition, the Phase 1 Hazardous Materials Record Search report found a number of potentially hazardous sites, "...sites with a UST reportable release, a solid waste disposal site or a well onsite with detectable quantities of contamination..." located within a two-mile radius of the project site. In a previous study by David J. Tanner & Associates (2003), the study identified, "...these sites beyond the project boundary have been listed as "closed," down-gradient, having been under remedial action..." Therefore, none of the sites within the two-mile radius appear to be an environmental concern to the proposed project site.

*Threshold: The proposed project would be located within an airport land use plan, or where such a plan has not been adopted, within two miles of an airport, and will therefore, create a hazard to persons working or living in the project area.*

The project site is not affected by an airport land use plan. The project site is located approximately 3 1/3 miles east of the Chino Airport and about 3 1/3 miles southeast of Ontario International Airport; well beyond all safety zones associated with the airports.

*Threshold: The proposed project would impair implementation of, or physically interfere with an adopted emergency response plan or evacuation plan.*

The project site will be served by the City of Ontario Police Department, The City of Ontario Fire Department and Emergency Medical Services provided by the Fire Department. The proposed specific plan, and all tracts within it, will be designed to meet Fire Department emergency access requirements and will not interfere in any way with emergency evacuation or response plans.

*Threshold: The proposed project would create a significant hazard to the public or the environment through ground cracking or the presence or release of methane gas.*

Methane accumulation on former dairy sites is a concern after grading activities, therefore, the exact impacts on the project site cannot be fully characterized at this time and typically relate to areas on dairies such as feed lots, waste ponds, and manure storage areas.

As identified in the final Phase I Environmental Site Assessment, a significant portion of the project site is located on land formerly used for dairy activities and contains manure (organic matter) that will potentially generate methane gas if buried and exposed to an oxygen-free environment. The Pietersma Dairy would be subject to the same potential for hazardous impacts

associated with manure. Due to the potentially explosive characteristic of methane gas, when concentrations exceed 20,000 parts per million (ppm), conditions must be made to mitigate the impact thereof or be considered significant.

Manure has a tendency to compress and settle over time. The soil on-site, with its current high concentration of manure in certain locations, is, therefore, unsuitable fill material. Removal of manure/organic material would combat surface soil cracking, but would remain a potentially significant impact if left in high levels on site.

SID Geotechnical (June 1998), in the preliminary soils investigation for the area currently owned by Armada, LLC and Amberhill, LTD, recommended that the onsite soils with organic content should not exceed 5 percent when mixed with underlying clean soils. If the organic content exceeds 5 percent, partial to complete removal of manure will be required. Soils with high concentrations of cow manure are generally unsuitable to be used as fill. Removal of manure on-site will reduce the potential risk of surface ground cracking and methane generation, after project development.

Although SID 1998 makes the above-described recommendation it should be noted that the City of Ontario does not allow organics to exceed 2 percent on former dairy land with no more than 1 percent of the remaining organic matter being manure.

As discussed above in the Project Compliance with Existing Regulations section, the project will be subject to City of Ontario Municipal Code Section 9-2.0435 (L) which requires actions that will mitigate potential significant impacts associated with high methane levels to less than significant levels.

### **Proposed Mitigation Measures**

The GPA for the NMC Final EIR established mitigation measures and incorporates General Plan policies that address risks associated with hazardous materials. The policies and mitigation measures found on pages 5.10-4 through 5.10-6 of the GPA for the NMC Final EIR are incorporated by reference.

*The following measures mitigate potential significant hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment in general and within one quarter mile of an existing or proposed school.*

**MM Haz 1:** To the extent not previously prepared and to properly assess and address potential hazardous materials, including pesticide residues, within the specific plan area, a Phase I Environmental Site Assessment (ESA) shall be performed by a registered environmental assessor (REA) prior to the approval of a site plan for a given phase of development. Pursuant to mitigation measure HM-1 in the GPA for the NMC Final EIR, page 5.10-6, the Phase I ESA shall, at a minimum, meet with the requirements and current standards of investigation established by the American Society of Testing and Materials (ASTM Standard E 1527). If potential hazardous materials or conditions are identified in the Phase I report, an in-depth evaluation shall be performed including surficial sampling and chemical analysis within agricultural areas or where soil staining was observed. The Phase I ESA shall be provided to the City of Ontario and shall be included in any CEQA analysis prepared in connection with the consideration of the discretionary approval for development. All identified hazardous materials

will be removed or remedial action taken prior to grading operations pursuant to the recommendations of the Phase I ESA and appropriate City, county, state and federal laws and guidelines under the oversight of the San Bernardino County Fire Department's Hazardous materials Division Site Remediation/Local Oversight Program.

**MM Haz 2:** Much of the site located south of Eucalyptus Avenue has been covered by undocumented fill and used as a dump site by the local community. To address possible contamination and remove appropriately all previously identified and unidentified types of hazardous waste on site, clearing and grading activities in this area shall be monitored by a Registered Environmental Assessor (REA), or other professional personnel approved by the City, and any known items of concern and those not previously identified which are uncovered can be removed or remediated per the appropriate regulations (see MM Haz 3 and 4, below).

**MM Haz 3:** If, while performing any excavation as part of project construction, material that is believed to be hazardous waste is discovered, as defined in Section 25117 of the California Health & Safety Code, the developer shall contact the City of Ontario Fire Department and the County of San Bernardino Fire Department Hazardous Materials Division. Excavation shall be stopped or redirected to another location on site until the material has been tested and the presence of hazardous waste has been confirmed. If no hazardous waste is present, excavation may continue. If hazardous waste is determined to be present, the California Department of Toxic Substances Control shall be contacted and the material shall be removed and disposed of pursuant to applicable provisions of California law under the oversight of the San Bernardino County Fire Department's Hazardous materials Division Site Remediation/Local Oversight Program. Fill material imported from other areas shall be tested prior to placement on-site to assess that it is suitable to be used as fill, including testing for unsafe levels of hazardous materials.

**MM Haz 4:** The biologically active materials, such as animal carcasses, should be removed and legally disposed of prior to any clearing and grubbing.

**MM Haz 5:** All onsite buildings and remaining foundations that were built before 1979 shall be tested for the presence of asbestos, mercury and lead-based paint and those materials shall be removed according to the applicable regulations and guidelines established by the South Coast Management District, Department of Toxic Substances Control, and the United States Environmental Protection Agency. As per HM-2 in the GPA for the NMC Final EIR, page 5.10-6, the developer shall submit documentation to the City Building Department that asbestos, mercury and lead-based paint are not present on their site, or that the above removal process has occurred.

**MM Haz 6:** All septic tanks on the project site will be properly removed and disposed of, per City and State procedures, prior to site development. All water wells on the project site will be properly destroyed in accordance with MM Util 8 in Section 12, Utilities, of this EIR. These activities will occur subject to City of Ontario Building Safety requirements.

*The following measure mitigates potential significant hazards to the public or the environment that might result in ground cracking or the presence or release of methane gas.*

**MM Haz 7:** Pursuant to the City of Ontario Municipal Code Section 9-2.0435 (L), "a methane gas assessment shall be prepared by a licensed professional with expertise in soil gas assessments

for subdivisions proposed on former dairies, poultry ranches, hog ranches, livestock feed operations and similar facilities to determine the presence of methane gas within the project boundary. The methane gas assessment shall identify monitoring and mitigation strategies and approaches. All mitigation measures/plans and specifications shall be reviewed and approved by the City of Ontario.”

Such an “assessment” may take two steps. A preliminary assessment should be done prior to grading to determine exactly where dairies have existed in the past so that the post grading assessment/mitigation measures can be focused on the portions of the specific plan area that have included dairies. The second step may include actual testing of graded pads no sooner than 30 days after construction to determine if methane is detected above 5,000 ppm. If so, the types of mitigation measures described below, or those approved by the City, shall be implemented in the areas exceeding this limit. If the developer chooses not to do the post grading assessment, then mitigation as described below shall be required on all lots within former dairy areas of the specific plan.

Mitigation shall include: 1) install a minimum 60-mil high density polyethylene (HDPE) membrane barrier (or equivalent), 2) install a subslab passive venting system, 3) seal utility or other penetrations through the membrane, 4) seal utility conduits where they enter a structure, and 4) construct a utility “dam” at the point where a “dry” utility trench approaches a structure. Liquid Boot, applied to a minimum 60-mil dry thickness per manufacturer’s recommendations, may be substituted for the HDPE membrane.

#### **Summary of Project-Specific Environmental Effects After Mitigation Measures are Implemented**

All potential significant adverse environmental effects will be reduced to below the level of significance identified for the project following implementation of the proposed mitigation measures outlined above. This is consistent with the findings of the GPA for the NMC Final EIR. No new information or potential impacts were discovered that would change this finding.

#### **Summary of Cumulative Environmental Effects After Mitigation Measures are Implemented**

Issues addressed in the Hazards/Hazardous Materials section are not generally cumulative in nature such that past, present or reasonably foreseeable projects would produce two or more individual effects which, when considered together, are considerable or which compound or increase other related, or cumulative, impacts. Since so few structures built prior to 1976 exist on the site, if demolition of the older structures on site were to occur simultaneously, the cumulative effect of the disturbance of asbestos or other hazardous building materials would be less than a “considerable” effect. No potential significant cumulatively adverse environmental effects will result from the proposed project. The discussion of cumulative impacts is limited because the Specific Plan is consistent with the plans used in the evaluation of each environmental issue area discussed here and in Section IV-1, Cumulative Environmental Effects. This is consistent with the findings of the GPA for the NMC Final EIR. No new information or potential impacts were discovered that would change this finding.

## 7. HYDROLOGY/WATER QUALITY

Potential impacts from 1) creating or contributing to runoff that would exceed storm water drainage system capacity, 2) altering the velocity or volume of storm water runoff, 3) otherwise substantially degrading water quality, 4) placing housing within a 100-year flood hazard area, 5) impeding or redirecting 100-year flood flows, 6) exposing people or structures to significant risk of loss, injury, or death, and 7) exposing people or structures to seiche, tsunami or mudflow are covered in Section II – Effects Found Not Significant of this EIR.

The following discussion will focus on potential impacts to surface and groundwater quality, groundwater supply and hydrology resulting from implementation of the proposed Planning Subarea 25 (Esperanza). This evaluation includes proximity of the project to nearby surface water bodies, water quality standards, and regulations related to surface and groundwater in the project area, as well as drainage patterns, in order to thoroughly assess the project's impacts to these parameters. For the purposes of potential impacts to hydrology and water quality, San Bernardino County Stormwater Program Model Water Quality Management Plan Guidance, June 2005, was referenced and ~~no difference exists between the use of the 10-acre school site for a school would not produce as many pollutants of concern as or for a similar acreage of houses, so this issue is not possible houses on the proposed school site are addressed in the following analyses.~~

### Setting

The 223-acre site has been used for agricultural activities since the 1950s and for dairy activities since approximately 1967. There are two wells located on-site that are available for extraction of ground water in support of agricultural operations. Water quality in groundwater underlying the southern portion of the Chino Basin, where the project is located, has been degraded due to years of agriculture-related activities in the area; and, in particular, high nitrate and total dissolved solids concentrations are troublesome. According to the Water Supply Assessment and Written Verification of Sufficient Water Supply for the New Model Colony, October 27, 2004 (WSA), Ontario's potable water supply is comprised of 79 percent local groundwater and 21 percent imported surface water supplied through Metropolitan Water District of Southern California.

Cucamonga Creek, the primary flood control facility in the area, flows in a southerly direction approximately 2 miles west of the Specific Plan. Storm flows, wastewater treatment facility discharges, and urban and agricultural runoff flows are transported in Cucamonga Creek and ultimately are discharged to the Santa Ana River/Prado Basin to the south. The major flood control facility in the project vicinity which feeds into Cucamonga Creek is the County Line channel located along the southern project boundary. There is currently no secondary storm drain infrastructure on the project site.

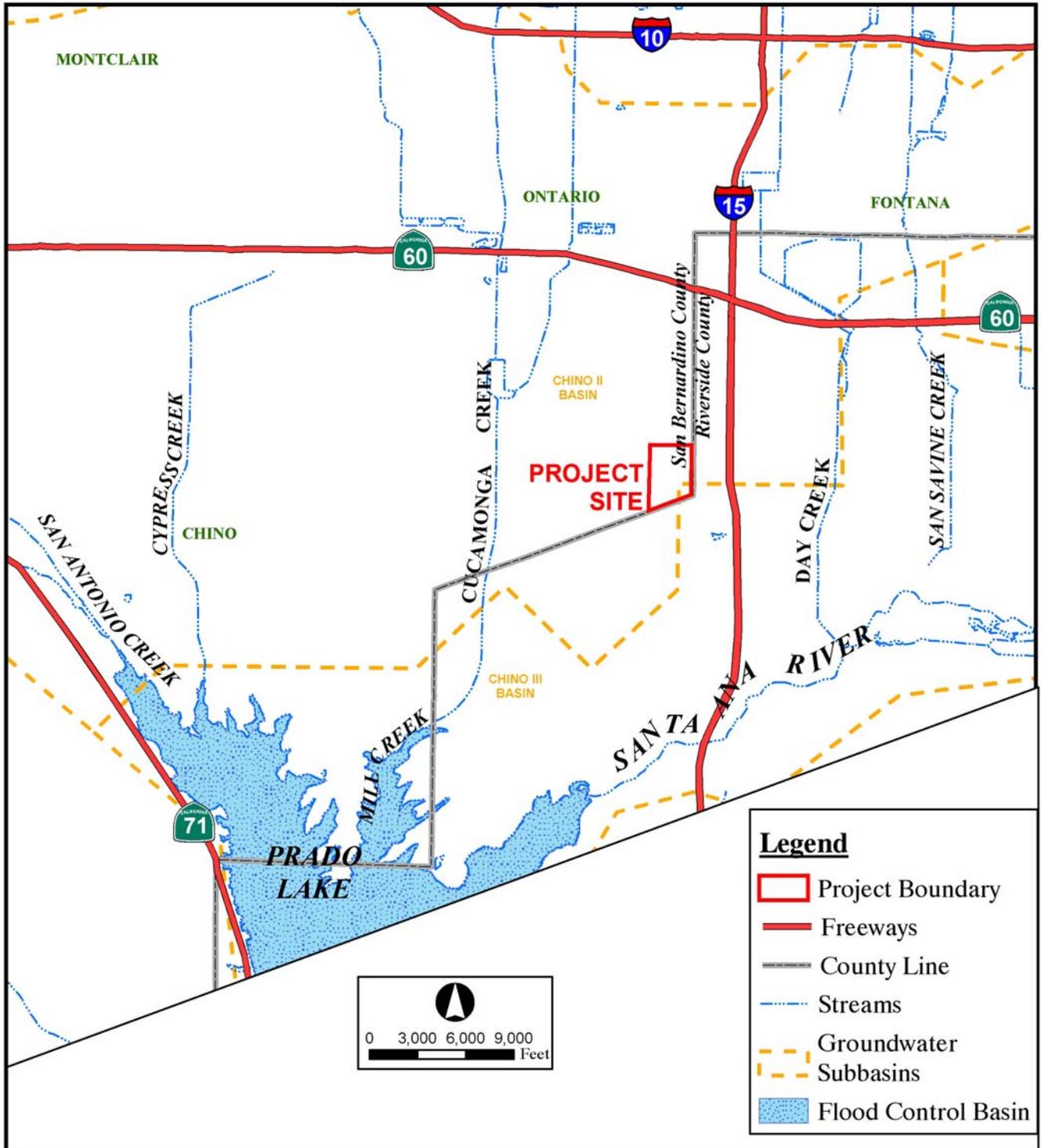
The project site is located within the Santa Ana River Watershed. Figure III-7-1 shows the site location and its proximity to various surface water bodies. The Santa Ana River (SAR) is the major surface water body within the Santa Ana Watershed that conveys water approximately 69 miles from the San Bernardino Mountains to the Pacific Ocean through San Bernardino, Riverside, and Orange Counties. The Santa Ana Regional Water Quality Control Board (SARWQCB) has divided the Santa Ana River geographically into six reaches, all of which vary

in width, disturbance, and reliability of water source (Santa Ana River Basin Water Quality Control Plan, 1995). Reach 3 is the portion of the SAR nearest to the project site, extending from the Mission Boulevard Bridge, in Riverside, to the Prado Dam. A number of tributaries feed into the SAR within Reach 3; several of these tributaries (Sunnyslope Channel, Tequesquite Arroyo, and Anza Park Drain) are supported by rising groundwater at Riverside Narrows. From the Riverside Narrows to Prado Basin, the SAR is generally in a natural and unmodified state. Water levels are generally shallow, temperatures are warm, and the channel bottom is dominated by shifting sands, creating only limited habitat for aquatic organisms. The project site is located approximately 3 miles north of Reach 3 of the SAR.

Thus, the proposed project will contribute storm and nuisance runoff water to the County Line Channel and Cucamonga Creek which flow into Mill Creek and the Santa Ana River/Prado Basin. In addition, the project overlies the Chino II sub-basin of the larger Chino Groundwater Basin. As stated in the Water Quality Management Plan of the Santa Ana River Basin (Basin Plan), each of these Reaches and the Chino II sub-basin have numeric and/or narrative water quality objectives that are required to be met by the SARWQCB. In addition, each Reach identified in the Basin Plan and the Chino II sub-basin have beneficial uses assigned to them (Table III-7-A). Beneficial uses are threatened or lost when the water quality objectives are violated.

**Table III-7-A Beneficial Uses for Surface Waters  
and Groundwater in Proximity to the Proposed Project**

Water Body		Beneficial Uses
SAR Reach 3		AGR, GWR, REC1, REC2, WARM, WILD, RARE
Cucamonga Creek Reach 1		GWR, REC1, REC2, LWRM, WILD
Mill Creek		REC1, REC2, WARM, WILD, RARE
Prado Basin Wetlands		REC1, REC2, WARM, WILD, RARE
Chino II Groundwater Sub-basin		MUN, AGR, IND, PROC
Definitions		
AGR	Waters are used for farming, horticulture or ranching. Uses may include, but are not limited to, irrigation, stock watering, and support of vegetation for range grazing.	
GWR	Groundwater recharge waters, used for natural or artificial recharge of groundwater for purposes that may include future extraction, maintaining water quality, or halting saltwater intrusion in freshwater aquifers.	
MUN	Waters used for community, military, municipal, or individual water supply systems. Uses may also include drinking water supply.	
IND	Waters for industrial service supply. These uses do not depend primarily upon water quality, and may include mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil well repressurization.	
PROC	Waters for industrial process supply. Uses are for industrial activities that are dependent upon water quality. Uses may include process water supply and all uses of water related to product manufacture or food preparation.	
REC1	Water contact recreation waters, used for recreational activities involving body contact with water where ingestion of water is reasonably possible. Uses may include swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, and use of natural hot springs.	
REC2	Non-contact water recreation waters, used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water would be reasonably possible. These uses may include picnicking, sunbathing, hiking, beachcombing, camping, boating, sightseeing, and aesthetic enjoyment in conjunction of the above activities.	
WARM	Warm freshwater habitat waters support warm water ecosystems that may include preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.	
LWRM	Limited warm freshwater habitat waters support warm water ecosystems which are severely limited in diversity and abundance as the result of concrete-lined watercourses and low, shallow dry weather flows which result in extreme temperature, pH, and/or dissolved oxygen conditions.	
WILD	Wildlife habitat waters support wildlife habitats that may include the preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife.	
RARE	Rare, threatened, or endangered species waters support habitats necessary for the survival and successful maintenance of plant or animal species designated under the state or federal law as rare, threatened, or endangered.	



Area Hydrology  
Figure III-7-1

*Surface Water Quality*

The project site is located approximately 4 miles northeast of the Prado Basin, a large area of undisturbed, dense riparian wetland, and the largest wetland in Southern California. The Prado Basin was formed as the result of construction of Prado Dam, which was built to provide flood control, water storage, and conservation for Orange County. Within Prado Basin, Orange County Water District (OCWD) manages approximately 465 acres of constructed wetlands. Water that contains nitrate in concentrations that may exceed water quality standards is diverted from the SAR, treated within the wetlands such that nitrogen levels are effectively reduced, and then is discharged back into the SAR. The Prado Basin wetland area is rich in both plant and animal life and serves as habitat for rare, threatened, and endangered species.

Cucamonga Creek, an improved flood control facility and tributary to the SAR, flows in a southerly direction approximately 2 miles west of southwest corner of the Specific Plan boundary. The SARWQCB has divided Cucamonga Creek into two reaches: Reach 1 (Valley Reach) extends from the confluence with Mill Creek to 23<sup>rd</sup> Street in the City of Upland; Reach 2 (Mountain Reach) extends from 23<sup>rd</sup> Street in the City of Upland to its headwaters in the San Gabriel Mountains (Santa Ana River Basin Water Quality Control Plan, 1995). Reach 1 is an improved rectangular or trapezoidal flood control facility along its entire length. Downstream of the project site, below Hellman Avenue where the stream is renamed Mill Creek, the channel is natural and unimproved, and ultimately discharges to Prado Basin. Cucamonga Creek Channel Reach 1 flows south approximately 2 miles west of southwest corner of the Specific Plan boundary. Rainy season (Oct-May) flows in Cucamonga Creek are dominated by storm water, while dry season flows consist of wastewater treatment facility discharges and urban runoff. Water quality in the channel at the project site is influenced by wastewater discharge, and runoff from urban and agricultural land use, including dairies.

Cucamonga Creek Channel Reach 1 is listed on the Clean Water Act Section 303(d) list as impaired for high coliform count. To address this impairment, a total maximum daily load (TMDL), defined as the maximum pollutant load that a waterbody can receive and still attain water quality standards, was presented at a public workshop held June 24, 2005 and is anticipated to be developed by the Santa Ana Regional Water Quality Control Board by the end of 2005. Until the TMDL is established, narrative water quality standards that are outlined in the Basin Plan and Table III-7-B apply.

The most southerly portion of Cucamonga Creek Channel that has been renamed Mill Creek is also listed on the Clean Water Act Section 303(d) list as impaired for nutrients, pathogens, and suspended solids. The potential sources of these pollutants are agricultural operations and dairies in the upstream former agricultural preserve area (now planned as the New Model Colony). Mill Creek also has established numerical water quality standards, as listed in the Basin Plan and Table III-7-C. Cucamonga Creek Channel/ Mill Creek discharges into Reach 3 of the Santa Ana River, which is also listed on the Clean Water Act Section 303(d) list as impaired for pathogens, which is expected to be a result of the upstream dairies.

**Table III-7-B Applicable Narrative Water Quality Objectives**

<b><i>Bacteria, Coliform</i></b>	
REC-1	Fecal coliform: log mean less than 200 organisms/100 mL based on five or more samples/30 day period, and not more than 10% of the samples exceed 400 organisms/100 mL for any 30-day period
REC-2	Fecal coliform: average less than 2000 organisms/100 mL and not more than 10% of the samples exceed 4000 organisms/100 mL for any 30-day period
<b><i>Oil and Grease</i></b>	
Waste discharges shall not result in deposition of oil, grease, wax, or other materials in concentrations which result in a visible film or in coating objects in the water, or which cause a nuisance or adversely affect beneficial uses.	
<b><i>Solids, Suspended and Settleable</i></b>	
Inland surface waters shall not contain suspended or settleable solids in amounts which cause a nuisance or adversely affect beneficial uses as a result of controllable water quality factors.	

**Table III-7-C Numeric Water Quality Objectives**

<b>Water Body</b>	<b>Water Quality Objectives (mg/L)</b>						
	<b>TDS</b>	<b>Hardness</b>	<b>Na</b>	<b>Cl</b>	<b>TIN</b>	<b>SO<sub>4</sub></b>	<b>COD</b>
SAR Reach 3	700	350	110	140	10	150	30
Cucamonga Creek Reach 1	Numeric Water Quality Objectives have not been established, narrative objectives apply.						
Mill Creek	Numeric Water Quality Objectives have not been established, narrative objectives apply.						
Prado Flood Control Basin	Numeric Water Quality Objectives have not been established, narrative objectives apply.						
Chino II Groundwater sub-basin	<b>TDS</b>	<b>Hardness</b>	<b>Na</b>	<b>Cl</b>	<b>TIN</b>	<b>SO<sub>4</sub></b>	
	330	185	18	18	6	20	

Once construction of the proposed project is complete, it would contain residential dwelling units. Although construction would be complete, pollutants from this land use that have the potential to impair receiving waters will continue to migrate into the storm drain system. The pollutants associated with this type of land use are listed in Table III-7-D and categorized below:

**Table III-7-D Pollutants of Concern Summary Table**

Pollutant Type	Expected	Potential	Listed for Receiving Water
<b>Bacteria/Virus</b>	<u>R</u> <sup>1</sup>	<u>R</u> <sup>1</sup> <u>A</u> <sup>2</sup>	Mill Creek (Prado Dam), SAR Reach 3
<b>Nutrients</b>	<u>R, A</u>		Mill Creek (Prado Dam)
<b>Pesticides</b>	<u>R, A</u>		
<b>Organic Compounds</b>	<u>RS</u> <sup>3</sup>		Cucamonga Creek Reach 1
<b>Sediments</b>	<u>R, A</u>		Mill Creek (Prado Dam)
<b>Trash &amp; Debris</b>	<u>R, A</u>		
<b>Oil &amp; Grease</b>	<u>R</u>	<u>A (if uncovered pkg.)R</u>	
<b>Oxygen Demanding Substances</b>	<u>R</u>	<u>A</u>	
<b>Heavy Metals</b>	<u>S</u>		

Source: San Bernardino County Stormwater Program, Model Water Quality Management Plan Guidance, June 9, 2005.

<sup>1</sup> "R" indicates pollutant generated by detached residential developments.

<sup>2</sup> "A" indicates pollutant generated by attached residential development.

<sup>3</sup> "S" indicates pollutant generated by streets, which is not otherwise addressed in residential land uses.

Surface water quality may be impacted by both point source and non-point source (NPS) discharges of pollutants. Point source discharges are regulated through National Pollutant Discharge Elimination System (NPDES) permitting. One of the largest point sources of pollutants in the Chino Basin, and including the project site, is dairy operations, and the SARWQCB regulates discharges of dairy waste through NPDES Permit No. CAG018001. This permit restricts the method in which dairies can dispose of wastes (manure and washwater). The SARWQCB requires dairies to contain all washwater and all storm water runoff on-site, with containment facilities designed for the 24-hour, 25-year storm event. It is recognized that higher intensity storms will result in discharge of manure and wash water from the dairies. Wash water is required to be contained on-site and manure must be removed from a facility within 180 days of its removal from corrals, transported and disposed of at regulated disposal and/or composting facilities. Despite these regulatory controls, off-site discharges of wastewater do occur due to inadequate containment and enforcement. Runoff from dairies contains large amounts of manure, urine and other organic materials, and this contaminated runoff from dairies eventually reaches the Santa Ana River. Other point sources in the project vicinity that discharge into the same receiving waters as the proposed project include: Inland Empire Utility Agency (IEUA) Regional Plant No. 1 (RP-1), City of Riverside Regional Water Quality Control Plant, and Western Riverside County Regional Wastewater Authority Treatment Plant.

Non-point source pollution is now considered to be the leading cause of water quality impairments in the state, as well as the entire nation (State Water Resources Control Board, Non-point Source Program Strategy and Implementation Plan, 1998-2013, January 2000). Non-point source pollution is not as quantifiable as pollution that is derived from point sources, since it occurs through numerous diffuse sources. Rain water, snowmelt, or irrigation water can pick up and transport pollutants as it moves across land or paved surfaces, and these pollutants may ultimately be discharged into streams, lakes, oceans and groundwater. Urban areas and agriculture are both considered to substantially contribute to NPS pollution in surface waters. As rainfall or irrigation waters intercept pollutants in the landscape, these pollutants may be transported in contaminated runoff and enter streams, lakes, and oceans. Pollutants associated

with urban areas include fertilizers and pesticides used on urban landscapes; oil and grease from vehicles; brake pad residues and other pollutants associated with highway and parking lot runoff.

To address water quality issues associated with both point and non-point source pollution on a City-wide basis, the City of Ontario is in discussions with the SARWQCB to establish a regional treatment facility. The purpose of the treatment facility would be to receive runoff from the City of Ontario, including the New Model Colony (NMC), and allow it to filtrate through vegetation and soil before being released into receiving surface waters. This regional treatment facility would be designed to address nitrates, pathogens, and pesticides. If regional facilities are in place, then local BMPs can focus on removal of heavy metals, sediment, and trash. The status of these discussions is not finalized, however, so water quality regulations must be met on a project-by-project basis until the regional system of basins is in place and operational.

#### *Ground Water Quality*

Ground water is the water that is present below ground in saturated soil or rock materials. Ground water “recharge” occurs when water (e.g., from rain) infiltrates through the soil and enters the ground water reservoir. When ground water is pumped and extracted from the ground, it may be used for domestic, irrigation, and industrial purposes; consequently the quantity and quality of local ground water is an important water resource issue. The project site is located over the Chino Ground Water Basin. This ground water basin occupies approximately 235 square miles in the Upper Santa Ana River watershed. The SARWQCB recently adopted a Basin Plan Amendment that redefined the Chino ground water sub basin boundaries and identified four management zones, including the Prado Basin Management Zone for regulatory purposes (attachment to Resolution No. R8-2004-001). This Basin Plan Amendment also revised water quality objectives for nitrogen and total dissolved solids (TDS) for each management zone. For current regulatory purposes, the project site is located within the Chino II Ground Water Sub basin. Ground water in this zone predominantly flows in a southerly direction. Ground water recharge occurs through direct percolation of precipitation, irrigation returns, and subsurface inflows (OBMP PEIR, 2000). Extraction primarily occurs through ground water extraction and subsurface discharge into the Santa Ana River.

Over time, ground water quality in the lower Chino Basin has deteriorated. Ground water in portions of the Chino Basin exceeds Environmental Protection Agency (EPA) drinking water standards for nitrates and total dissolved solids (TDS), and exceeds water quality objectives listed in the SARWQCB Basin Plan for these constituents. In particular, the Chino Ground Water Basin south of SR60 has elevated concentrations of TDS and nitrates. High nitrate concentrations in waters used for drinking can be toxic to human life, and infants are particularly at risk and can develop “blue baby syndrome” (SARWQCB Basin Plan, 1995). The drinking water standard for nitrate (as  $\text{NO}_3$ ) has been set at 45 mg/L. High TDS (salts) in drinking water results in poor taste, and in irrigation water can negatively impact plant growth. Irrigation waters should not have a TDS concentration above 700 mg/L.

Currently, approximately 9200 acre-feet per year of Chino Basin ground water containing elevated concentrations of nitrate and TDS are treated by reverse osmosis to remove salts by the Chino I Desalter, operated by the Chino Desalter Authority (CDA). A second desalter (Chino II Desalter) was complete as of March 2006 ([www.ieua.org/docs/projects/](http://www.ieua.org/docs/projects/)

CDAProjectUpdateMar06.pdf). Ground water treatment yields potable water that is a viable water supply source for use in developing communities; consequently ground water treatment has been identified in the Optimum Basin Management Program (OBMP) as an important management strategy for the Chino Basin.

### *Hydrology*

The region has relatively flat topography, gently sloping south to southwest, and storm water runoff occurs predominantly as sheet flows over the landscape. The Federal Emergency Agency (FEMA) Flood Insurance Rate Map (FIRM) of the project area developed in 1996 (Figure III-7-2) shows that the 100-year storm flows (Zone A) are completely contained within the Cucamonga Creek Channel that is located about 2 miles west of the project site. The entire site is within the flood-free area (Zone X). No structures within the Specific Plan will be placed within a 100-year flood plain or will impede or redirect flood flows.

The nearly-complete County Line Channel, is a proposed 3-mile-long flood control facility that is located on the San Bernardino/Riverside County line within the Bellegrave Avenue alignment, and connects to Cucamonga Creek southwest of the project site via a rectangular channel stub that was placed at this location during the construction of the channel for this purpose. After construction, the channel will accommodate major storm drain laterals and convey storm flows such that runoff from urbanizing areas to the north is precluded from flowing onto former dairy lands (now housing tracts) to the south, causing overflows of dairy drainage systems (Initial Study/Environmental Assessment for the County Line Channel Flood Control Project, September 2001). Drainage from portions of the Mira Loma area of Riverside County will also discharge into the County Line Channel.

Currently, the storm flows estimated to occur from the one-in-a-hundred-year probability storm ( $Q_{100}$ ) are estimated to be about 32,000 cubic feet per second (cfs) in Cucamonga Creek at its confluence with Mill Creek. The  $Q_{100}$  storm flows discharging into Cucamonga Creek from the County Line Channel are projected to be approximately 3400 cfs.

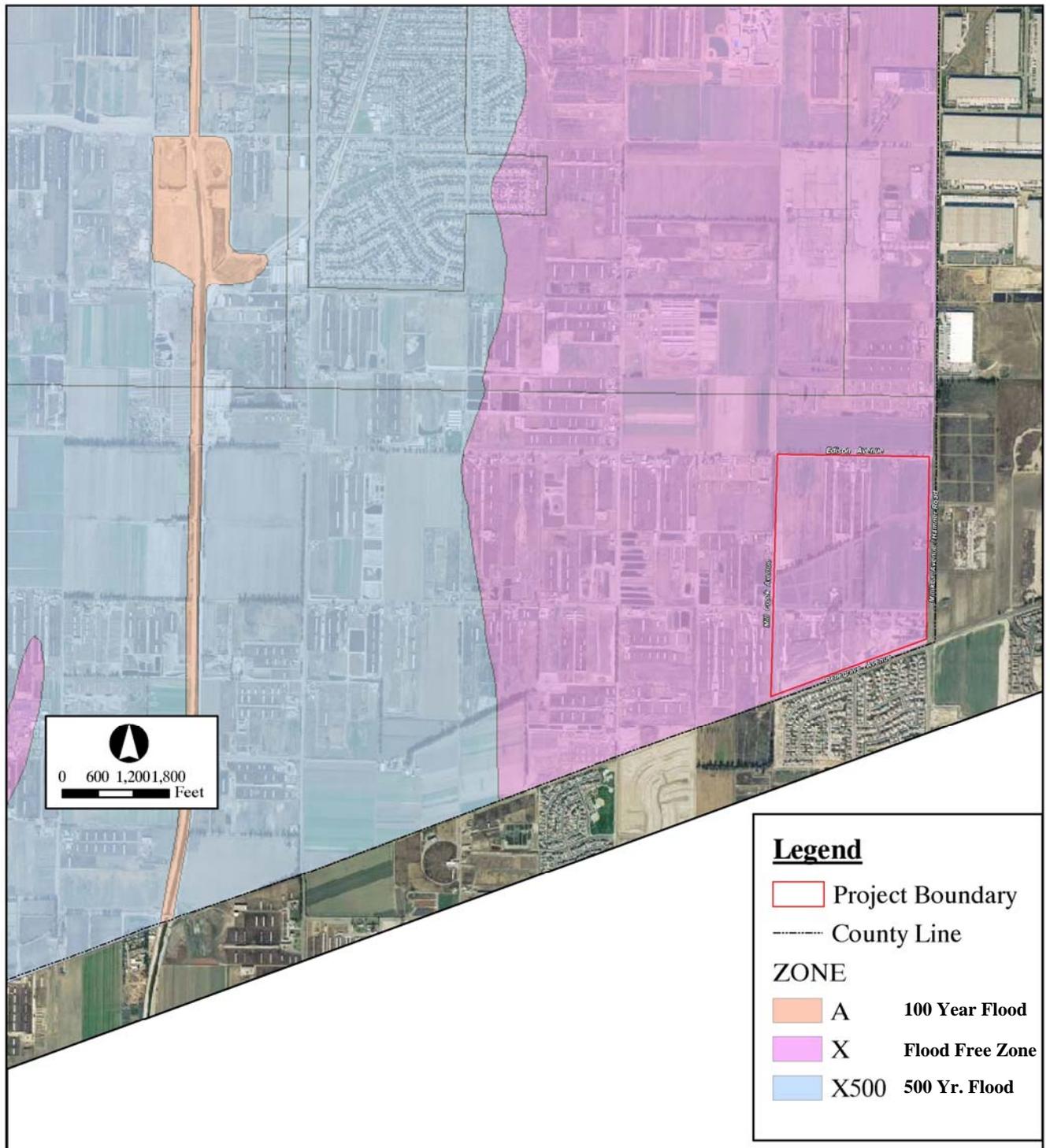
### *Flooding and Drainage*

The project site is currently used for agriculture and is relatively flat. Since the project does not contain extensive impervious surfaces, storm water generated on the site is able to percolate on-site and does not result in high volumes of surface run-off. During periods of heavy rainfall, surface runoff is collected in the existing drainage ditches and ponds on-site.

### *Water Quality Programs*

The City of Ontario receives recycled water from IEUA. The plans for IEUA's Regional Recycled Water Distribution System includes over 50 projects which include separate pipelines, pump stations, and storage reservoirs for recycled water. These projects have been grouped into five implementation phases, which are scheduled in two-year increments. By 2010, when all five phases are operational, anticipated annual recycled water sales will be approximately 70,000 acre-feet per year. Forty-thousand (40,000) acre-feet per year will replace potable demands for use in green belt irrigation and industrial use applications, while 30,000 acre-feet per year will be used for groundwater replenishment consistent with the Regional Recharge Master Plan and Optimum Basin Management Program approved by the Chino Basin Watermaster and Superior Court.

An Optimum Basin Management Program (OBMP) for the Chino Basin was developed by the Chino Basin Watermaster pursuant to a Judgement entered in the Superior Court of the State of California for the County of San Bernardino and a February 19, 1998 ruling. The OBMP includes nine Program Elements which will enhance basin water supplies, protect and enhance water quality, and enhance management of the basin.



Source: FEMA, National Flood Insurance Program, Q3 Flood Data, 2002

**Flood Zone Map  
Figure III-7-2**

### **Thresholds for Determining Significance**

Impacts to water quality and local hydrology may be considered potentially significant if the proposed project would:

- During project construction, create or contribute runoff water that would violate any water quality standards or waste discharge requirements, including the terms of the City's municipal separate stormwater sewer system permit.
- After the project is completed, create or contribute runoff water that would violate any water quality standards or waste discharge requirements, including the terms of the City's municipal separate stormwater sewer system permit.
- Provide substantial additional sources of polluted runoff from delivery areas; loading docks; other areas where materials are stored, vehicles or equipment are fueled or maintained, waste is handled, or hazardous materials are handled or delivered; other outdoor work areas; or other sources.
- Discharge stormwater so that one or more beneficial uses of receiving waters are adversely affected.
- Violate any other water quality standards or waste discharge requirements.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- Significantly increase erosion, either on- or off-site.
- Significantly alter the flow velocity or volume of stormwater run off in a manner that results in environmental harm.

### **Project Compliance with Existing Water Quality Regulations**

The Porter–Cologne Water Quality Control Act §13000 directs each Regional Water Quality Control Board (RWQCB) to develop a Water Quality Control Plan (Basin Plan) for all areas within its region. The Basin Plan is the basis for each RWQCB's regulatory programs. The proposed project site is located within the purview of the SARWQCB (Region 8), and must comply with applicable elements of the region's Basin Plan, as well as the Porter-Cologne Water Quality Control Act, and the federal Clean Water Act.

In 1972, the Federal Water Pollution Control Act (Clean Water Act) was amended to prohibit the discharge of pollutants to waters of the United States unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The Clean Water Act focused on tracking point sources, primarily from waste water treatment facilities and industrial waste dischargers, and required implementation of control measures to minimize pollutant discharges. The Clean Water Act was amended again in 1987, adding Section 402(p), to provide

a framework for regulating municipal and industrial storm water discharges. In November 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that establish application requirements for specific categories of industries, including construction projects that encompass greater than or equal to 5 acres of land. The Phase II Rule became final in December 1999, expanding regulated construction sites to those greater than or equal to 1 acre. The regulations require that storm water and non-storm water runoff associated with construction activity, which discharges either directly to surface waters or indirectly through municipal separate storm sewer systems (MS4s), must be regulated by an NPDES permit.

The SARWQCB administers the NPDES permit program regulating storm water from construction activities for projects greater than one acre in size. The main compliance requirement of the NPDES permits is the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The purpose of a SWPPP is to identify potential on-site pollutants, identify and implement appropriate storm water pollution prevention measures to reduce or eliminate discharge of pollutants to surface water from storm water and non-storm water discharges. Storm water best management practices (BMPs) to be implemented during construction and grading, as well as post-construction BMPs, will be outlined in the SWPPP prepared for the proposed project. The project proponent will be required to obtain coverage under the General NPDES Permit for construction activities prior to site disturbance, and will need to meet San Bernardino County's requirements for new development that are specified in its Water Quality Management Plan (WQMP). Impacts other than water quality impacts that pertain to construction and grading are discussed in Section III-2, Air Quality, and Section III-5, Geology/Soils. Examples of construction BMPs include: detention basins for capture and containment of sediments, use of silt fencing, sandbags, gravel bags, or straw bales to control runoff and identification of emergency procedures in case of hazardous materials spills.

The San Bernardino County Flood Control District, as principal permittee under the County's MS4 permit (Order No. R8-2002-0012), has recently revised its Water Quality Management Plan (WQMP), which was approved by the SARWQCB and made available to the public starting June 1, 2004. The Model WQMP Guidance document supersedes the "Guidelines for New Development and Redevelopment," dated June 2000. The purpose of the new WQMP is to guide the Permittees that have land-use planning and development authority in the development and implementation of a program to minimize the detrimental effects of urbanization on the beneficial uses of receiving waters, including effects caused by increased pollutant loads and changes in hydrology. The City of Ontario enacted Chapter 6 of Title 6 of the City's Municipal Code ("Storm water Drainage System") pursuant to the authority conferred by Order No. 2002-0012 in order to prescribe regulations to effectively prohibit non-storm water discharges into the City's storm water drainage system.

Pursuant to San Bernardino County Flood Control District's MS4 permit (Order No. 2002-0012) of which the City of Ontario is a co-permittee, the project's Water Quality Management Plan would be required to:

- Incorporate and implement Site Design BMPs. Justification is required for any Site Design BMPs not incorporated into the Project.

- Incorporate and implement all Source Control BMPs, unless not applicable to the project due to project characteristics. Justification is required for any Source Control BMP not incorporated into the project.
- Either incorporate and implement Treatment Control BMPs, by including a selection of such BMPs into the project design; or participate in or contribute to an approved regional-based treatment program. Site Design and Source Control BMPs are required for projects participating in regional-based treatment programs.
- The combination of Site Design, Source Control, and/or Treatment Control BMPs or Regional-based treatment program must address all identified pollutants and hydrologic conditions of concern.

### **Design Considerations**

The Storm Drain Plan included in the Subarea 25 Specific Plan (Figure III-7-3) proposes a drainage system of underground pipes and surface streets carrying water to 90 inch storm drain pipe which widens to a 102 inch storm drain pipe which then will connect to the County Line Channel. All major storm drain facilities required by the City's adopted Master Storm Drain Plan are included within the project. Precise facility alignments may change to reflect street alignments established during project development.

### **Environmental Impacts Before Mitigation**

*Threshold: During project construction, create or contribute runoff water that would violate any water quality standards or waste discharge requirements, including the terms of the City's municipal separate stormwater sewer system permit.*

During grading and construction operations, large land areas will be disturbed which may then become susceptible to wind or water-induced erosion and sediment loss. Excess sedimentation in receiving waters can contribute to water quality impairment. According to the SARWQRB, active construction sites can contribute almost a 200-fold increase in the amount of sediment discharged to receiving waters as compared to grassland. Therefore, construction sites greater than 1 acre in size are regulated under the State's General Permit for Construction Activities. This permit requires the discharger to eliminate or minimize sediments and other pollutants from discharging into storm water runoff from their construction sites through appropriate best management practices (BMPs) implemented during and after construction. A sampling and analysis program must be established for construction activities which discharge storm water directly into a water body listed pursuant to Section 303(d) of the Clean Water Act, as impaired for sedimentation/siltation or turbidity. The proposed project will not discharge into a waterbody that is listed for these specific constituents. Therefore, during construction, a sampling and monitoring plan for sedimentation is not required. However, a sampling and analysis program is still required during construction when one of the following instances occurs:

- Visual inspections indicate that there has been a break, malfunction, leakage, or spill from a BMP that could result in the discharge of pollutants in storm water; and/or

- Storm water comes into contact with soil amendments, exposed stockpiles of construction materials, or contaminated soils, and this storm water is allowed to discharge offsite.

During the Phase I hazardous materials analysis of the project site and the NMC historic resources survey, it was noted that the site currently contains structures built in the 1950s and 1960s that could potentially contain asbestos and lead-based paint in building materials. There are also septic tanks and petroleum-contaminated soils associated with above ground storage tanks. Demolition of the existing structures and removal of septic facilities and above ground storage tanks could potentially introduce pollutants into the environment which could subsequently be transported to receiving waters if appropriate BMPs are not implemented during construction. These issues and suitable mitigation measures are discussed in Section III-6, Hazards/Hazardous Materials, of this DEIR. Alternatively, if developments within the project area implement appropriate BMPs and, thus, are in compliance with the General Permit for Construction Activities, construction-related impacts should be reduced to a level below significance.

During construction, storm water runoff from the project site will migrate to waterbodies that are currently in violation of their water quality standards. The City's MS4 permit (Order No. 2002-0012) states that, "...discharges from permittee's activities into waters of the U.S. are prohibited unless the discharges are permitted by a NPDES permit..." Since the project will obtain an NPDES storm water permit for construction activities and shall comply with the requirements of the permit, the project is in compliance with the City's MS4 permit related to construction activities. If a construction-phase SWPPP is not developed for each portion of the project under construction and/or the project proponent does not prepare a Master WQMP for the entire project area for submittal to the City of Ontario for review and approval, and they do not incorporate controls required by the WQMP into the project design, potential significant individual and cumulative impacts to water quality could result.

*Threshold: After the project is completed, create or contribute runoff water that would violate any water quality standards or waste discharge requirements, including the terms of the City's municipal separate stormwater sewer system permit.*

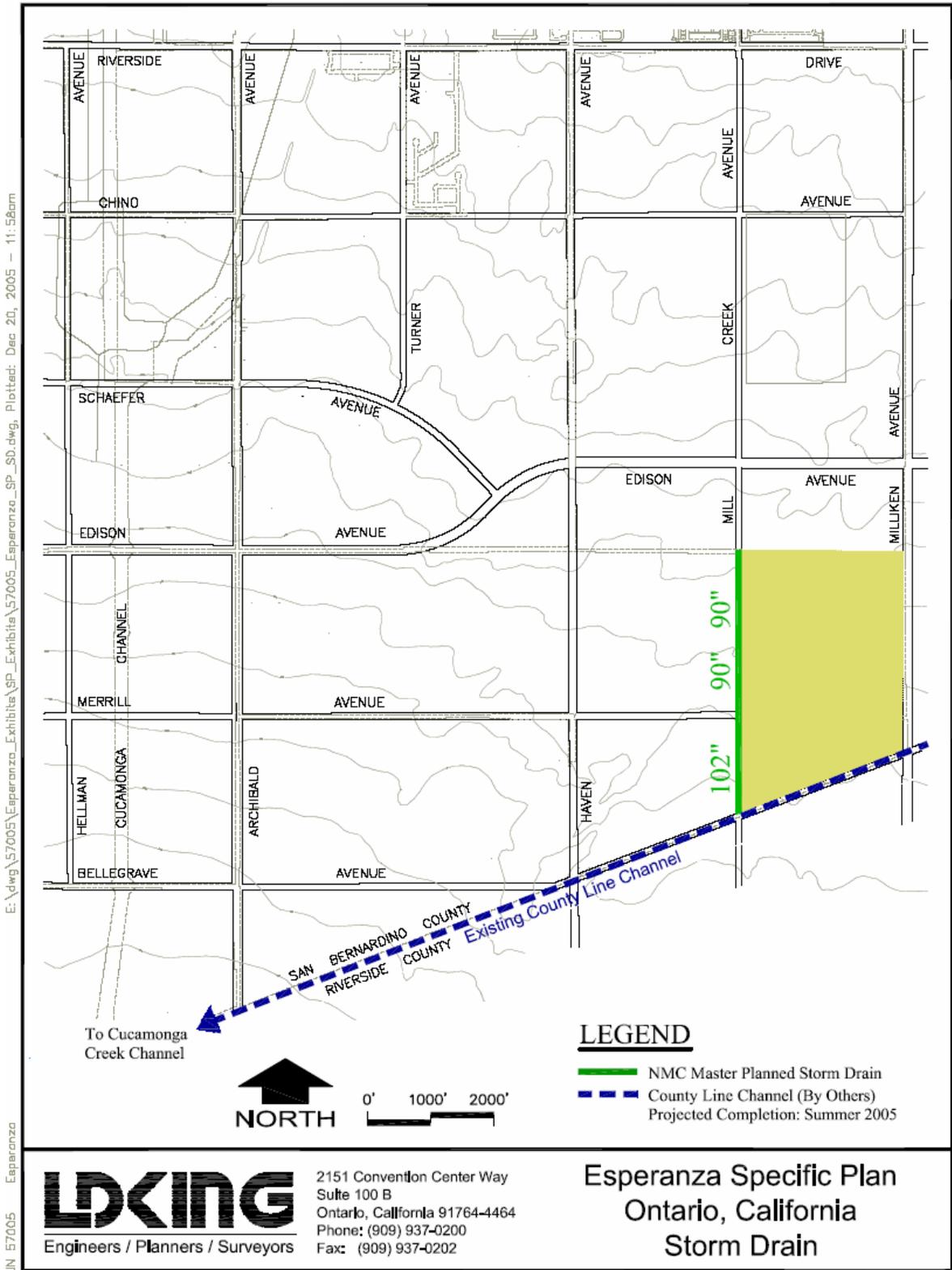
After the project is completed, all storm and nuisance run-off water will be conveyed in streets and drains to an underground storm drain system. As shown on Figure III-7-3, the backbone storm drain system within Subarea 25 includes one connection to the County Line Channel via a 90-inch pipe in Mill Creek Avenue which widens from Merrill Avenue south to a 102-inch pipe.

The SARWQCB sets water quality standards for all ground and surface waters within its region. Water quality standards are defined under the Clean Water Act to include the beneficial uses of specific water bodies, the levels of water quality that must be met and maintained to protect those uses (water quality objectives), and the State's anti-degradation policy. Water quality standards for all ground and surface waters overseen by the SARWQCB are documented in the Basin Plan (1995). Beneficial uses consist of all the various ways that water can be used for the benefit of people and/or wildlife. Eleven beneficial uses have been designated for surface water bodies and groundwater in the vicinity of the project site (Table III-7-A). All listed water quality

objectives governing water quality in inland surface waters were evaluated for potential impacts from development of the proposed project; however, only those numeric and narrative water quality objectives that are most likely to be relevant to the proposed project are listed in Table III-7-B and III-7-C, respectively. Water quality standards are attained when designated beneficial uses are achieved and water quality objectives are being met.

Non-point source pollution that is associated with residential urban land use (attached, detached, and streets) may be expected to increase following development of the project site and surrounding areas. Pollutants such as oil and grease, bacterial and viruses, heavy metals, oxygen demanding substances, organic compounds, trash and debris, sediment, fertilizers (nutrients), and pesticides can be expected to be present in surface water runoff once project development occurs. According to Sand Bernardino County Stormwater Program Model Water Quality Management Plan Guidance, June 2005 (SBWQMP Guidance), since Mill Creek (in Prado Basin area) and the Santa Ana River, Reach 2, are listed in the Clean Water Act Section 303(d) as impaired water bodies with respect to bacteria and pathogens, and Mill Creek also listed with respect to nutrients, the possible discharge of these pollutants by residential development shall require and offset (e.g. no net loading) to ensure no further degradation of the impaired water body. Without appropriate post-construction BMPs and/or mitigation measures incorporated into the development projects within the Specific Plan, significant adverse impacts to water quality standards and a general degradation of water quality may be expected to occur.

Implementation of the Project may contribute to an improvement in ground water quality. Ground water sampled via the two wells located on the site revealed high concentrations of both nitrate and TDS. Dairy operations have been identified as a primary source of these two pollutants in ground water, and every re-use of water further results in an increase in TDS concentration (SARWQCB Basin Plan, 1995). Converting the existing dairy land use to urban land use will, over time, result in an improvement to ground water quality with respect to nitrogen and TDS.



**Storm Drain Infrastructure Proposed for the Project Area  
Figure III-7-3**

Based on the above analysis and information, Table III-7-E, below, identifies the beneficial use, the potentially affected bodies of water and a discussion of the potential significant impacts of the project on each beneficial use.

**Table III-7-E Potential Significant Impacts to Beneficial Uses of Water**

<b>Beneficial Use</b>	<b>Receiving Waters</b>	<b>Potential Impacts</b>
AGR	SAR Reach 3, Chino II Groundwater Sub-basin	The agricultural use of water will be eliminated on the project site once development is complete. Negative impacts associated with agricultural uses of water will be eliminated. No negative significant impact to SAR Reach 3 or Chino II Groundwater Sub-basin related to AGR will result.
GWR	SAR Reach 3, Cucamonga Creek Reach 1	The unregulated recharge of water on site through the agricultural land will be eliminated once development is complete. Negative impacts associated with agricultural uses of water will be eliminated. No negative significant impact to SAR Reach 3 or Cucamonga Creek Reach 1 related to GWR will result.
REC1	SAR Reach 3, Cucamonga Creek Reach 1, Mill Creek, Prado Basin Wetlands	The project is not expected to have any measurable impact to REC1 beneficial uses of receiving waters in Cucamonga Creek Channel Reach 1 because it is concrete lined and fenced to restrict access; therefore, no significant impact is expected. The portions of SAR Reach 3, Mill Creek and Prado Basin Wetlands that the project could impact are not used as primary areas for REC 1 beneficial uses with the possible exception of fishing. If the project proponent does not prepare a Master WQMP for the entire project area for submittal to the City of Ontario for review and approval, and they do not incorporate controls required by the WQMP into the project design, potential significant cumulative impacts to water quality in SAR Reach 3, Mill Creek and Prado Basin, could result.
REC2	SAR Reach 3, Cucamonga Creek Reach 1, Mill Creek, Prado Basin Wetlands	The project is not expected to have any measurable impact to REC2 beneficial uses of receiving waters in Cucamonga Creek Channel Reach 1 because it is concrete lined and fenced to restrict access; therefore, no significant impact is expected. The portions of SAR Reach 3, Mill Creek and Prado Basin Wetlands that the project could impact are used as primary areas for REC 2 beneficial uses. If the project proponent does not prepare a Master WQMP for the entire project area for submittal to the City of Ontario for review and approval, and they do not incorporate controls required by the WQMP into the project design, potential significant cumulative impacts to water quality in SAR Reach 3, Mill Creek and Prado Basin, could result.
WARM	SAR Reach 3, Mill Creek, Prado Basin Wetlands	The portions of SAR Reach 3, Mill Creek, and Prado Basin Wetlands that the project could impact serve many beneficial uses associates with warm freshwater habitat. If the project proponent does not prepare a Master WQMP for the entire project area for submittal to the City of Ontario for review and approval, and they do not incorporate controls required by the WQMP into the project design, potential significant cumulative impacts to water quality in SAR Reach 3, Mill Creek and Prado Basin, could result.
WILD	SAR Reach 3, Cucamonga	Impacts to WILD beneficial uses for Cucamonga Creek

Beneficial Use	Receiving Waters	Potential Impacts
	Creek Reach 1, Mill Creek, Prado Basin Wetlands	Channel will be negligible because it is concrete lined and fenced to restrict access. The portions of SAR Reach 3, Mill Creek, and Prado Basin Wetlands that the project could impact serve many beneficial uses associated with wildlife habitat including water fowl. If the project proponent does not prepare a Master WQMP for the entire project area for submittal to the City of Ontario for review and approval, and they do not incorporate controls required by the WQMP into the project design, potential significant cumulative impacts to water quality in SAR Reach 3, Mill Creek and Prado Basin, could result.
RARE	SAR Reach 3, Mill Creek, Prado Basin Wetlands	The portions of SAR Reach 3, Mill Creek, and Prado Basin Wetlands, that the project could impact serve many beneficial uses associated habitats for rare, threatened or endangered species such as the least Bell's vireo. If the project proponent does not prepare a Master WQMP for the entire project area for submittal to the City of Ontario for review and approval, and they do not incorporate controls required by the WQMP into the project design, potential significant cumulative impacts to water quality in SAR Reach 3, Mill Creek and Prado Basin, could result.
LWRM	Cucamonga Creek Reach 1	Impacts to LWRM beneficial uses for Cucamonga Creek Channel will be negligible because it is concrete lined and fenced to restrict access. To the extent that LWRM habitats are formed in concrete-lined channels, the project will not change the benefits currently derived within the Cucamonga Creek Channel.
MUN	Chino II Groundwater Sub-basin	The proposed project will improve the groundwater quality within the Chino II Groundwater Sub-basin because the agricultural uses that presently cause high levels of nitrates in the drinking water supply will be eliminated. No negative impacts to the quality of the drinking water supply will result from this project.
IND	Chino II Groundwater Sub-basin	The proposed project will not affect industrial uses of the groundwater in the Chino Basin. No impacts are expected.
PROC	Chino II Groundwater Sub-basin	The proposed project will improve the groundwater quality within the Chino II Groundwater Sub-basin because the agricultural uses that presently cause high levels of nitrates in the drinking water supply will be eliminated. No negative impacts to the quality of the water supply for industrial processing purposes will result from this project.

*Threshold: Provide substantial additional sources of polluted runoff from delivery areas; loading docks; other areas where materials are stored, vehicles or equipment are fueled or maintained, waste is handled, or hazardous materials are handled or delivered; other outdoor work areas; or other source.*

The proposed project will allow for the development of new residential space. As required by the County's MS4 permit issued by the SARWQCB, the project's WQMP would identify all potential pollutants and their sources and appropriate construction-phase and operational-phase BMPs implemented. If a construction-phase SWPPP is not developed for each portion of the project under construction and/or the project proponent does not prepare a Master WQMP for the

entire project area for submittal to the City of Ontario for review and approval, and they do not incorporate controls required by the WQMP into the project design, potentially significant individual and cumulative impacts to water quality could also result.

*Threshold: Discharge stormwater so that one or more beneficial uses of receiving waters are adversely affected.*

The proposed project will have both a beneficial and potential negative effect on water quality. Agricultural land use, and, in particular, dairy operations, have been implicated as a primary source of the high nitrogen and TDS concentrations in Chino Basin ground water. Dairy abandonment will benefit water quality by reducing nitrate and total dissolved solids (TDS) in receiving waters. Assuming that 30,000 tons of salts enter Chino Basin ground water per year (Basin Plan, 1995) from disposal of dairy waste, over a total area of 19,300 acres, a salt load reduction to ground water of as much as 825 tons per year may be achieved by implementing the project and removing the current dairy land use. Furthermore, total coliform pollutant loadings would likely also be reduced as a result of dairy conversion, resulting in further improvement to water quality.

The project is not expected to have any measurable impact to REC1 and REC2 beneficial uses of receiving waters (see Table III-7-A for definitions). Cucamonga Creek Channel Reach 1 is concrete lined and is fenced to restrict access; therefore, REC1 and REC2 uses are extremely limited. Likewise, impacts to LWRM and WILD beneficial uses for Cucamonga Creek Channel will be negligible, as habitat function and value of Cucamonga Creek Channel is very limited and will not be altered as the result of development of the proposed project. See also Table III-7-E for a detailed analysis of each beneficial use.

*Threshold: Violate any other water quality standards or waste discharge requirements.*

No additional water quality standards or waste discharge requirements will be violated beyond those discussed in the previous thresholds.

*Threshold: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).*

The Chino Basin, in which the proposed project is located, is one of the largest groundwater basins in southern California, with over 5,000,000 acre feet of ground water present (Program Environmental Impact Report for the Optimum Basin Management Program (OBMP), May 2000). This groundwater source is important for supplying water for municipal, industrial, and agricultural uses. The Chino Basin Watermaster and Inland Empire Utilities Agency (IEUA) have developed a long-range water management plan for the Chino Basin (OBMP). This plan includes a comprehensive program that implements specific projects and regulatory requirements in order to effectively manage ground water quantity and quality in the Chino Basin. One basic premise of the OBMP is that there is an optimum level for the ground water table that translates

into a “safe yield.” Safe yield is defined as the amount of ground water than can be extracted (e.g., from the Chino Basin) without resulting in undesirable effects. Conversely, raising this optimum ground water level could cause negative effects as well.

Currently, ground water extraction in the vicinity of the proposed project occurs by agricultural operations as well as through operations of the Chino Desalter Authority (CDA). CDA oversees operations of the Chino I Desalter, which extracts water that contains high concentrations of TDS and nitrates; treats this water to remove excess salts; and delivers the resulting potable water to purveyors, such as the City of Ontario, Chino, Norco, Chino Hills, and Jurupa Community Services District (Chino I Desalter Expansion and Chino II Desalter SEIR, November 2001). As agricultural ground water extraction, including ground water extraction at the project site, diminishes with conversion to urban land use, desalter pumping operations will need to increase in order to ensure ground water levels do not rise, thereby affecting the safe yield of the basin. Consequently, a shift to urban land use at the project site and throughout the southern portions of the NMC will further the OBMP objective of maintaining a low ground water table in the southern part of the Chino Basin, by increasing the amount of impervious land surfaces and thereby reducing the amount of water subject to on-site infiltration. Thus, conversion from agricultural to urban use is considered in the OBMP, and should result in a positive impact to the ground water basin.

The project site is composed of soils in the Delhi and Hilmar soil series. In its current state, land surfaces are pervious and water can infiltrate to some degree. These soils have rapid water infiltration rates and potentially have good ground water recharge characteristics (Soil Survey, Western Riverside Area, California, 1971). Over time, however, dairy applications of manure to the ground surface create a textural boundary through which water does not easily infiltrate; thus, infiltration rates on these lands are effectively lowered. On the other hand, all dairy wash water must be retained on site within wastewater lagoons; it would be expected that some water from these detention ponds would infiltrate through the soil and contribute to ground water recharge, albeit recharge with low water quality. Therefore, while large amounts of water may be pumped from the ground by dairy operations, some recharge would also be expected to occur.

The GPA for the NMC Final EIR (1997) indicated that the area to the south of State Highway 60, where this site is located, generally is unsuitable for recharge projects that are in the planning stage, due to low infiltration potential in the soils and poor water quality of the underlying ground water; therefore, most planned recharge projects under consideration are best placed to the north of the freeway. The NMC Master Plan of Drainage (2000) documented the concern of the Chino Basin Water Conservation District that, although the NMC is not appropriate for large scale recharge projects, development projects within this area may miss opportunities to conserve water and enhance percolation. After development of the 223-acre Specific Plan area, pavement and structures will be introduced into the environment, such a large percentage of the surfaces on the site will become impervious. Runoff rates and volumes will increase and infiltration will decrease. However, within the Specific Plan, the proposed parks and school site could be vegetated and designed to conserve water and enhance ground water recharge compared to the present dairy land use.

Since the project actually furthers the ground water management objectives of the OBMP by limiting recharge into the southern portion of the Basin; and since the development of the OBMP

anticipated the cumulative impacts of urbanization of the Chino Basin and consequent conversion of agricultural land use (e.g., diminished agricultural ground water extraction and projected need to increase ground water pumping by desalters), no significant individual or cumulative negative impacts to aquifer volume or the ground water table are expected to occur with implementation of the proposed project. Nevertheless, mitigation measures are included that would both conserve water and provide for enhanced ground water recharge, as recommended in the NMC Water Master Plan (2000).

*Threshold: Significantly increase erosion, either on- or off-site.*

On-site erosion could occur as a result of soil disturbance, wind or water. Implementation of the required NPDES SWPPP should reduce impacts to less than significant levels of erosion due to grading and storm waters. Graded sites, if not treated properly, can result in wind erosion and dust pollution. See the Air Quality Section, III-2, for impacts and proposed mitigation related to wind erosion.

The project site is not currently equipped with an underground storm drain system. In its current state, storm water runoff predominantly occurs as sheet flows directed toward the southwest. The estimated amount of water leaving the site in its undeveloped condition is 215 cfs at the intersection of Mill Creek and the County Line. Project implementation will alter the existing condition to allow surface runoff within the project site boundary to drain into an underground storm drain system that is designed to accommodate projected surface flows within the project site. Flows during a 100-year storm event from the site after development are estimated to be approximately 359 cfs at the intersection of Mill Creek and the County Line. The proposed storm drain system will convey surface runoff into the County Line Channel to the south; ultimately all runoff will reach Cucamonga Creek Channel and the Prado Basin. The  $Q_{100}$  peak storm discharge from the County Line Channel into Cucamonga Creek is projected to be approximately 3,400 cfs. Cucamonga Creek Channel Reach 1 is a concrete-lined flood control facility in its entirety, and was designed to accommodate the 100-year storm event at full buildout (urban development) of the watershed. Therefore, the projected flows from the project site (maximum approximately 144 cfs change from existing) which will ultimately be discharged into the Channel, would not be sufficient to result in substantial unanticipated erosion or siltation to Cucamonga Creek.

Below the confluence of Cucamonga and Mill Creeks, however, the channel is natural and unimproved so increased flows could cause off-site erosion. At the Cucamonga Creek and Mill Creek confluence below Hellman Avenue, flows for the 100-year storm event are approximately 32,000 cfs. Cumulative increases in flows within Cucamonga Creek channel due to upstream urban development may cause erosion of the bed and bank of the unimproved Mill Creek. It is anticipated that the Mill Creek reach will be within the inundation zone (566 ft elevation) created by raising the level of Prado Dam (Army Corps of Engineers (ACOE) Water Control Manual: Prado Dam & Reservoir, Santa Ana River, California, Sept. 1994, Plate 2-11). Storm flows discharging from Cucamonga Creek at full inundation would have negligible erosion and siltation impacts to Mill Creek or the Prado Basin. Cumulative increases in storm flows discharging from Cucamonga Creek Channel when the water level within the Basin is nearer to operational levels (490 ft. elevation) may cause adverse impacts to Mill Creek due to erosion of

the stream bed and bank. Implementation of the proposed project, however, would have negligible individual impacts, since the  $Q_{100}$  would increase by only 144 cfs and this is only about 0.45 percent of the total flows at the Mill Creek/Cucamonga Creek confluence. According to the ACOE in their response summary to the Public Information Meeting, 12/08/05, the “Los Angeles District has begun construction to increase the capacity of the reservoir behind Prado Dam. The modifications to the dam, . . . will take place in three phases over the next five to eight years.” Given the projected changes in water levels of the Prado Basin, and the construction of the dam improvements which will be completed prior to completion of the Specific Plan, any potential cumulative impacts will be less than significant.

*Threshold: Significantly alter the flow velocity or volume of stormwater run off in a manner that results in environmental harm.*

Conversion from agricultural to urban land use will alter the existing drainage patterns of the project area. In its current state, moderate amounts of rainfall infiltrate into the soil and surface runoff is negligible. During intensive rainfall events or storms of long duration, runoff occurs via sheet flows toward the south. The 1997 City of Ontario GPA for the NMC EIR showed that the project area is not within a flood hazard area due to lack of storm drain infrastructure.

After construction, impervious surfaces will substantially increase; therefore, surface absorption (infiltration) will decrease and rates and amounts of surface runoff will increase. Without adequate on-site and downstream infrastructure in place to direct the storm flows from the project site into County Line Channel and subsequently the Cucamonga Creek, an increase in on- and off-site flooding could be expected to occur. Once the drainage system is developed within the project area, however, storm flows will be adequately managed and will discharge ultimately to Cucamonga Creek and the Prado Basin. At that point, there would be negligible risk of on- or off-site flooding due to increased rates or amounts of surface runoff.

Areas north of the site (up-gradient) may remain in their existing state for some amount of time after the proposed project is built, and/or the Pietersma property may not be built out until after the Armada and Amberhill properties. Sheet flows during storm events could impact the proposed all or portions of the project site if not properly mitigated. This may be a potentially significant temporary impact.

### **Proposed Mitigation Measures**

An Environmental Impact Report is required to describe feasible mitigation measures which could minimize significant adverse impacts (CEQA Guidelines §15126.4). Mitigation measures were evaluated for their ability to eliminate or reduce the potential significant adverse impacts related to hydrology and water quality.

*In order to reduce impacts to hydrology and water quality and implement the mitigation measures included in the GPA for the NMC Final EIR, the following mitigation measures shall be implemented, unless the Regional Water Quality Treatment Facility is complete and operational prior to project construction:*

**MM Hydro 1:** In order to ensure that construction activities associated with the Subarea 25 Esperanza Specific Plan will not cause a violation of any water quality standard or waste discharge requirements and to assure no substantial degradation of water quality occurs, and to implement the intent of mitigation measures included in the Final Environmental Impact Report for the NMC, the development within the project area shall comply with all applicable provisions of the State’s General Permit for Construction Activities (Order No. 99-08-DWQ, or most recent version) during all phases of construction. A copy of evidence of the receipt of a Waste Discharge Identification Number from the State Regional Water Quality Control Board shall be filed with the City Engineer along with a copy of the Storm Water Pollution Prevention Plan (SWPPP) maps and BMPs. According to Title 6, Chapter 6, Section 6 of the City’s code, the City Engineer shall review and approve the provisions of the SWPPP prior to implementation of any SWPPP provision or starting any construction activity.

**MM Hydro 2:** In order to ensure the development within the Subarea 25 Esperanza Specific Plan will not cause or contribute to violations of any water quality standard or waste discharge requirements, and to assure no substantial degradation of water quality occurs, the project will complete a Water Quality Management Plan (WQMP) pursuant to the MS4 permit (Order No. 2002-0012) under which the City of Ontario is a permittee. The City adopted storm water management code Section 6-6.101 *et seq.* to implement the provisions of the permit. The project shall incorporate Site Design BMPs and Source Control BMPs, and potentially Treatment Control BMPs. The following table (III-7-F) provides guidelines and possible BMPs that may be incorporated into the project design (on construction drawings) and/or project specifications. Prior to acceptance of the WQMP, the City shall assure that maintenance responsibilities of BMPs approved for the project are identified and enforceable. Table III-7-G correlates each BMP to the pollutants of concern which it removes/reduces and/or meets the design objectives for the BMP.

**Table III-7-F Guidance for Use of BMPs in Esperanza Specific Plan**

1. Where landscaping is proposed, drain rooftops into adjacent landscaping prior to discharging to the storm drain.
2. Where landscaping is proposed drain impervious sidewalks, walkways, trails and patios into adjacent landscaping.
3. Increase the use of vegetated drainage swales in lieu of underground piping or imperviously lined swales.
4. Use one or more of the following: <ul style="list-style-type: none"> <li>- Rural swale system: street sheet flows to vegetated swale or gravel shoulder, curbs at street corners, culverts under driveways and street crossings;</li> <li>- Urban curb/swale system; street slopes to curb; periodic swale inlets drain to vegetated swale/biofilter;</li> <li>- Dual drainage system: First flush captured in street catch basins and discharged to adjacent vegetated swale or gravel shoulder, high flows connect directly to municipal storm drain systems;</li> <li>- Other comparable design concepts that are equally effective.</li> </ul>
5. Use one or more of the following features for design of driveways and private residential parking areas: <ul style="list-style-type: none"> <li>- Design driveways with shared access, flared (single lane at street) or wheel strips (paving only under tires); or, drain into landscaping prior to discharging to the municipal storm drain system;</li> <li>- Uncovered temporary or guest parking on private residential lots may be paved with a permeable surface; or designed to drain into landscaping prior to discharging to the municipal storm drain system;</li> <li>- Other comparable design concepts that are equally effective.</li> </ul>
6. Use one or more of the following design concepts for the design of parking areas: <ul style="list-style-type: none"> <li>- Where landscaping is proposed in parking areas, incorporate swaled (depressed) landscape areas into the drainage design or utilize vegetated infiltration trenches between opposing parking stalls; and</li> <li>- Other comparable design concepts that are equally effective.</li> </ul>

NOTE: Infiltration trenches and/or basins shall be incorporated in all areas described in Table III-7-F, where bacteria and nutrients can be expected, to achieve the required offset.

**Table III-7-G Available Site Design, Source Control and Treatment Control BMPs**

<b>TREATMENT CONTROL BMPs</b>	<b>TARGETED CONSTITUENTS</b>	<b>REMOVAL EFFECTIVENESS</b>
<b>Volume Based</b>		
Extended Detention Basin (TC-22)	Sediments	M
	Nutrients	L
	Trash	H
	Metals	M
	Bacteria	M
	Oil and Grease	M
	Organics	M
Infiltration Trench (TC-10)	Sediments	H
	Nutrients	H
	Trash	H
	Metals	H
	Bacteria	H
	Oil and Grease	H
	Organics	H
Infiltration Basin (TC-11)	Sediments	H
	Nutrients	H
	Trash	H
	Metals	H
	Bacteria	H
	Oil and Grease	H
	Organics	H
Retention/Irrigation (TC-12)	Sediments	H
	Nutrients	H
	Trash	H
	Metals	H
	Bacteria	H
	Oil and Grease	H
	Organics	H
Wet Pond (TC-20)	Sediments	H
	Nutrients	M
	Trash	H
	Metals	H
	Bacteria	H
	Oil and Grease	H
	Organics	H
Constructed Wetland (TC-21)	Sediments	H
	Nutrients	M
	Trash	H
	Metals	H
	Bacteria	H
	Oil and Grease	H
	Organics	H

**Table III-7-G Available Site Design, Source Control and Treatment Control BMPs**

<b>TREATMENT CONTROL BMPs</b>	<b>TARGETED CONSTITUENTS</b>	<b>REMOVAL EFFECTIVENESS</b>
<b>Volume Based</b>		
Media Filter	Sediments	Variable
	Nutrients	Variable
	Trash	Variable
	Metals	Variable
	Bacteria	Variable
	Oil and Grease	Variable
	Organics	Variable
Manufactured Proprietary Devices (MP Series)	Sediments	Variable
	Nutrients	Variable
	Trash	Variable
	Metals	Variable
	Bacteria	Variable
	Oil and Grease	Variable
	Organics	Variable
<b>Flow Based</b>		
Vegetated Swale (TC-30)	Sediments	M
	Nutrients	L
	Trash	L
	Metals	M
	Bacteria	L
	Oil and Grease	M
	Organics	M
Vegetated Buffer Strips (TC-31)	Sediments	H
	Nutrients	L
	Trash	M
	Metals	H
	Bacteria	L
	Oil and Grease	H
	Organics	M
Bioretention (TC-32)	Sediments	H
	Nutrients	M
	Trash	H
	Metals	H
	Bacteria	H
	Oil and Grease	H
	Organics	H
Multiple Systems (TC-60)	Sediments	H
	Nutrients	L
	Trash	H
	Metals	H
	Bacteria	M
	Oil and Grease	H
	Organics	H

**Table III-7-G Available Site Design, Source Control and Treatment Control BMPs**

<b>TREATMENT CONTROL BMPs</b>	<b>TARGETED CONSTITUENTS</b>	<b>REMOVAL EFFECTIVENESS</b>
<b>Volume Based</b>		
Manufactured Proprietary Devices (MP Series)	Sediments	Variable
	Nutrients	Variable
	Trash	Variable
	Metals	Variable
	Bacteria	Variable
	Oil and Grease	Variable
	Organics	Variable
<b>SOURCE CONTROL BMPs</b>	<b>DESIGN OBJECTIVES</b>	
<b>Routine Structural BMPs</b>		
Site Design & Landscape Planning (SD-10)	Maximize Infiltration	
	Provide Retention	
	Slow Runoff	
	Minimize Impervious Land Coverage	
Roof Runoff Controls (SD-11)	Maximize Infiltration	
	Provide Retention	
	Slow Runoff	
	Contain Pollutants	
Efficient Irrigation (SD-12)	Maximize Infiltration	
	Provide Retention	
	Slow Runoff	
Storm Drain Signage (SD-13)	Prohibit Dumping of Improper Materials	
Trash Storage Area (SD-32)	Contain Pollutants	
Pervious Pavements (SD-20)	Maximize Infiltration	
	Provide Retention	
	Slow Runoff	
	Minimize Impervious Land Coverage	
Alternative Building Materials (SD-21)	Maximize Infiltration	
	Provide Retention	
	Source Control	
Hillside Landscaping		
Protect Slopes and Channels		
Trash Inlet Racks		
Energy Dissipaters		
<b>Routine Non-Structural BMPs</b>		
Activity Restrictions		
Spill Contingency Plan		
Employee Training/ Education		

**Table III-7-G Available Site Design, Source Control and Treatment Control BMPs**

<b>TREATMENT CONTROL BMPs</b>	<b>TARGETED CONSTITUENTS</b>	<b>REMOVAL EFFECTIVENESS</b>
<b>Volume Based</b>		
Program		
Street Sweeping Private Street and Parking Lots		
Common Area Catch Basin Inspection		
Education of Property Owners		

\*Any BMP including a reference such as “(SD-30)” is included in the California Storm Water Quality Association, Storm Water Best Management Practices Handbook for New Development and Redevelopment (CASQA, 2004, [www.cabmphandbooks.com](http://www.cabmphandbooks.com)).

**MM Hydro 3:** In order to reduce the risk of flooding and to implement mitigation measures included in the Final Environmental Impact Report for the NMC prior to the issuance of a grading permit, the development within the Specific Plan, a final drainage plan for the proposed project shall be submitted for review and approval by the City Engineer and shall construct all necessary storm drain facilities internal to the development which are designed to connect with the City’s master planned drainage system.

**MM Hydro 4:** In order to reduce the risk of flooding and to implement mitigation measures included in the GPA for the NMC Final EIR, prior to issuance of grading permits, the City of Ontario shall coordinate with the San Bernardino County Flood Control District to ensure that the project meets County Flood Control requirements such as those established for encroachment permits.

**MM Hydro 5:** In order to conserve water and to mitigate for any potential unforeseen adverse impacts to a reduction in ground water recharge, the following measure has been recommended by the Chino Basin Water Conservation District: Landscaping within individual development projects will retain and percolate both applied irrigation water and storm water in vegetated areas of parking lots and other areas, where appropriate; “depressed” planted areas bordered by shrubbery screens will be implemented rather than “mounded” grass and shrubbery planted screens. Neighborhood Edges and parks will be irrigated via reclaimed water.

**MM Hydro 6:** In order to reduce pollutants in post construction run-off and to implement mitigation measures included in the Final Environmental Impact Report for the NMC, the individual project owners and operators (e.g., homeowner associations, parks department, etc.) shall ensure that all pest control, herbicide, insecticide and other similar substances used as part of maintenance of project features are handled, stored, applied and disposed of by those conducting facility maintenance in a manner consistent with all applicable federal, state and local regulations. According to Title 6, Chapter 6, Section 6 of the City’s code, the City Engineer shall monitor and enforce this provision.

**MM Hyd: 7:** To mitigate possible temporary run-off from undeveloped properties located north (up-gradient) of all or a portion of the project site, drainage from properties north of the developed portions of the project site shall be conveyed to appropriate drainage facilities, as approved by the City Engineer.

### **Summary of Project-Specific Environmental Effects After Mitigation Measures are Implemented**

After implementation of the above mitigation measures, all potential project-specific impacts are reduced to a level below significance.

### **Summary of Cumulative Environmental Effects After Mitigation Measures are Implemented**

As defined in Section 15355 of the CEQA Guidelines, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. The discussion of cumulative impacts is limited because the Specific Plan is consistent with the plans used in the evaluation of each environmental issue area discussed here and in Section IV-1, Cumulative Environmental Effects.

Future land development projects within the NMC would cumulatively impact water quality in the region due to increased urban runoff. The nature of the pollutants found in runoff is expected to change from pollutants associated with agricultural land uses, such as bacteria, ammonia, nitrates, phosphorous and salts, to urban uses which produce contaminants such as oil and grease, trash and debris, and pesticides. Currently, dairies within the NMC operate under the authority of NPDES Permit No. CAGO18001 (Waste Discharge Requirement Order No. 99-11). However, because this permit is concerned with dairy operations, existing non-dairy properties would not be covered along with portions of dairy properties not developed with dairies. Future development of Subareas would be required to obtain prepare and implement SWPPPs and WQMPs for all proposed development affording a more extensive amount of storm water and nuisance water quality protection. Therefore, development of the project area with the implementation of water quality BMPs as required by the SWPPPs and WQMPs and above mitigation measures has the potential to produce a net beneficial cumulative impact on the quality of downstream surface waters and groundwater within the Chino Basin in the long-term, as stated in the GPA for the NMC Final EIR.

However, Reach 1 of Cucamonga Creek Channel, Mill Creek (Prado Area), and Reach 3 of the Santa Ana River are currently in violation of their respective water quality standards. Cumulatively considerable impacts to these water bodies would occur even if during construction a SWPPP was developed and a WQMP enforced after construction since the permits that govern these documents allow some discharge of non-storm water pollutants into receiving waters, and these waters are currently in violation. Once the NMC and other portions of the Chino Basin that support dairy/agricultural operations convert to urban uses, these impaired water bodies may revert to non-violation status, but until such time as the downstream receiving waters are not in violation, potentially significant cumulative effects could result from the project and a Statement of Overriding Consideration would be required prior to project approval.

## 8. NOISE

The following discussion summarizes the Acoustical Impact Analysis prepared for the proposed project by Albert A. Webb Associates in November 2005. This report is contained in its entirety as Appendix F of this document. Potential impacts addressed in this section relate to increases in noise levels, groundborne vibration, increases in ambient noise levels, temporary or periodic noise, and exposure of sensitive receptors to excessive noise. As discussed in Section III-11, Transportation/Traffic, the traffic created by the school will be worse than the traffic created by 46 single-family residences. Therefore, for the purposes of the following analysis, the project is assumed to include approximately 1,410 dwellings and a 10-acre elementary school. If the school district does not use the site in the future and it reverts to homes, those homes would be subject to all applicable mitigation measures within this section of the EIR.

### Setting

Noise is defined as unwanted or objectionable sound. The effect of noise on people can include general annoyance, interference with speech communication, sleep disturbance and, in the extreme, hearing impairment. The unit of measurement used to describe a noise level is the decibel (dB). The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, the “A-weighted” noise scale, which weights the frequencies to which humans are sensitive, is used for measurements. Noise levels using A-weighted measurements are written dB(A) or dBA. Decibels are measured on a logarithmic scale which quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as doubling a traffic volume, would increase the noise level by 3 dBA; a halving of the energy would result in a 3 dBA decrease.

The term CNEL is the abbreviation for Community Noise Equivalent Level. CNEL is a 24-hour average noise level with adjustments. For noise that impacts a site and occurs between 7:00 PM and 10:00 PM, the actual average level is adjusted upward by 5 dBA. For noise that occurs between 10:00 PM and 7:00 AM, the actual average level is adjusted upward by 10 dBA. These adjustments could make the CNEL (a 24-hour average) as much as seven (7) dBA higher than the true 24-hour average. The above standards assume that typical wood frame homes provide a 10 dBA outdoor-to-indoor noise reduction with windows open and a 20 dBA reduction with windows closed.

Sensitive receptors are areas where humans are participating in activities that may be subject to the stress of significant interference from noise. Land uses associated with sensitive receptors often include residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, education facilities, and libraries. Other receptors include office and industrial buildings, which are not considered as sensitive as single-family homes, but are still protected by the City of Ontario land use compatibility standards. Please see the project-specific Acoustical Impact Analysis (Appendix F) for a thorough discussion of City of Ontario land use compatibility standards.

The Esperanza Specific Plan (the project) is located in the City of Ontario, San Bernardino County, California. The project site is approximately 2 miles south of State Highway 60 and

approximately one-half mile west of Interstate 15. The project consists of approximately 223 acres located within the 8,200-acre New Model Colony, and is located between Mill Creek Avenue and Hamner Avenue immediately north of Bellegrave Avenue (adjacent to the boundary between Riverside and San Bernardino counties).

Existing noise levels near the proposed project site derive mainly from vehicular sources along Hamner/Milliken Avenue, Bellegrave Avenue, Eucalyptus Avenue, and the I-15 Freeway. Sources of groundborne vibration or noise are associated with such sources as trains, heavy equipment, and heavy industrial processes. The nearest train track is the Union Pacific line located approximately 2 miles northeast of the project site. At this distance, groundborne vibration/noise will not affect the project site. Heavy equipment used during construction may cause temporary groundborne vibration. No heavy industry is currently located near the site.

### **Thresholds for Determining Significance**

Noise impacts would be considered significant if they cause noise standards to be exceeded where they are currently met, or if they create a measurable increase in noise levels in an already noisy environment. The following thresholds, if exceeded, could create noise impacts that are potentially significant if:

- Levels exceed standards in general plans or noise ordinances. (65 dB CNEL exterior, 45 dB CNEL interior, pursuant to the GPA for the NMC Final EIR, page 5.11-7)
- The project will expose persons to or will generate excessive groundborne vibration or groundborne noise levels.
- A substantial permanent increase in the noise environment (ambient noise levels) will occur (an increase of greater than 3 dB CNEL, which equals an audible change in noise level).
- A substantial temporary or periodic increase in the noise environment (ambient noise levels) will occur.
- The project will expose people residing or working in the project area to excessive noise level (for projects located within an airport land use plan or, where such plan is not adopted, within 2 miles of a private or public airport).

### **Project Compliance with Existing Regulations**

Construction Noise. The project construction is subject to the City of Ontario Land Use Code Section 9-1.3305, which prescribes limits on noise produced on one land use as it occurs on another land use. Also, construction activities of the proposed project are subject to the City of Ontario ordinance that prohibits construction activities on Sundays, Federal Holidays, and other days between 7PM and 7AM.

Traffic noise. The City of Ontario requires that residential projects be subject to no more than 65 dBA CNEL outside a building, and 45 dBA CNEL in the interior of buildings.

### **Environmental Impacts before Mitigation**

*Threshold: The project will expose people to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards (65 dB CNEL exterior, 45 dB CNEL interior).*

Table III-8-A shows the noise standards for sensitive receptors in the City of Ontario.

**Table III-8-A Residential Noise Standards for the City of Ontario**

<b>Location</b>	<b>Level</b>
Exterior (not to exceed)	65 dBA CNEL
Interior (not to exceed)	45 dBA CNEL

Source: Acoustical Impact Analysis, Albert A. Webb Associates, 2005

Since the project involves the development of residences, the noise impacts to the sensitive receptors occupying these residences was analyzed. The model used in the Acoustical Impact Analysis (Appendix F) included several roadway and site parameters, including traffic volumes, distances, speeds, and vehicle mix. Noise impacts resulting from vehicular traffic on roadways were modeled using the California specific vehicle noise curves (CALVENO) and FHWA Highway Traffic Noise Prediction Model (FHWA – RD – 77-108). The average speed for all streets was assumed to be 40 mph, which compensates for any start/stop effects at lower speeds. The site is treated as a “hard” site, allowing a 3 dB reduction for each doubling of the distance from the noise source.

The sensitive receptors along Mill Creek Avenue will be exposed to exterior noise levels as high as 64.2 dBA, which is less than the exterior threshold of 65 dBA; therefore, no further mitigation is necessary. However, sensitive receptors along Hamner Avenue (noise levels as high as 71.4 dBA), Bellegrave Avenue (noise levels as high as 69.9 dBA), and Merrill Avenue (noise levels as high as 71.0 dBA) will be exposed to noise levels which exceed the City’s exterior threshold and mitigation measures are required and proposed below. Due to roadway widths and large setbacks, all homes located along these streets will be further than 50 feet from the centerline. When taken into consideration, these expanded distances from the roadway centerline are large enough to provide an additional 3 dBA reduction in noise levels which will not bring any of projected noise levels along these streets down below the 65 dBA threshold.

Therefore, the project’s residents along Hamner Avenue, Bellegrave Avenue, and Merrill Avenue will be exposed to noise levels which exceed the City’s exterior threshold and the impact is considered potentially significant without additional mitigation.

*Threshold: The project will expose persons to or will generate excessive groundborne vibration or groundborne noise levels.*

The proposed project will not generate excessive groundborne vibrations or groundborne noise levels during normal operations. During construction, groundborne vibrations may be generated infrequently by use of heavy construction equipment. However, this type of vibration would be

temporary and infrequent. Therefore, this impact is considered less than significant and no mitigation measures are necessary.

Acoustical Impact Analysis (Appendix F) includes calculations to determine the height of a wall necessary to reduce noise levels to less than significant. The results of this analysis are shown in Table III-8-B, below. Noise impacts to first floor receivers (at a height of 5 feet above the pad) and second floor receivers (at a height of 14 feet above the pad), a distance of 10 feet from the property line (assumed 60 feet from centerline), were calculated. The analysis assumed a 3 dB reduction for each doubling of the distance. The exterior noise impacts on both first and second floor receivers along perimeter lots adjacent to the major streets are shown.

**Table III-8-B Exterior Noise Impacts on Residential Receivers**

Roadway	Classification	Wall Height	Noise Impact to 1 <sup>st</sup> Floor Receiver	Noise Impact to 2 <sup>nd</sup> Floor Receiver
Hamner/Milliken Avenue	Parkway 1	0 feet	71.4 dB	71.8 dB
		6 feet	65.4 dB	NA
		7 feet	63.9 dB	71.7 dB
Bellegrave Avenue	Standard Arterial	0 feet	69.9 dB	69.9 dB
		6 feet	63.0 dB	69.7 dB
Merrill Avenue	Standard Arterial	0 feet	71.0 dB	71.0 dB
		6 feet	64.1 dB	70.9 dB
Mill Creek Avenue	Collector	0 feet	64.2 dB	64.2 dB

Detailed calculations are included in the Acoustical Study, Appendix F.

Since the exterior noise impacts to first floor receivers are greater than 65 dB, sound walls will have to be constructed to mitigate exterior noise impacts. At 60 feet from centerline, a 7-foot high wall is required along Hamner Avenue, while a 6-foot high wall is required along Bellegrave Avenue and Merrill Avenue in order to mitigate exterior noise impacts to a less than significant level. No wall is required along Mill Creek Avenue. All wall heights are relative to the roadway elevation.

Hamner/Milliken Avenue has a greater setback, or “Neighborhood Edge,” required. Thus the location of a wall, if needed, would be significantly farther than 60 feet from the centerline of the road. Based on the road cross section included as Exhibit 11, page 5.34 of the Esperanza Specific Plan, a sound wall would be located 99 feet from the centerline of Hamner/Milliken Avenue. Thus, the additional 39 feet of distance would provide a reduction of approximately 1.5 dB. This would bring the 65.4 dB at 60 feet with a 6 foot wall down to 63.9 dB, well below the outdoor noise level standard of 65 dB. With the walls required in MM Noi 3, 4, and 5 constructed, exterior noise levels at homes within the project will be less than significant.

*Threshold: The project will result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.*

A 3 dBA change in the average noise level is only perceptible by a small percentage of people and is considered barely audible. However, to use a conservative measure and for the purposes of this analysis, a change of greater than 3 dBA will be used as the significance criteria.

Roadway segments surrounding the project site were modeled for increased noise levels due to the project and for the cumulative noise levels for proposed projects (6 other proposed specific plans) within the New Model Colony. Table III-8-C from the Acoustical Impact Analysis (Appendix F) shows expected noise levels at 50 feet from the centerline of road segments in the project vicinity.

**Table III-8-C Modeled Noise Levels (CNEL) at 50 Feet From Centerline**

Road Segment	Noise Level (dBA CNEL) at 50 feet from Roadway Centerline				
	2005 <sup>a</sup>	2015 <sup>b</sup> (without Project)	Increase <sup>c</sup>	2015 <sup>b</sup> (with Project)	Project Increase <sup>d</sup>
<b>Archibald Avenue</b>					
South of Chino Ave	65.8	72.8	7.0	72.8	0.0
South of Schaefer Ave	67.1	72.0	4.9	72.0	0.0
South of Edison Ave	67.6	72.5	4.9	72.6	0.1
South of Eucalyptus Ave	66.6	72.7	6.1	72.8	0.1
<b>Haven Avenue</b>					
South of Chino Ave	60.7	69.6	8.9	69.6	0.0
South of Edison Ave	-	68.1	-	68.1	0.0
South of Eucalyptus Ave	46.6	68.6	22.0	68.8	0.2
<b>Mill Creek Avenue</b>					
South of Edison Ave	-	46.6	-	56.1	9.5
South of Eucalyptus Ave	-	61.6	-	62.8	1.2
South of Bellegrave Ave	-	66.0	-	66.0	0.0
<b>Hamner/Milliken Avenue</b>					
North of SR-60	67.5	71.0	3.6	71.2	0.2
South of SR-60	67.8	73.9	6.1	74.1	0.2
South of Riverside Dr	68.3	71.2	2.9	71.5	0.3
South of Chino Ave	68.1	71.9	3.8	72.2	0.3
South of Edison Ave	66.9	72.1	5.2	72.6	0.6
South of Eucalyptus Ave	68.9	70.0	1.1	70.8	0.8
South of Bellegrave Ave	68.8	70.9	2.1	71.3	0.4
South of Limonite Ave	67.7	71.3	3.5	71.4	0.1
<b>Riverside Drive</b>					
West of I-15	64.1	71.2	7.1	71.2	0.0
West of Hamner Ave	64.8	71.4	6.6	71.4	0.0
<b>Chino Avenue</b>					

**Table III-8-C Modeled Noise Levels (CNEL) at 50 Feet From Centerline**

Road Segment	Noise Level (dBA CNEL) at 50 feet from Roadway Centerline				
	2005 <sup>a</sup>	2015 <sup>b</sup> (without Project)	Increase <sup>c</sup>	2015 <sup>b</sup> (with Project)	Project Increase <sup>d</sup>
West of Hamner Ave	56.1	66.1	10.0	66.2	0.0
<b>Schaefer Avenue</b>					
West of Mill Creek Ave	-	65.0	-	65.0	0.0
West of Haven Ave	-	68.9	-	68.9	0.0
West of Turner Ave	-	64.3	-	64.3	0.0
West of Archibald Ave	-	61.9	-	61.9	0.0
<b>Edison Avenue</b>					
West of Haven Ave	64.0	68.2	4.2	68.2	0.0
West of Archibald Ave	65.0	72.1	7.1	72.7	0.1
<b>Eucalyptus Avenue</b>					
West of Hamner Ave	62.1	70.1	8.0	70.6	0.5
West of Mill Creek Ave	-	70.6	-	71.0	0.4
West of Haven Ave	-	69.7	-	70.0	0.3
West of Archibald Ave	-	63.5	-	63.6	0.1
<b>Bellegrave Avenue</b>					
West of I-15	66.0	71.4	5.4	71.7	0.2
West of Hamner Ave	55.6	68.8	13.2	69.3	0.4
West of Mill Creek Ave	-	67.3	-	67.3	0.0
<b>Limonite Avenue</b>					
East of I-15	69.9	74.6	4.7	74.7	0.1
West of I-15	69.8	73.2	3.3	73.4	0.2
West of Hamner Ave	68.3	72.7	4.4	72.7	0.0

Note: <sup>a</sup> 2005 represents the existing conditions.

<sup>b</sup> 2015 represents the project opening year.

<sup>c</sup> The increase in noise levels from existing conditions to opening year conditions without the project. This increase is calculated as the noise level in 2015 (without project) minus noise levels in 2005.

<sup>d</sup> The increase in noise levels from project-generated traffic. This increase is calculated as the noise level in 2015 (without project) minus noise levels in 2015 (with project).

The increase in noise levels due to the project ranges from 0.0 dBA to 9.5dBA for all road segments modeled. Based on the modeled noise levels for the proposed project shown above, the ambient noise environment will be substantially increased as a result of the noise generated by the project only along the segment of Mill Creek Avenue south of Edison Avenue (9.5 dBA increase). This impact to the noise environment is considered potentially significant.

In 2015, even without the project, the increase in the ambient noise levels from existing conditions ranges from 1.1 dBA to 22.0 dBA. Since this increase in ambient noise levels already exceeds 3 dBA for most of the roadway segments modeled, the contribution of project-generated traffic noise along roadways in the project vicinity will result in potential significant cumulative noise impacts associated with increases in ambient noise levels.

*Threshold: The project will result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.*

Construction activities, especially from heavy equipment, may create substantial short-term noise increases near the project site. Such impacts might be potentially significant for nearby noise-sensitive receptor such as the existing residential uses to the south.

The most noise-intensive period will be during the grading of the site. Dozers and other heavy equipment will be used. Equipment noise will reach 90 dB at 50 feet from such equipment when it operates under a full load. Under normal atmospheric spreading losses, peak levels up to 65 dB may be heard as far as 1,000 feet from the operating equipment. A level of 65 dB is considered intrusive in normal conversation. Construction activity impacts during the noisiest activities could thus extend as far as approximately 1,000 feet from the activity. Irregular terrain and/or intervening structures would, however, often block direct line-of-sight noise propagation. Due to the terrain variability, temporary construction noise impacts will typically be less than their theoretical maximum. Impacts from construction are considered short-term impacts since noise will cease upon completion of construction activity. If grading were to occur during periods of heightened residential noise sensitivity (during the night when most people are sleeping), a temporary potentially significant impact could occur.

The City of Ontario does not permit construction or repair work on Sunday and holidays, or between the hours of 7:00 p.m. and 7:00 a.m. on any other day. Construction is expected to occur only during daytime hours allowed by the City's Noise Ordinance therefore, potential significant temporary noise impacts resulting from construction are not considered significant. Thus, compliance with the City's noise ordinance is predicted to create a less than significant temporary noise impact during project construction.

*Threshold: The project will expose people residing or working in the project area to excessive noise level (for projects located within an airport land use plan or, where such plan is not adopted, within 2 miles of a private or public airport).*

The Ontario International Airport is located approximately 3.5 miles north of the project site and the Chino Airport is located approximately 3.3 miles southwest of the project site. However, the project area is located outside the 65 dB CNEL contour line of both airports. Therefore, the project site will not experience excessive noise levels due to airport proximity.

### **Proposed Mitigation Measures**

*To reduce impacts associated with construction noise, the following mitigation measures shall be implemented:*

**MM Noi 1:** The construction activities of the proposed project shall comply with the City of Ontario Noise Ordinance that prohibits construction activities on Sundays, federal holidays, and other days between the hours of 7:00 p.m. and 7:00 a.m.

**MM Noi 2:** Construction staging areas shall not be located within 150 feet of existing sensitive receptors and construction equipment shall be fitted with properly operating and maintained mufflers.

*To reduce or eliminate impacts related to exterior and interior noise levels within the project exceeding City of Ontario standards, the following mitigation measures shall be implemented. However, the wall heights recommended in MM Noi 3 through 5 only apply to lots which have backyards directly adjacent to the roadways. For lots with front yards adjacent to the roadways, the windows and/or doors would need to have upgraded sound rated glazing products in order to comply with the City of Ontario's interior noise standards.*

**MM Noi 3:** A sound wall at least 6 feet high shall be constructed along perimeter lots adjacent to Hamner/Milliken Avenue. If any residential structures are two stories high, then windows facing Hamner/Milliken Avenue would need upgraded sound-rated glazing products and the rooms would need supplemental ventilation. A final acoustical report shall be submitted to address wall heights based on final grading and site plans. The report shall be reviewed and approved by the Planning Department prior to building permit issuance to ensure that City standards are maintained (45 dB CNEL interior and 65 dB CNEL exterior).

**MM Noi 4:** A sound wall at least 6 feet high shall be constructed along perimeter lots adjacent to Bellegrave Avenue. If any residential structures are two stories high, then windows facing Bellegrave Avenue would need upgraded sound-rated glazing products and the rooms would need supplemental ventilation. A final acoustical report shall be submitted to address wall heights based on final grading and site plans. The report shall be reviewed and approved by the Planning Department prior to building permit issuance to ensure that City standards are maintained (45 dB CNEL interior and 65 dB CNEL exterior).

**MM Noi 5:** A sound wall at least 6 feet high shall be constructed along perimeter lots adjacent to Merrill Avenue. If any residential structures are two stories high, then windows facing Merrill Avenue would need upgraded sound-rated glazing products and the rooms would need supplemental ventilation. A final acoustical report shall be submitted to address wall heights based on final grading and site plans. The report shall be reviewed and approved by the Planning Department prior to building permit issuance to ensure that City standards are maintained (45 dB CNEL interior and 65 dB CNEL exterior).

**MM Noi 6:** Architectural plans shall be submitted to the City of Ontario for an acoustical plan check prior to the issuance of building permits to assure that second story windows are upgraded for sound reduction and proper ventilation systems are incorporated. Plans shall include a final acoustical report to be reviewed and approved by the Planning Department prior to building permit issuance to ensure that City standards are maintained (45 dB CNEL interior and 65 dB CNEL exterior).

### **Summary of Project-Specific Environmental Effects After Mitigation Measures Are Implemented**

With the incorporation of mitigation measures MM Noi 3-6, listed above, exterior and interior noise impacts to residences along Hamner Avenue (noise level reduces to 63.9 dBA with a 6 foot high sound wall), Bellegrave Avenue (noise level reduces to 63.0 dBA with a 6 foot high sound wall), and Merrill Avenue (noise level reduces to 64.1 dBA with a 6 foot high sound wall) will be reduced to less than significant levels.

Temporary noise impacts from project construction will be reduced to a less than significant level by compliance with the noise ordinance in the City of Ontario and implementation of MM Noi 1 and 2, above.

### **Summary of Cumulative Environmental Effects After Mitigation Measures are Implemented**

The ADT used for the cumulative analysis includes existing noise levels resulting from traffic generated both within and outside the NMC, plus the project generated traffic noise, plus the 5 additional specific plan projects proposed currently proposed in the NMC which will develop in the reasonably foreseeable future. The NMC is currently characterized as a relatively quiet rural area. The traffic study establishes that due to existing traffic levels and routes, many trucks and other traffic traverse the NMC today. This existing traffic causes higher existing noise conditions near major roads. The noise analysis shows that many roadway segments already exceed 65 dB CNEL at 50 feet from the centerline and that cumulatively the ambient noise levels throughout the project vicinity will increase by more that 3 dB CNEL. In some areas within the vicinity of the project site no sensitive receptors exist, but in some locations residents, school children and outdoor agricultural workers are currently, and will continue to be, exposed to noise levels that exceed thresholds.

Within the NMC, virtually all rural uses will be replaced by new development over time. On a project-by-project basis, increases in noise will be addressed through on-site mitigation; thereby cumulative ambient noise levels within the NMC will be mitigated over time for sensitive receptors that are developed in the future. In the interim, some existing sensitive receptors such as homes associated with dairies will remain while development occurs nearby. It would not be necessary or appropriate to upgrade windows or build walls in front of these existing homes to mitigate for noise increases because in the future they are expected to be demolished or incorporated into development project, which in turn will mitigate for traffic-related noise impacts.

As discussed above, some of the cumulative increases in noise within the NMC are currently occurring along roadways due to traffic generated in other jurisdictions located to the south, west, and east, and the developed portion of Ontario located to the north. Currently there are no joint fee programs or mitigation strategies for addressing these cross-jurisdictional cumulative noise increases. Legally, the City of Ontario has no ability to require the County of Riverside or City of Chino to mitigate noise impacts resulting from traffic that originates in one of those jurisdictions when such impacts affect sensitive receptors in the NMC. The reverse is also true in that Ontario cannot mandate developers to mitigate outside the City's jurisdiction. Additionally,

since noise is created from many sources in addition to traffic (air conditioners, playgrounds, commercial establishments, etc.), it is very difficult to assign relative responsibility for cumulative noise increases. Improved technologies in the production of automobiles, trucks, and airplanes in the future may reduce noise in some areas. Therefore, it is speculative at best to determine relative responsibility and is legally infeasible to mitigate in jurisdictions outside the City of Ontario.

Based on the above discussions, no feasible mitigation is available that will reduce cumulative noise impacts to less than significant levels. The discussion of cumulative impacts is limited because the Specific Plan is consistent with the plans used in the evaluation of each environmental issue area discussed here and in Section IV-1, Cumulative Environmental Effects. A statement of overriding consideration will be required if the proposed project is approved related to cumulative noise impacts.

## 9. POPULATION AND HOUSING

The focus of the following discussion is related to the potential impacts associated with the housing issue. These potential impacts could relate to inducement of substantial population growth in the area, displacement of substantial numbers of existing housing, or displacement of substantial numbers of people.

### Setting

The project site is part of an 8,200 acre area annexed into the City of Ontario on November 30, 1999. The approximately 223-acre Esperanza Specific Plan area has historically been used for agricultural purposes. Currently, the majority of the project site is vacant agricultural use, with vacant dairy farms, row crops, and agricultural use structures. The only active dairy on-site is located in the northern portion. According to the Phase I Environmental Site Assessment (Forecast PPI, 2003) four one-story (occupied) residential homes still exist in the area. Driveways and foundations from two single-family residential homes are located north of Eucalyptus/Merrill Avenue. A foundation from a single-family home is located south of Eucalyptus/Merrill Avenue. Based on aerial photo observations, residential and agricultural structures were present on site in 1959 with additional structures constructed in the 1970s and 1980s.

The vicinity of the site had been used extensively for agriculture, at least as far back as 1959. Dairy farming began to appear in the 1970s along with an increase in rural residential uses. Today, the area is rapidly being converted to suburban residential tract development and industrial uses.

The project site is currently owned by three separate property owners – Armada, LLC, Amberhill, LTD., and Pietersma & Company (see Figure I-1-4, Property Ownership). The four occupied homes are on the property owned by Amberhill, LTD.

The Program EIR prepared for the City of Ontario General Plan Amendment for the New Model Colony (GPA for the NMC) projects that single-family detached units will dominate the New Model Colony's unit mix (65% vs. 35% multiple-family units).

The same Program EIR evaluated housing conditions through visual observations conducted in February, 1996. In general, the housing units in the New Model Colony are in good to very good condition with little or no structural, cosmetic, or landscaping repair/maintenance needing to be performed. The *Historic Context for the New Model Colony Area*, prepared by Galvin & Associates, September 2004, also evaluated residential structures more than 45 years old. Few residences existed older than 1930. The remainder of the agricultural housing stock was built between 1930 and 1970; most in good to excellent condition. Three hundred forty eight properties served more than one residential type.

The existing homes on the project site currently have access from Hamner/Milliken Avenue and Eucalyptus/Merrill Avenue. On the west, the project site is bordered by unimproved Mill Creek/Cleveland Avenue where access to the operating dairy occurs.

Currently, the City of Ontario does not have water distribution mains in any of the roadways in and around the project (Hamner/Milliken Avenue, Eucalyptus/Merrill Avenue, or Cleveland Avenue). The existing mains are in Riverside Drive, a distance of over 1.5 miles from the project. The City of Ontario does not have sewer facilities in the vicinity of the project site. The existing homes on site are served by wells and septic systems.

### **Thresholds for Determining Significance**

Impacts on housing and population may be considered significant if the proposed project would:

- Not meet the City's Regional Housing Needs Allocation and/or improve the City's jobs/housing balance, either directly (by proposing new homes and businesses), or indirectly (through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

### **Project Compliance with Existing Regulations**

State law mandates local communities to provide for their portion of the regional demand for housing units. The number of units to be accommodated, or a local jurisdiction's portion of the regional demand, is determined by Southern California Association of Governments (SCAG). If the number of units or number of units affordable to distinct income groups are not met or justified and the existing conditions are exacerbated by the proposed project, typically, the project would be considered regionally significant.

The City of Ontario New Model Colony General Plan Amendment's (GPA for the NMC) Housing Element provides for adequate housing to support the present and future community within ownership and rental markets. Project development will meet and comply with all applicable Housing policies of the GPA for the NMC. These policies address: household and job growth, accommodation of various incomes and lifestyles, livable neighborhoods, housing needs for all economic segments and for groups with special needs (GPA for the NMC Policies 3.1.1 – 3.8.2). For a descriptive response to each of these Housing Policies, see the discussion in Section 9 of the Esperanza Specific Plan (under separate cover).

### **Design Considerations**

As discussed in Section I of this EIR, the proposed project, 916 single-family residential dwelling units and about 494 cluster/town home attached dwelling units are proposed to be built on the project site with a 10-acre elementary school site, and approximately 9 acres of neighborhood park area. Up to 46 additional housing units can be built if the school district chooses not to utilize the proposed site. The development will be phased, beginning in the southwest portion of the site. All the project structures are designed to meet or exceed City of Ontario standards for construction and design safety. Residential design guidelines are discussed

in Section 8 of the Esperanza Specific Plan (under separate cover). The project will meet the GPA for the NMC policies for housing through implementation of the Specific Plan.

### **Environmental Impacts before Mitigation**

*Threshold: The project will not meet the City's Regional Housing Needs Allocation and/or improve the City's jobs/housing balance, either directly (by proposing new homes and businesses), or indirectly (through extension of roads or other infrastructure).*

As indicated above, the proposed project is consistent with the GPA for the NMC land uses so which took into account the City's Regional Housing Needs Allocation. Therefore, the proposed project will help meet the City's obligation to provide adequate housing of all types. Population growth associated with this housing is discussed below as well as the jobs/housing balance in the City.

### **Direct Impacts**

The Southern California Association of Governments (SCAG) 2004 *Regional Transportation Plan (RTP) Growth Forecast* projects a Year 2030 population of 2,713,149 persons within the SANBAG Subregion of San Bernardino County. The Subregion area comprises the cities of Barstow, Big Bear Lake, Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Twentynine Palms, Upland, Yucaipa, Yucca Valley, as well as unincorporated County of San Bernardino. Table III-9-A identifies SCAG's population forecasts for the entire SANBAG Subregion. Table III-9-B identifies SCAG population forecasts for the City of Ontario, which includes the proposed project site.

**TABLE III-9-A SCAG SANBAG Subregion Forecasts**

	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
Population	2,059,420	2,229,700	2,397,709	2,558,729	2,713,149
Households	618,782	686,584	756,640	826,669	897,739
Employment	770,877	870,491	972,243	1,074,861	1,178,890
Job/Housing Ratio	1.25	1.27	1.28	1.30	1.31

Source: 2004 Regional Transportation Plan (RTP) Growth Forecast Report

**TABLE III-9-B SCAG City of Ontario Forecasts**

	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
Population	180,059	212,734	224,977	275,873	305,509
Households	48,749	58,981	69,473	79,909	90,417
Employment	97,366	109,637	122,204	134,897	147,785
Job/Housing Ratio	2.00	1.86	1.76	1.69	1.63

Source: 2004 Regional Transportation Plan (RTP) Growth Forecast Report

The proposed project site lies within the City of Ontario New Model Colony area, as described by the City of Ontario General Plan Amendment for the New Model Colony. The New Model

Colony (NMC) encompasses approximately 8,200 acres in the southern part of the City of Ontario. NMC is bounded by Riverside Drive to the north, Hamner/Milliken Avenue to the east, and Riverside County line and Eucalyptus/Merrill Avenue to the south, and Euclid Avenue (State Route 83) to the west.

### **Project/Regional Growth Forecast Comparative Analysis**

The proposed project proposes approximately 916 single-family residential dwelling units and 494 multi-family units on the project site. Up to 46 additional housing units can be built if the school district chooses not to utilize the proposed site. The project site will generate a total of approximately 4,743 persons to 4,948 persons based upon City of Ontario estimates. The calculation used to determine the project's population is as follows:

$$(1,410 \text{ to } 1,456 \text{ total dwelling units}) \times (3.53 \text{ persons per d.u.}) \times 3.67\% \text{ (vacancy rate)} = 4,795 \text{ to } 4,948 \text{ persons}$$

The vacancy rate for the City of Ontario is indicated by the 2000 Census. A vacancy rate of between 3% and 5% is considered normal (enough to ensure the continued upkeep of rental properties and keep housing costs down) (2000–2005 Housing Element, City of Ontario, December, 2001).

The ratio of 3.53 persons per dwelling unit represents the average SCAG 2004 projections and has been computed for the City of Ontario estimates of households and population. Table III-9-C identifies SCAG per household ratio forecasts for the City of Ontario:

**Table III-9-C SCAG City of Ontario Per Household Ratio Forecasts**

<b>City of Ontario</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
Population	180,059	212,734	244,977	275,873	305,509
Households	48,749	58,981	69,473	79,909	90,417
<b>Persons per d.u.</b>	<b>3.69</b>	<b>3.60</b>	<b>3.51</b>	<b>3.45</b>	<b>3.38</b>

The project population of 4,795 persons comprises 0.23% of the forecasted population for the SANBAG Subregion and 2.66% of the forecasted population for the City of Ontario in 2010. In 2025, the project population of 4,795 persons will comprise 0.19% of the forecasted population for the SANBAG Subregion and 1.74% of the forecasted population for the City of Ontario.

### **Employment/Housing Balance Policies**

SCAG's April 2001 report titled *The New Economy and Jobs/Housing Balance in Southern California* ([www.scag.ca.gov/housing/jobhousing/balance.html](http://www.scag.ca.gov/housing/jobhousing/balance.html)) states that "a balance between jobs and housing in a metropolitan region can be defined as a provision of an adequate supply of housing to house workers employed in a defined area (i.e., community or subregion). Alternately, a jobs/housing balance can be defined as an adequate provision of employment in a defined area that generates enough local workers to fill the housing supply." The SCAG region as a whole is, by definition, balanced. The SCAG region as a whole is projected to have 1.35

jobs per housing unit in 2030 under SCAG's *2004 RTP/Growth Vision: Socio-Economic Forecast Report*.

The jobs/housing ratio for the City of Ontario is projected to be 2.00 in 2010, 1.86 in 2015, 1.76 in 2020, 1.69 in 2025, and 1.63 in 2030. Therefore, City of Ontario is projected to be a jobs-rich area. It is forecast to move from eleventh place to third place in terms of the greatest number of jobs among Southern California Regional Statistical Areas (RSA). However, the jobs/housing ratio for the SANBAG subregion is projected to be 1.38 in 2010, 1.27 in 2015, 1.28 in 2020, 1.30 in 2025, and 1.31 in 2030. This indicates that the SANBAG subregion, as a whole, is projected to be a jobs-poorer area than City of Ontario. The Riverside/Corona RSA to the south and east of the project site will jump to seventh place from fifteenth, in terms of the greatest number of jobs in the RSA, and the San Bernardino City RSA moves from thirteenth place to ninth place in the rankings during the twenty-five year period. These forecasts support the fact that the project site will be surrounded by jobs-rich or very jobs-rich areas and housing will be necessary to balance regional employment and housing.

The proposed project is a residential subdivision which will bring an additional 1,410 to 1,456 housing units to the area. The NMC GP land use plan includes over 5 million square feet of business park and over 5 million square feet of commercial uses which will add jobs to the region. SCAG's *The New Economy and Jobs/Housing Balance in Southern California* defines jobs/housing balance for the City of Ontario as a "job center," along with San Bernardino City, and Riverside-Corona. The proposed project falls within an area projected to be jobs-rich. The project will provide housing opportunities for employment centers within the same local region, thereby contributing to an overall jobs/housing balance. Therefore, the proposed project is consistent with the regional housing needs, regional growth forecasts, and regional jobs/housing balance projections creating direct impacts that are less than significant.

### **Indirect Impacts**

Urbanization of the project site could potentially influence the timing of development within adjacent properties by providing or extending roadways, water and sewer service, and other utility services to the immediate area. This could eliminate potential constraints for future development in this area.

New and realigned streets within the project site are proposed that will connect to existing roadways. The realigned Eucalyptus/Merrill Avenue (108-foot wide right-of-way) will connect Mill Creek Avenue to Hamner/Milliken Avenue. One-half street improvements in Hamner/Milliken, Bellegrave, and Mill Creek Avenues adjacent to the project site will be done as part of the implementation of the Esperanza Specific Plan infrastructure. Since Bellegrave Avenue and Hamner/Milliken Avenue currently provide access near the project site, they would support development within the vicinity of the project site, with or without the proposed project. Connecting Mill Creek Avenue to Bellegrave Avenue will provide a new route for some traffic in the area to reach Edison Avenue, north of the project area. These additional improvements are expected to be incremental and will beneficially impact the overall conditions and operations of the City of Ontario's transportation system, but will primarily serve the project site.

As discussed in Section III-11, Traffic, and considering the current growth in the surrounding project area, following implementation of area-wide offsite transportation improvements listed as mitigation measures, the indirect impacts to population growth by extending existing roadways are considered less than significant with mitigation incorporated.

Because the City of Ontario does not have water distribution mains in any of the roadways in and around the project, potable water will be provided to the proposed project development by the City of Ontario as presented in the Water Master Plan prepared for the New Model Colony. Generally, there will be 12 inch distribution mains throughout the New Model Colony, and supplied with water from new wells and storage tanks located within the City of Ontario. The project developer will be responsible for new distribution mains in the roadways adjacent to the property, and may be required to plan and build portions of the backbone water system off-site that is required to serve the site. All water mains internal to the project will be provided by the project developer. These improvements are expected to be incremental and will beneficially impact the overall conditional and operations of the City of Ontario utility and infrastructure system. Installation of the backbone water system, including a reservoir, would open up other areas of the New Model Colony and could assist the City in meeting its Regional Housing Needs Allocation and improving the City's jobs/housing balance.

The City of Ontario does not have sewer facilities in the vicinity of the project. On a permanent basis, the New Model Colony Sewer Master Plan shows service to this project by portions of the proposed Eastern Trunk Sewer (Archibald Avenue). The Eastern Trunk Sewer is under construction and is scheduled to be completed in 2006. The wastewater generated by the project will be collected by 8 inch to 10 inch mains and routed to Bellegrave Avenue where it will be discharged into Archibald Trunk Sewer, and ultimately treated by Regional Treatment Plan No. 5. The Eastern Trunk Sewer will be a larger sewer facility that is tailored to accommodate sewer flows that are generated by the proposed development and the eastern portion of the NMC. These improvements are expected to be incremental and will beneficially impact the overall conditional and operations of the City of Ontario utility and infrastructure system. The proposed project may also be required to plan and build portions of the backbone sewer system. Installation of the backbone sewer facilities could open up other areas of the NMC and could assist the City in meeting its Regional Housing Needs Allocation and improving the City's jobs/housing balance.

*Threshold: Displace substantial numbers of existing housing, necessitating the construction or replacement housing elsewhere;*

Four one-story (occupied) residential homes exist on the project site. Current dwellers have sold the houses to Amberhill Development, on whose property the structures are located. These homes, along with any attached structures, will be displaced when the project is in an advanced phase of development and construction reaches the Amberhill property. Additionally, one or 2 homes exist associated with the Pietersma dairy. The limited number of homes makes the issue of displacement insignificant, and mitigation measures are not necessary.

*Threshold: Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.*

According to the City of Ontario persons per household ratio calculated above, there could be approximately 21 people occupying the homes on the project site. The calculation used to determine the project's current population is as follows:

$$6 \text{ (occupied homes)} \times 3.53 \text{ (population per household ratio for City of Ontario)} = 21.$$

These people will be displaced when the project is built or they may choose to leave earlier. Due to the limited number of people affected and their plans to leave as evidenced by the sale of the houses, this issue is insignificant for the purposes of this EIR and no mitigation measures are necessary.

### **Proposed Mitigation Measures**

No mitigation measures required.

### **Summary of Project-Specific Environmental Effects After Mitigation Measures are Implemented**

No significant project-related impacts result from the proposed project that exceed planned growth projections for the area. The proposed project is consistent with the GPA for the NMC land uses so which took into account the City's Regional Housing Needs Allocation. Therefore, the proposed project will help meet the City's obligation to provide adequate housing of all types. The project site will be surrounded by jobs-rich or very jobs-rich areas and housing will be necessary to balance regional employment.

### **Summary of Cumulative Environmental Effects After Mitigation Measures are Implemented**

Cumulatively, the Esperanza Specific Plan will bring population growth into the area along with other specific plans being processed by the City currently and those specific plans in Riverside County that have been recently approved (The Resort, located on the east side of Hamner/Milliken Avenue adjacent to the project site). In total, the New Model Colony is projected to introduce approximately 31,000 housing units for a population increase of 109,430. The GPA for the NMC Final EIR identified this as "growth inducing" pursuant to CEQA, therefore, cumulatively, the proposed project will have a significant impact on population growth in the region.

However, as discussed above, the project represents 2.7% of the forecasted population for the City of Ontario in 2010 and 1.74% in 2025. As a percent of SCAG's Subregional forecast, the proposed project represents 0.23% in 2010 and 0.19% by 2025. Therefore, because the proposed project comprises less than one percent (not substantial) of SANBAG's projections, and no more than five-percent of the City's projections through 2025, and because the proposed project assists the City in meeting its Regional Housing Needs Allocation and improving the City's

jobs/housing balance, the residential population growth from the project is not considered cumulatively considerable and is planned for at the regional level. The discussion of cumulative impacts is limited because the Specific Plan is consistent with the plans used in the evaluation of each environmental issue area discussed here and in Section IV-1, Cumulative Environmental Effects.

## 10. PUBLIC SERVICES AND RECREATION

The focus of the following discussion is related to the potential impacts from the proposed project on police protection, fire protection/emergency medical services, schools, parks and recreation, libraries and emergency procedures including the mitigation measures that will be incorporated to reduce impacts to a level below significance. If the additional 46 single-family residences are constructed in lieu of the elementary school, the need for the types of public services discussed below will change. Therefore, for the purposes of the following analysis, the potential impacts of the project are identified for both the 1,410 dwellings and the possible 1,456 dwelling units.

### **Setting**

The City of Ontario is served by the City of Ontario Police Department and the City of Ontario Fire Department. Emergency Medical Services (EMS) within the City of Ontario is also provided by all eight of the City of Ontario Fire Stations. The stations for these agencies that are located closest to the proposed project site are shown on Figure III-10-1, *Existing Fire and Police Facilities*.

#### *Police Services*

The City of Ontario Police Department receives all calls at the main station located at 2500 S. Archibald Avenue. Chief Jim Doyle commands the Department. The Ontario Police Department has a mutual aid agreement with all adjacent cities as a primary resource and the County of San Bernardino Sheriff's Department as a secondary resource.

The mission of the Ontario Police Department is to protect life and property, solve neighborhood problems, and enhance the quality of life in our community. This is accomplished by providing superior police services while fostering successful community partnerships. These services are provided in a positive, empathetic, and professional manner, which reflects sensitivity to the needs of both the community and the individual. The dedicated full-time staff of 229 sworn law enforcement personnel and 116 non-sworn civilian support personnel are committed to the accomplishment of the Department's mission.

Response time is the period of time between when a call is received by a dispatcher and the arrival of a patrol officer. The response time varies depending upon the nature of the call. Typical calls are prioritized based upon the urgency of the incident. The average emergency call response time for the officer assigned to the beat of the subject project site is less than five minutes. The Police Department currently has a ratio of 1.34 officers per 1,000 residents, and a civilian personnel ratio of 0.68 employees per 1,000 residents. No reduction in the current level of service is expected.

#### *Fire/Emergency Medical Services*

The Ontario Fire Department currently provides fire and Emergency Medical Services (EMS) from eight existing fire stations. Response capability consisting of eight paramedic engine companies and two truck (ladder) companies, and six Battalion Supervisors, totaling 42 emergency personnel on duty 24 hours per day, 7 days a week. A new station is planned to be

located near the intersection of Mill Creek and Edison Avenues, just north of the project site. A second station is proposed on Archibald Avenue between Edison and Eucalyptus Avenues.

The closest fire station to the proposed project site is Ontario Fire Station No. 6, located at 2931 East Philadelphia. This station is approximately five miles north of the project site (see Figure III-10-1, *Existing Fire and Police Facilities*). The Department's current response time from Station No. 6 to the proposed site exceeds current Fire Department Emergency Response Goals.

Currently, the Ontario Fire Department has automatic-aid agreements with the San Bernardino County Fire Department (Fontana), the Chino Valley Fire Protection District, the Montclair Fire Department, the Upland Fire Department, the Rancho Cucamonga Fire Department, and the Ontario Airport Fire Department. These agreements provide automatic aid in the event of fire or disaster. The Ontario Fire Department is also a member of the County of San Bernardino and State of California Master Mutual Aid Agreement. These agreements do not include emergency medical services and response times for medical emergencies could be compromised.

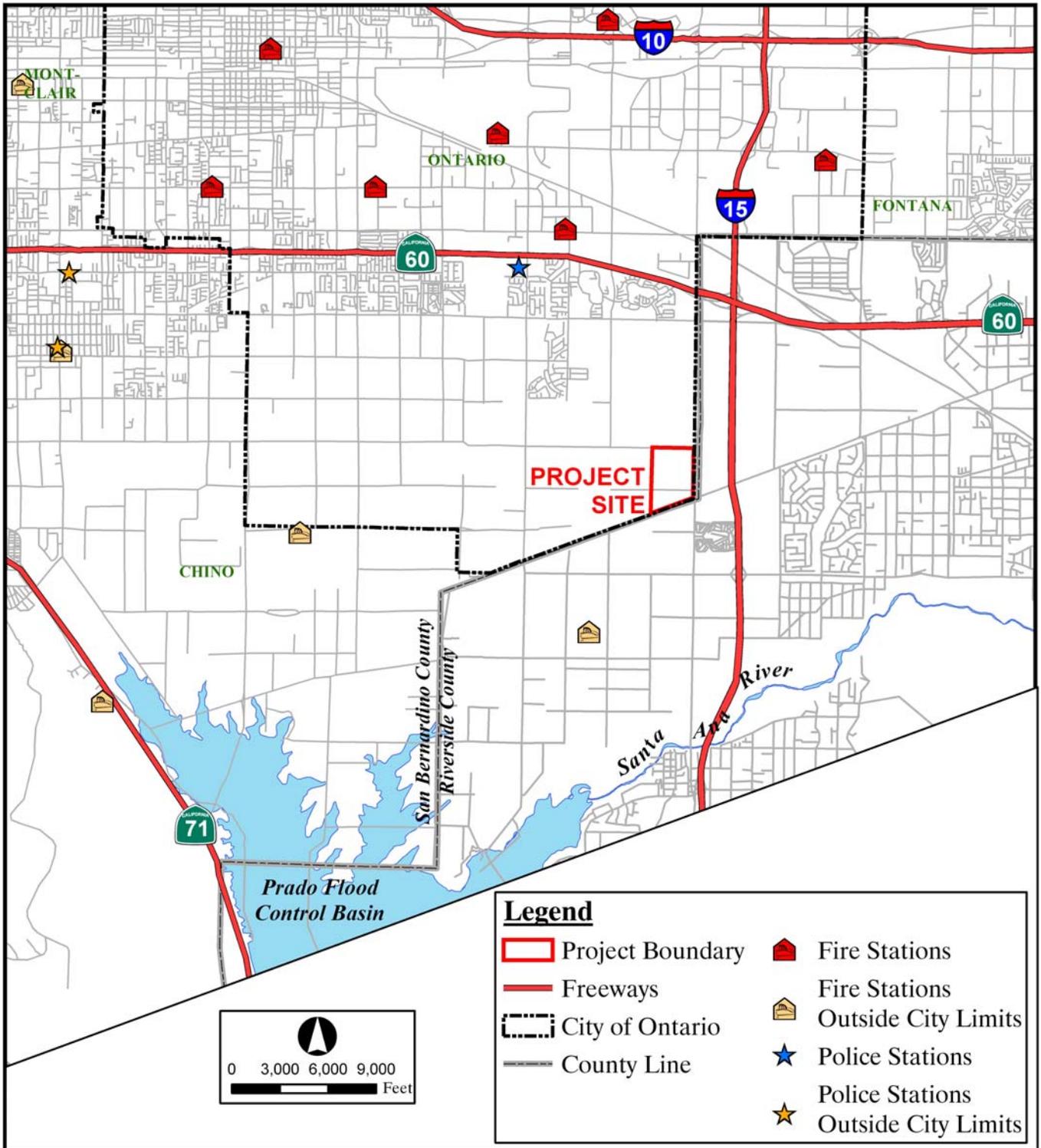
Water service has a direct impact on fire protection services. Water availability and pressure must be adequate. The water systems shall be designed and built to current City of Ontario requirements.

The City of Ontario uses 2 trauma centers located at the Arrowhead Regional Medical Center in the City of Colton (approximately 15-20 minutes away from project site) and the Loma Linda University Medical Center (approximately 20-30 minutes away) in the City of Loma Linda.

#### *Schools*

The project site is served by both Mountain View School District (MVSD), which provided grades K-8 and Chaffey Joint Union High School (CJUHS), which provided grades 9-12. Currently, the 4 schools within MVSD, including Grace Yokley Middle School, are either at or above capacity and the students are being housed in portable buildings in order to serve all the students in the district's boundaries (personal communication, Bob Cosgrove with MVSD, 1/23/04). The CJUHS operates 8 comprehensive high schools including Colony High School which will serve the project site.

The Esperanza Specific Plan includes a 10-acre elementary school site located along the west side of Street A, north of Merrill Avenue. This elementary school (K-5) will be between 30,000 to 40,000 square feet to serve a maximum of 700 students (telephone communication, Craig Newby, 2/5/03). The school will serve a radius of one and one-half miles which includes the elementary-aged children of Esperanza Specific Plan. After completion of the proposed school, students will proceed on to Grace Yokley Middle School and finally Colony High School unless an additional proposed middle school is complete (see Figure III-10-2, *Existing Schools, Libraries*). Some areas within the one and one-half mile service radius of the proposed elementary school are located in other school districts (Corona-Norco and Jurupa). Students living within these areas could be served at the Esperanza Specific Plan school via inter-district transfers, if capacity at the school was not needed for students living within the Mountain View School District (Craig Newby, 1/9/03, public scoping meeting).

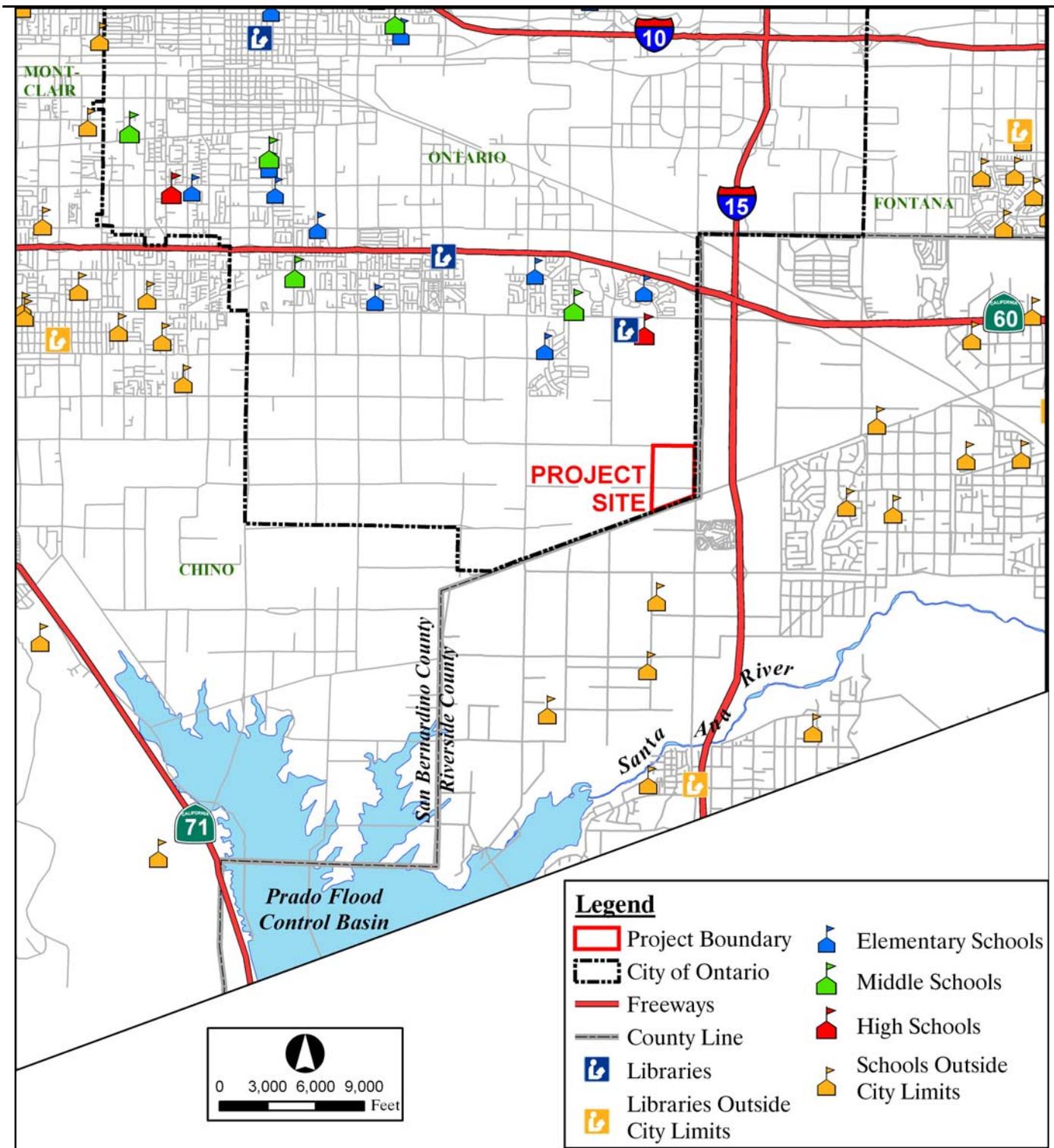


Source: Thomas Bros. Maps, 2006



## Esperanza Specific Plan Draft EIR Existing Fire and Police Facilities

Figure III-10-1



Source: Thomas Bros. Maps, 2006



## Esperanza Specific Plan Draft EIR Existing Schools and Libraries

Figure III-10-2

### *Parks and Recreation*

The area surrounding the project site has traditionally been a rural agricultural area. Thus the need for parks and recreation facilities has not existed in the past. Some regional recreational facilities and several local parks exist to serve the area today (see Figure III-10-3, *Existing Parks and Open Spaces*).

Community, Neighborhood, and Mini parks are owned and operated by the City of Ontario, or master property owners associations throughout the City. Regional recreational facilities in the area are provided by the San Bernardino County Regional Park Department within San Bernardino County, and by Riverside County Regional Parks and Open Space District within Riverside County. Also, considering the proposed project's proximity to the County of Riverside, future residents of the Esperanza Specific Plan could easily access local park and recreation facilities within this neighboring jurisdiction, and vice versa. Local parks currently located proximate to the project site (within 4 miles) are provided by the Jurupa Community Services District (Eastvale) or Jurupa Parks and Recreation District (Mira Loma), in addition to the City of Ontario.

The closest local parks within the City of Ontario are located within the Creekside residential development about 2 miles north of the proposed project site. These parks are operated by home owners association and are not open to the general public. Westwind Park is a City park located about 2 miles northwest of the project site on Riverside Drive west of Archibald. Adjacent to this park is the Whispering Lakes Golf Course. Outside of the City, neighborhood parks exist within the Sky Country Development (Jurupa Parks and Recreation District) one and one-half miles east of the proposed project, and within the Eastvale Specific Plan area (Jurupa Community Services District) located about 3 miles to the southwest.

Figure III-10-3, *Existing Parks and Open Spaces*, illustrates a number of regional facilities within the project vicinity. San Bernardino County maintains regional parks and recreation facilities within 4 to 5 miles of the project site. Regional recreation facilities include the Prado Regional Park and El Prado Golf Course approximately four miles west of the project site and Cucamonga-Guasti Regional Park located 5 miles northwest of the site. The Prado Basin County Park, located about 4 miles south of the project site, is a 1,837-acre open space park with picnicking and hiking facilities that is operated by Riverside County. Riverside County's Santa Ana River Regional Park is located approximately 4 miles southeast of the site.

Within the existing residential areas of the City, the present parks ratio is approximately 2.9 acres per 1,000 residents. The City of Ontario's New Model Colony standard for park and recreation areas is 5 acres for every 1,000 residents. The City's General Plan has designated three sizes of parks; first, the Mini-Park (up to one acre serving a one-quarter mile radius) second, the Neighborhood Park (5 to 10 acres serving a one-half mile radius) and third, the Community Park (ten to thirty acres serving a one-half mile radius). Current City policy is directed at neighborhood parks of no less than 5 acres.

### *Libraries*

Library services are provided by the Ontario City Library Main and South Branches. Currently, the Main Branch is undergoing renovation and expansion. Also, the South Branch has a joint use venture with Colony High school that significantly increased the Library's size and services (personal communication, Judy Evans, 1/26/04). The project will generate additional demands for library services. The Ontario City Library uses a space planning standard of 0.6 square feet per resident for determining facility needs relative to resident population. The closest library to the Specific Plan is the South Branch at Colony High School. Library development fees have been established to offset this additional need (Figure III-10-2, *Existing Schools and Libraries*).

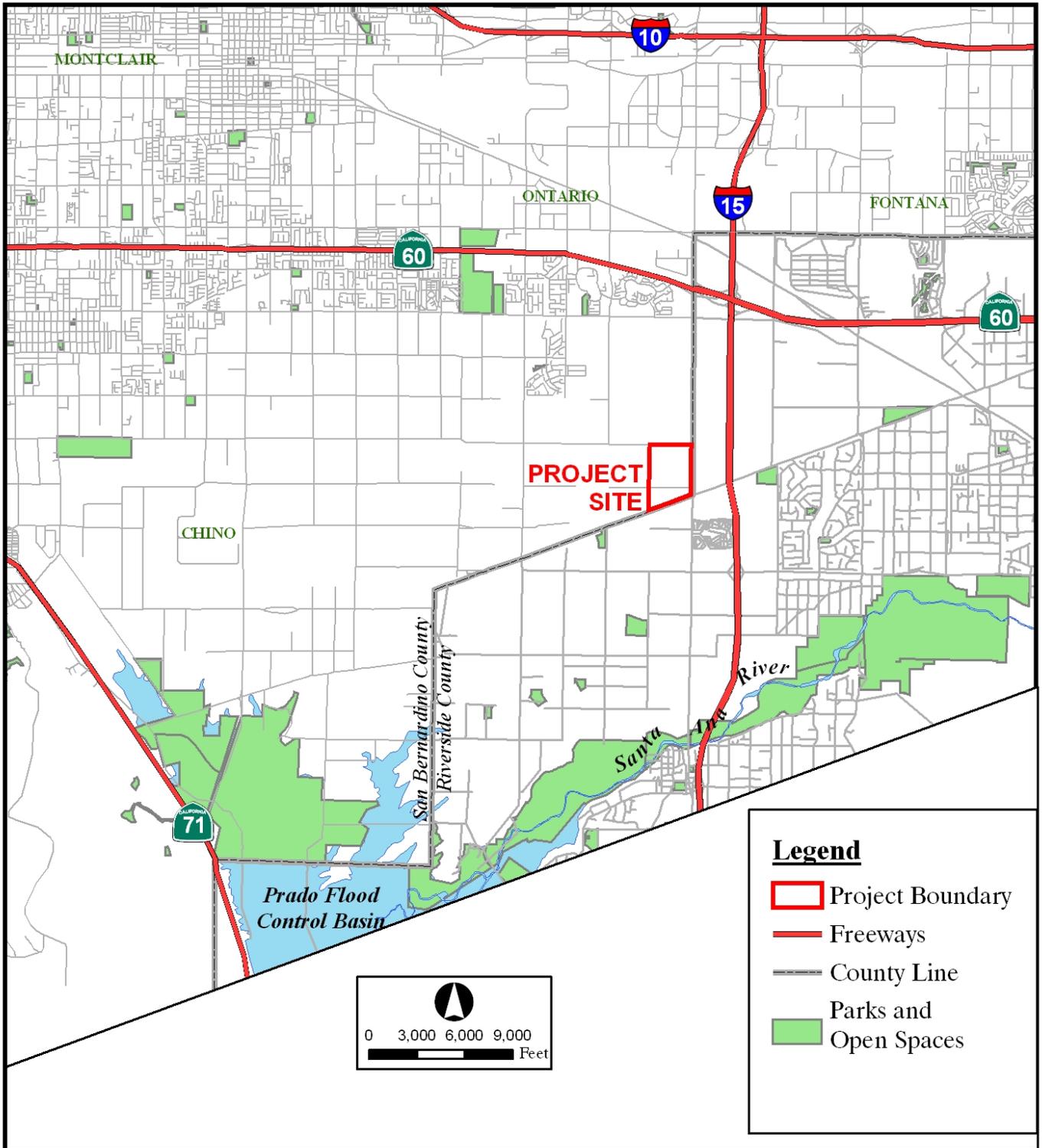
### *Emergency Procedures*

The Emergency Preparedness Plan (the "Plan") was developed in the 1990s to address disaster-related actions that could occur within the City of Ontario. Emergency procedures are addressed in the Plan by identifying all local agencies/organizations and all potential functional emergency responsibilities of those agencies/organizations.

### **Thresholds for Determining Significance**

Impacts related to police protection, fire protection/emergency medical services, schools, parks and recreation, libraries and emergency procedures may be considered potentially significant if the proposed project would:

- Result in substantial adverse physical impacts associated with the need for, or provision of, new or physically altered governmental facilities, the construction of which could cause significant environmental impact, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
  - Fire Protection
  - Police Protection
  - Schools
  - Parks
  - Libraries
  - Emergency Procedures
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- Project includes recreational facilities or requires the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.



Source: Thomas Bros. Guide, 2006



## Esperanza Specific Plan Draft EIR Existing Parks and Open Space

Figure III-10-3  
III-10-7

## **Project Compliance with Existing Regulations**

### *Police Protection*

The Esperanza Specific Plan addresses General Plan Goal 9.0 which includes Policy 9.2.1 that requires Specific Plans to incorporate defensible space designs. “These designs should help ensure maximum visibility and security for entrances, pathways, and corridors, as well as open space (both public and private) and parking lots/structures.” Policy 10.5 of the Ontario General Plan has a policy to “continue Police Department review of proposed new development.” All tracts in future phases of the Specific Plan will be designed to meet these General Plan policies and specific plan design guidelines.

### *Fire Services*

The General Plan Amendment also states that no development will be permitted if there is an inadequate water supply that would increase the standard response time or limit fire-fighting services. In accordance, the Specific Plan will be required to provide or participate in the funding and construction of the backbone water system to serve the area. The Water Master Plan for the City also addressed the adequacy of fire flows/pressure. Design of the water systems within the NMC will meet the intent of the Water Master Plan.

### *Schools*

The GPA for the NMC includes Policy 8.1.2 which requires specific plans to accommodate sufficient schools to meet School District criteria. The project will implement this Policy by providing a 10-acre elementary school site. The Specific Plan developers will be required to pay school fees in accordance with state law to the extent that the school site does not fully meet school district criteria. Pursuant to state law (SB 50 and Proposition 1A), the project will be required to pay school impact fees. In general, the school impact fees are calculated for each school district and apply to residential, commercial, and industrial development within a school district.

### *Parks and Recreation*

The Esperanza Specific Plan proposes the development of one 5-acre Neighborhood Park, one 2-acre Pocket park and two 1-acre Mini Parks. Based on the City’s standard of five acres per 1,000 residents and approximately 4,795 people living with the project, approximately 24 acres of parks would be required. Some of this requirement is met by the payment of fees and the development of the large “Great Park” within adjacent Subareas of the NMC.

The Specific Plan addresses General Plan Policy 12.1.3 that requires all Specific Plans to incorporate a comprehensive and unified parks and recreation plan that:

- Identifies mini, neighborhood, and community park sites in accordance with the service standards and updated Parks and Bike Trail Master Plan criteria;
- Integrates neighborhood parks with Neighborhood Centers and schools;
- Links parks by pedestrian greenway and bike trail networks;
- Incorporates passive and active recreational uses as specified in the Parks and Bike Trail Master Plan; and
- Defines a park acquisition and improvement financing plan.

General Plan Policy 12.1.3 is implemented in the Specific Plan by integrating the 5-acre park with the elementary school and by providing both passive and active uses in the Neighborhood and Mini parks. The parks are linked via neighborhood edges and Class 1 (Class 3 on Merrill Avenue as required in the General Plan) bicycle trails, which connect neighborhoods to existing and proposed parks and recreation facilities located north and northwest of the project site, as well as to the proposed major commercial center to be located north of the project site. Project developers will pay the adopted park fee established by the City for the project less any credit given by the City for the parks and trails network.

The Esperanza Specific Plan addresses Policy 12.1.9 that requires the use of extensive landscaping along street frontages. This policy will be implemented in the Specific Plan by using the Design Guidelines and plant palette developed for the streets surrounding and within the project site.

### **Design Considerations**

As described above, the plan and design of the proposed Specific Plan implement most of the requirements of General Plan Policy 12.1.3 by proposing parks, neighborhood edges, and bicycle trails.

### **Environmental Impacts Before Mitigation**

*Threshold: Result in substantial adverse physical impacts associated with the need for, or provision of, new or physically altered governmental facilities, the construction of which could cause significant environmental impact, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:*

- *Fire/Emergency Medical Services*

Fire and EMS services will be provided by the City of Ontario Fire Department which currently provides fire and Emergency Medical Services for the proposed project from Station No. 6, located at 2931 E. Philadelphia. This station is approximately 5 miles north of the project. The current response time from this station exceeds current Fire Department Emergency Response Goals.

At this time in the NMC, the City has required construction of two fire stations that will be located closer to the Esperanza Specific Plan site. Their construction will be funded through the payment of Development Impact Fees. One will be located approximately 2 miles to the west within the Parkside Specific Plan near the intersection of Archibald and Edison Avenues. The second will be located at the northwest corner of Mill Creek and Edison Avenues, less than one-half mile north of the project site. One of these stations is required to be operational prior to any occupancies. All potential significant physical impacts associated with construction of these stations are addressed in their respective specific plans.

If, at the time of occupancy of the Esperanza project, one or both of these stations are operational, potential significant impacts associated with the risk due to inadequate response times would be less than significant. If neither station is operating, potential impacts associated with the provision of fire and EMS services would be considered potentially significant because

Fire Department Response Goals could not be met. The payment of fees would be considered inadequate because the lack of fire/EMS services, unlike other public services, can be life threatening.

New commercial and residential construction that includes highly flammable building material, such as wood shingles, tract design that has less accessible areas (e.g., long cul-de-sacs) or inadequate water supply or pressure can cause unnecessary, yet significant, fire hazards unless design measures are taken to avoid such hazards.

- *Police Protection*

Police services will be provided by the Ontario Police Department. Since police services are based upon per capita service levels, the proposed project will require an incremental increase in policing services to maintain required service levels. With a projected population of about 4,795 to 4,948 people (as calculated in Section III-9, Population and Housing), approximately 10 sworn officers and 5 civilian staff will be needed to serve the Specific Plan at build-out. The City's development review process and building permit plan check processes include review by the City's Police Department to ensure incorporation of defensible space concepts in site design and construction. Property taxes and City fees support the general fund to help offset the cost of additional personnel. Since response time for police service is not based on proximity to the station and since the new main station is close to the project site, no adverse physical impacts associated with the need for, or provision of, new or physically altered police facilities will result from the project. Therefore, impacts to police protection are considered less than significant.

- *Schools*

The project will be adding school-aged children that will require school services from Mountain View School District and Chaffey Joint Union High School District.

**Table III-10-A Student Generation**

<b>School/Location</b>	<b>Grades</b>	<b>Generation Factor</b>	<b>D.U.</b>	<b>Student Generation</b>
Proposed 10-acre school Esperanza Specific Plan	K-5	0.63 per single-family dwelling unit 0.27 per multi-family dwelling unit	916 494	576 134
Grace Yokley Intermediate 2947 S. Turner Ave. Ontario, CA 91761	6-8	0.188 per dwelling unit	1,410	265
Colony High School 3850 E. Riverside Dr. Ontario, CA 91761	9-12	0.20 per dwelling unit	1,410	282
Total	K-12			1,257

Note: Student generation was calculated using 914 single-family and 496 multi-family dwelling units. If the 10-acre elementary school was not built within the Esperanza Specific Plan, an additional 46 single-family homes would be allowed which would generate an additional: 29 elementary students, 9 intermediate students, and 9 high school students.

As shown in Table III-10-A above, a total of 1,257 new students could be generated by the proposed 1,410 residential units. It is estimated that 710 elementary students from the Esperanza Specific Plan would attend the proposed 10-acre elementary, 265 intermediate students would attend Grace Yokley Intermediate, and 282 students would attend Colony High School. Currently, there is not sufficient capacity the existing Grace Yokley Middle School to accommodate the proposed project. A new middle school is being considered by MVSD to be located at Haven Avenue and Merrill Avenue (formerly Eucalyptus). The timing and exact location of this school have not been approved to date.

In addition to Grace Yokley already being at capacity, the recent approval of Edenglen Specific Plan within the NMC has resulted in Colony High School reaching capacity. Students from the proposed Esperanza Specific Plan or any other specific plan currently proposed within the NMC will result in Colony High School exceeding its capacity, necessitating the use of portable interim classrooms.

Cumulative impacts to Public Services could occur if other major residential and/or commercial projects were developed in immediate proximity to the proposed project. For example, other proposed specific plans within the New Model Colony that will provide residential developments may also contribute school age children that will require services from Mountain View and Chaffey Unified High School Districts. This conclusion is consistent with the discussion of school facilities impacts in the GPA for the NMC EIR, from which the project EIR is tiered, which found that the District would have to establish a new high school to accommodate development in the NMC. (GPA for the NMC EIR, § 5.12.3.3.) Additionally, the GPA for the NMC EIR found that development in the area would continue to put pressure on school districts and that cumulative impacts would be significant without mitigation. (GPA for the NMC EIR, at § 5.12.3.4.) The GPA for the NMC EIR concluded, however, that the impact would be less than significant with the implementation of mitigation measures, including the payment of development impact fees and General Plan policies. (*Ibid.*) The GPA for the NMC EIR's analysis and conclusions regarding school facilities impacts are presumed valid. (Pub. Resources Code, § 21167.2; *Laurel Heights Improvement Ass'n v. Regents of the University of California* (1993) 6 Cal.4th 1112, 1130 (“[a]fter certification, the interests of finality are favored”); *Santa Teresa Citizen Action Group v. City of San Jose* (2003) 114 Cal. App. 4th 689, 705-706.) The impacts associated with the proposed project are consistent with the conclusions in the GPA for the NMC EIR.

Following certification of the GPA for the NMC EIR, the California Legislature severely curtailed the analysis of school facilities impacts under CEQA. (Gov. Code, § 65995 *et seq.*; Ed. Code, § 17620 *et seq.*) Specifically, in 1998 the Legislature declared that it intended to occupy the entire field of mitigation for school impacts as provided in the Government Code and Education Code. (Gov. Code, § 65995, subd. (e).) Further, the Legislature declared that payment of the fees provided for in those Codes was deemed to be “full and complete” mitigation for any potential school impacts. (*Id.* at subd. (h).) Not only is payment of school fees deemed to be complete mitigation, it is also to be the “exclusive method of *considering*” such impacts under CEQA. (*Id.* at § 65996, subd. (a).)

Pursuant to state law (SB 50 and Proposition 1A), the project will be required to pay school impact fees. For the reasons described above, the payment of school fees are adequate to mitigate impacts to school facilities and impacts must be considered less than significant.

- *Parks*

The Esperanza Specific Plan proposes the total development of approximately 9 acres of parks. At 5 acres per 1000 residents, and approximately 4,795 to 4,948 people living in the Specific Plan, approximately 24 to 25 acres of parks would be required. Table 3-4 of the GPA for the NMC does not require a minimum number of acres of parks to be located within the project area so the remainder of the park requirement will be met by the development of the large “Great Park” within the NMC. The Quimby Act requires local jurisdictions with parks responsibilities to provide parks and recreation opportunities through the receipt of fees or the acceptance of facilities/land. The project proponent could either provide adequate local park facilities or pay fees to the City in lieu thereof, or some combination of both approaches. Without such mitigation, the project does not provide adequate park facilities and its environmental impacts would be considered significant. Quimby and other parks fees collected for this project may be used to develop the New Model Colony Great Park.

- *Libraries*

Library services are provided by the Ontario City Library System. Because the project involves residential development, the demand for library services will increase incrementally over time. The current expansion standard is 0.6 sq. ft. per resident multiplied by the 4,795 to 4,948 residents equals a need for 2,850 to 2,969 sq. ft. of library space. In order to reduce impacts associated with additional residents increasing the demand on the local library system, the City has adopted a library development impact fee. Because libraries need enough people within a geographic area to warrant their construction, the fees are considered adequate mitigation and no significant impact results from the project.

- *Emergency Procedures*

According to the City of Ontario GPA for the NMC Final EIR, the City of Ontario’s Existing Emergency Preparedness Plan and the actions contained therein are considered appropriate and adequate for the entirety of the Sphere of Influence which includes the area contained in the Esperanza Specific Plan. Therefore, the proposed project will not present any potentially significant environmental impact to emergency procedures.

*Threshold: The project would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.*

The proposed project will consist of 1,410 single family residential units, approximately 916 single-family and 494-multiple family dwelling units, approximately nine (9) acres of parks, and a 10-acre elementary school site at completion of the project. Up to 46 additional units may be built if the school district chooses not to utilize the school site. The nearest regional park is the Santa Ana River Wildlife Area and the Prado Regional Park to the south. Due to the proximity of the project site to these large recreational areas, they may get some use by the project residents, but these regional facilities are designed to serve this region so such use would be

expected/appropriate. Existing local park facilities in the area could experience accelerated deterioration due to the added use by Esperanza Specific Plan residents. Construction of the NMC Great Park will occur in phases as each specific plan that includes a portion of the Great Park builds out. Potential physical environmental impacts associated with development of the Great Park will be considered and mitigated, as necessary, in the affected specific plan EIRs. However, if parks within the project are built out based on the population-based service criteria, such potential impacts would be reduced to less than significant levels. Without mitigation, impacts to existing parks resulting from overuse Esperanza Specific Plan residents could be considered significant by other jurisdictions.

*Threshold: The project includes recreational facilities or requires the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.*

The proposed project includes the construction of approximately nine (9) acres of parks to provide recreational space for the residents of Esperanza Specific Plan. Construction of the new parks has been included in the analysis presented in all sections of this EIR and mitigation measures have been incorporated as appropriate.

### **Proposed Mitigation Measures**

**MM Serv 1:** To reduce fire hazards, wood-shingled and shake-shingled roofs are prohibited.

**MM Serv 2:** To reduce fire hazards, adequate fire hydrant locations and water main sizes shall meet standards established by the City of Ontario Fire Department and reviewed and implemented by the Engineering Department.

**MM Serv 3:** To reduce fire hazards, adequate fire flow pressure shall be provided for residential areas and non-residential projects in accordance with currently adopted City standards.

**MM Serv 4:** To reduce fire hazards, adequate water supply shall be provided as approved by the Fire Department prior to the framing stages of construction.

**MM Serv 5:** To reduce fire hazards, houses located on cul-de-sacs longer than 300 feet shall be constructed with residential fire sprinklers.

**MM Serv 6:** To reduce fire hazards, access roadways designed in accordance with Fire Department standards to within 150' of all structures, shall be provided prior to the framing stages of construction. This access is to be maintained in an unobstructed manner throughout construction.

**MM Serv 7:** To mitigate for potential impacts to library, police, and fire departments, the developer shall pay library, police, and fire service development impacts fees.

**MM Serv 8:** To reduce the risks associated with inadequate fire service, one of the two fire stations described above (Edison/Archibald or Edison/Mill Creek) shall be in operation prior to the issuance of the first certificate of occupancy within the Esperanza Specific Plan area. The details of where and how this will be accomplished shall be included in the development

agreement between the City and the developer. Potential impacts associated with the construction of these stations is evaluated in the EIRs prepared for their respective GPA Subareas.

**MM Serv 9:** The developer shall pay school fees or otherwise meet project obligations to schools, as approved by Mountain View School and Chaffey Joint Union High School Districts.

**MM Serv 10:** To adequately address the need for recreation within the City, park development impact fees, Quimby fees, and/or developed parkland shall be provided to the City commensurate with the requirements of the General Plan equivalent to 24 acres total. The park fees shall be paid on a pro-rata share as building permits are issued in accordance with the negotiated DIF agreement. (Note: parkland shall be provided to the City commensurate with the requirements of the General Plan equivalent to 25 acres, if 46 additional homes are built in lieu of the school.)

**MM Serv 11:** To ensure adequate parks are built commensurate with development, the pocket park located within Planning Area 9 of the Esperanza Specific Plan shall be constructed no later than the issuance of certificates of occupancy for 50 percent of the units within Planning Areas 8, 9 and 10 combined; the pocket park located within Planning Area 7 of the Esperanza Specific Plan shall be constructed no later than the issuance of certificates of occupancy for 50 percent of the units within Planning Areas 6 and 7 combined; the pocket park located within Planning Area 5 of the Esperanza Specific Plan shall be constructed no later than the issuance of certificates of occupancy for 50 percent of the units within Planning Areas 4b and 5 combined; the 5-acre Neighborhood Park shall be constructed no later than the issue of the certificates of occupancy for 50 percent of the units within Planning Areas 1, 2, 3, and 4a combined.

### **Summary of Project-Specific Environmental Effects After Mitigation Measures are Implemented**

All potential direct impacts of the project were found to be less than significant with the above mitigation measures incorporated.

### **Summary of Cumulative Environmental Effects After Mitigation Measures are Implemented**

Cumulative impacts to Public Services could occur if other major residential and/or commercial projects were proposed in immediate proximity to the proposed project. For example, other proposed specific plans within the New Model Colony that will provide residential developments may also contribute school age children that will require services from Mountain View School District. The effects from these developments should also be mitigated through the payment of school impact fees or through the creation of a Community Facilities District, as appropriate. Each NMC specific plan is subject to similar mitigation measures related to all the various public services. The cumulative potentially significant impacts of facilities required to provide public services to the NMC as a whole and surrounding areas in Riverside County have been considered in the following environmental documents: GPA for the NMC Final EIR, Water Master Plan for the NMC mitigated negative declaration, The Resort Specific Plan Final EIR, Countryside, West Haven Specific Plan EIR, Subarea 7 Specific Plan EIR, Parkside Specific Plan EIR, Subarea 29

Specific Plan EIR, and Riverside County Integrated Project General Plan Final EIR. The discussion of cumulative impacts is limited because the Specific Plan is consistent with the plans used in the evaluation of each environmental issue area discussed here and in Section IV-1, Cumulative Environmental Effects. With the implementation of the above mitigation measures and those already incorporated in prior environmental documents, cumulative adverse effects on public services are not anticipated.

## 11. TRANSPORTATION/TRAFFIC

The focus of the following discussion is related to the potential impacts associated with changes in the existing traffic patterns, level of service, air traffic patterns, emergency access, parking capacity, and alternative modes of transportation. This discussion summarizes the traffic impact study for the project, which was prepared by Albert A. Webb Associates. The *Traffic Impact Study Report Esperanza Specific Plan City of Ontario* (Webb, 2005) is bound under separate cover as Appendix H of this document.

For purposes of the Traffic Impact Study and this EIR, the worst case traffic situation is analyzed. The proposed project may include either a 10-acre elementary school or an additional 46 single-family residences. Table III-11-A, below, shows the trips generated by the school compared to those generated by the 46 additional units. As shown, the school creates far more traffic than the 46 homes, therefore, the school use is assumed in the traffic study and this EIR section.

**Table III-11-A Comparison Trip Generation**

	AM	PM	
Land Use	Total	Total	Daily
Single-Family Residential (46 units)	34	47	440
Elementary School (736 Students)	309	206	949

Source: Traffic Impact Study Report Esperanza Specific Plan, Webb 2005, Tables 4-1 and 4-2.

The proposed project is located in an area of the City that was formerly a part of the Agricultural Preserve. This rural area is transitioning to urban and suburban uses, both within the City of Ontario and within adjacent areas of Riverside and San Bernardino counties. This transition in land use results in some rural roads and some urban streets serving developing areas. The traffic study for the project analyzed the surrounding street network and freeway access points to determine the need for roadway and intersection improvements resulting from the project.

The objectives of the traffic study were to:

- Determine existing traffic conditions in the vicinity of the proposed project;
- Evaluate the traffic generated from the proposed development with respect to its impact on the Project Opening Year conditions; and
- Determine if the level of service required by the City of Ontario General Plan will be maintained at all impacted intersections, and if not, determine the mitigation measures and cost that will be necessary in order to maintain the required level of service.

This analysis uses the Level of Service (LOS) system of categorization to evaluate the project area roadway intersections. Traffic engineers use this LOS system of categorization to describe

how well an intersection or roadway is functioning. The LOS measures several factors including operating speeds, freedom to maneuver, traffic interruptions, and average vehicle delay at intersections. The LOS approach uses a ranking system, similar to education, with level ‘A’ being best and level ‘F’ being worst.

The levels of service at the unsignalized and signalized intersections have been calculated using TRAFFIX Version 7.7, which is based on 2000 Highway Capacity Manual (HCM) methodologies. HCM evaluates the LOS at intersections based on average controlled delay per vehicle per approach. This average delay per vehicle is then used to judge Level of Service. Table III-11-B, Level of Service (LOS) Standards describes LOS levels in terms the average driver can understand and shows the criteria used to determine the level of service at intersections.

**Table III-11-B Level of Service (LOS) Standards**

Level of Service (LOS)	Signalized Average Total Delay (seconds/vehicle)	Unsignalized Average Total Delay (seconds/vehicle)	Qualitative LOS Description
<b>A</b>	0 to 10.00	0 to 10.00	Progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
<b>B</b>	10.01 to 20.00	10.01 to 15.00	Progression is good and/or cycles are of short length. More vehicles stop than for LOS A, causing higher levels of average total delay.
<b>C</b>	20.01 to 35.00	15.01 to 25.00	Fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in the level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
<b>D</b>	35.01 to 55.00	25.01 to 35.00	Noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
<b>E</b>	55.01 to 80.00	35.01 to 50.00	The limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.
<b>F</b>	80.01 and up	50.01 and up	Unacceptable to most drivers. This condition often occurs with over saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Source: Traffic Impact Study Report Esperanza Specific Plan, Albert A. Webb Associates, 2005

### **Setting**

The Esperanza Specific Plan (the Plan) is located north of Bellegrave Avenue, south of Edison Avenue, east of Mill Creek (formerly Cleveland) Avenue, and west of Milliken/Hamner Avenue in the southeasterly portion of the City of Ontario. Figure III-11-1 identifies the existing roadway conditions for roadways in the vicinity of the project site. The following roadways provide service to the area:

- **Hamner/Milliken Avenue.** Hamner/Milliken Avenue is a north-south road located along the east side of the project site. The road serves as the boundary for the Counties of Riverside and San Bernardino. It forms the eastern New Model Colony boundary and extends from the

City of Rancho Cucamonga to the City of Corona. Currently developed as a two-lane undivided road, the west half of this road is designated in the City of Ontario Transportation Implementation Plan for the New Model Colony (NMS TIP, 2001) as a Divided Arterial-Parkway 1-1. Such a designation in this location has a 28-foot wide median (to allow for dual left turn lanes) with six through lanes (Edison Avenue to Bellegrave Avenue segment) and a minimum 148-foot right-of-way. The Edison Avenue to Riverside Drive segment of Hamner/Milliken Avenue is designated as “Divided Arterial Parkway 1A” with eight through lanes and minimum 160-foot right-of-way.

- **Hamner/Milliken Avenue (con’t).** The County of Riverside designates the east half of the street for the same two segments of Hamner/Milliken Avenue as a Modified Urban Arterial with a 152-foot right-of-way, 14-foot raised or painted median, and 6 through lanes. South of Bellegrave Avenue, Hamner/Milliken Avenue is located entirely within Riverside County with the same 152-foot right-of-way. Hamner/Milliken Avenue connects to the 60 Freeway located approximately 1.5 miles north of the project site.
- **Edison Avenue.** The existing Edison Avenue is an east-west road located adjacent to the northern boundary of the project site. Currently developed as a two-lane undivided road east of Euclid Avenue, Edison Avenue extends west of Euclid Avenue into the City of Chino Hills where it changes its name to Grand Avenue and continues into West Covina. This road, when realigned, is designated in the City of Ontario Transportation Implementation Plan for the New Model Colony as a Divided Arterial Parkway 1A with eight through lanes (Mill Creek-Hamner/Milliken segment) and a minimum of 160-foot right-of way. East of Hamner/Milliken Avenue, in Riverside County, the realigned Edison Avenue becomes Cantu Galleano Ranch Road (Galena Street) and it is designated by the Riverside County General Plan Circulation Element as an Urban Arterial with 6 through lanes and 152-foot right-of-way. This roadway connects the NMC to the I-15 freeway at the proposed Galena St. Interchange.
- **Eucalyptus/Merrill Avenue.** Eucalyptus/Merrill Avenue is an east-west road that, when realigned, will roughly bisect the project site. Currently developed as a two-lane undivided road, Eucalyptus/Merrill Avenue extends from San Antonio Avenue in Chino to Hamner/Milliken Avenue. Through the project site, this road is designated in the City of Ontario Transportation Implementation Plan for the New Model Colony as a Standard Arterial with four through lanes and a 108-foot right-of-way. Merrill will include a Class III bike path.
- **Haven Avenue.** Haven Avenue is a north-south roadway, located ½ mile to the west of the project site. Currently developed as a two-lane undivided road, this road is designated in the City of Ontario New Model Colony General Plan Amendment as a Parkway 2 with four lanes divided (116’-128’ right-of-way), between Riverside Drive and Bellegrave Avenue. South of Bellegrave Avenue, Haven Avenue is named Sumner Avenue and is located in Riverside County. The Riverside County Eastvale Area Plan designates Sumner Avenue as a Major roadway with 118-foot right-of-way. Haven serves as a connection to SR 60 located approximately 2.5 miles to the north.



Source: Esperanza Specific Plan Traffic Study, Webb Associates, 2005



## Esperanza Specific Plan Draft EIR Existing and Proposed Roadways

Figure III-11-1

- **Bellegrave Avenue.** Bellegrave Avenue is an east-west road that forms the southern boundary of the project site. Bellegrave presently terminates one half mile west of Milliken/Hammer Avenue and connects with Mission Boulevard to the east in the unincorporated area of Riverside County known as Glen Avon. Within the project area, the north half of this roadway falls under the jurisdiction of the City of Ontario, while the south half is subject to Riverside County's standards. Currently developed as a two-lane undivided road, this road is designated by the City of Ontario General Plan as a Standard Arterial with 4 through lanes (2 in each direction) and a 108-foot right-of-way. The Riverside County half of Bellegrave Avenue is designated as a Modified Urban Arterial with a 152-foot right-of-way, 14-foot raised or painted median, and 6 through lanes. It has been constructed to accommodate 3 through lanes (south half only) and a painted median. Riverside County's designation is currently being downgraded to Major Arterial. Bellegrave is planned to continue further west to connect with other portions of the NMC.
- **Interstate 15.** Interstate 15 (I-15) is located approximately ½ miles east of the project site. Currently access to the I-15 is approximately 1.5 miles south, via Hammer/Milliken Avenue, then east on Limonite Avenue. I-15 carries approximately 90,000 vehicles per day in the vicinity of the proposed project.
- **Galena Interchange.** The County of Riverside Transportation Department proposes to construct a freeway Interchange with Interstate-15 and the extension of Cantu-Galeano Ranch Road/Galena Street. It is unknown when construction of the interchange will begin. Construction of the interchange is expected to take 18 months to complete. At the time of this writing, construction had not yet begun. The project will include construction of Galena Street from Milliken/Hammer Avenue to Wineville Road, which will contain 3 lanes in each direction. This proposed interchange will allow north-bound and south-bound freeway traffic to enter/exit the freeway on Cantu-Galeano Ranch Road/Galena Street, which is located directly north of the project site. The Interchange project is unrelated to the proposed project.
- **State Route 60.** State Route 60, located approximately 1.5 miles north of the project site, is generally ten lanes (four mixed flow lanes and one carpool lane in each direction). In this area, SR-60 has full diamond-type interchanges with Euclid Avenue, Grove Avenue, Vineyard Avenue, Archibald Avenue, Haven Avenue, and Hammer/Milliken Avenue. SR-60 carries approximately 160,000 vehicles per day near the project site.
- **Archibald Avenue.** Archibald is a north-south roadway located approximate 1.5 miles west of the project site. Archibald connects to the Cities of Norco and Corona to the south and to the City of Rancho Cucamonga in the north, though interrupted for one mile by Ontario International Airport. Archibald is currently developed as a two-lane undivided road south of Schaefer Avenue. Archibald Avenue is designated as a Divided Arterial Parkway 1A according to the New Model Colony General Plan Amendment with 8 travel lanes in a 156-foot ROW. North of Schaefer, Archibald is a 6-lane undivided road becoming divided near the SR 60 interchange.

The ease at which intersections within the study area handle traffic largely controls the operation of the roadway system as a whole. Therefore, analysis of traffic at study area intersections was

used to evaluate the traffic impacts of the project. Nineteen intersections within the study area were evaluated to determine their existing and future levels of service. These intersections are:

1. Milliken Avenue / SR-60 Westbound Ramps
2. Milliken Avenue / SR-60 Eastbound Ramps
3. Milliken/Hamner Avenue / Riverside Avenue
4. Milliken/Hamner Avenue / Chino Avenue – Harvest Drive
5. Archibald Avenue / Schaefer Avenue
6. Archibald Avenue / Edison Avenue
7. Schaefer Avenue / Edison Avenue
8. Haven Avenue / Edison Avenue
9. Archibald Avenue / Eucalyptus Avenue (Merrill Avenue)
10. Haven Avenue / Eucalyptus Avenue (Merrill Avenue)
11. Cleveland Avenue (Mill Creek Avenue) / Eucalyptus Avenue (Merrill Avenue)
12. Milliken/Hamner Avenue / Eucalyptus Avenue (Merrill Avenue)
13. Project Street (W) / Eucalyptus Avenue (Merrill Avenue)
14. Project Street (E) / Eucalyptus Avenue (Merrill Avenue)
15. Cleveland Avenue (Mill Creek Avenue) / Bellegrave Avenue
16. Milliken/Hamner Avenue / Bellegrave Avenue
17. Hamner Avenue / Limonite Avenue
18. I-15 Southbound Ramps / Limonite Avenue
19. I-15 Northbound Ramps / Limonite Avenue

The project site is proposed to be developed with 914 single-family detached residential dwelling units, 496 condominium/townhouse units, and a 736-student elementary school. The Specific Plan allows for the construction of up to 46 additional houses if the school district chooses not to utilize the school site. For traffic analysis purposes, the school is being analyzed because it results in a “worst case” scenario as the residential units result in less traffic than the school. The project site is currently in agricultural use with relatively low traffic generation from the project. Adjacent uses include mostly agricultural uses to the east and west giving way to residential development, residences to the south, with some industrial uses located to the northeast.

The traffic generation currently experienced in the project area is shown in Table III-11-C. All of the intersections operate at LOS levels acceptable to the City of Ontario except the intersections of Archibald Avenue/Merrill Avenue, Milliken/Hamner Avenue/Merrill Avenue, and I-15/Limonite Southbound and Northbound Ramps. According to the traffic study (Appendix H), signals are warranted at the following intersections for existing conditions:

- Archibald Avenue/ Merrill Avenue
- Milliken/Hamner Avenue/ Merrill Avenue

**Table III -11-C Existing Level of Service for Study Intersections (2005)**

Intersection	Traffic Control Status	AM Peak Hour		PM Peak Hour	
		Delay (Sec)	LOS	Delay (Sec)	LOS
1. Milliken Avenue / SR-60 WB Ramps	Signal	20.5	C	17.3	B
2. Milliken Avenue / SR-60 EB Ramps	Signal	21.8	C	27.1	C
3. Milliken/Hamner Avenue / Riverside Avenue	Signal	16.6	B	25.9	C
4. Milliken/Hamner Avenue / Chino Avenue	Signal	7.3	A	7.8	A
5. Archibald Avenue / Schaefer Avenue	TWSC	14.7	B	10.8	B
6. Archibald Avenue / Edison Avenue	Signal	23.5	C	25.9	C
7. Schaefer Avenue / Edison Avenue	<i>Does Not Exist</i>				
8. Haven Avenue / Edison Avenue	TWSC	10.7	B	13.2	B
9. Archibald Avenue / Merrill Avenue	TWSC	154.2	F	OFL	F
10. Haven Avenue / Merrill Avenue	<i>Does Not Exist</i>				
11. Cleveland Avenue / Merrill Avenue	<i>Does Not Exist</i>				
12. Project Street (W) / Merrill Avenue	<i>Does Not Exist</i>				
13. Project Street (E) / Merrill Avenue	<i>Does Not Exist</i>				
14. Milliken/Hamner Avenue / Merrill Avenue	TWSC	11.7	B	45.5	E
15. Cleveland Avenue / Bellegrave Avenue	<i>Does Not Exist</i>				
16. Milliken/Hamner Avenue / Bellegrave Avenue	Signal	25.7	C	32.5	C
17. Hamner Avenue / Limonite Avenue	Signal	31.2	C	32.2	C
18. I-15 Southbound Ramps / Limonite Avenue	Signal	97.1	F	56.2	E
19. I-15 Northbound Ramps / Limonite Avenue	Signal	64.3	E	55.0	D

Table III-11-D shows the projected levels of service at study area intersections at the buildout year of the project but without the construction of the project. These projections were made assuming the existing intersection geometrics with the development of other area projects shown in Table III-11-G. For purposes of the traffic analysis report (Webb 2005), and this EIR section, the project is assumed to be built in one phase which is completed or “built out” in 2015. As shown in Table III-11-D, all study area intersections (indicated by shading) violate the City of Ontario’s acceptable LOS D in either the AM and PM Peak hours or both.

The following intersections warrant traffic signals in the project buildout year without the construction of the project:

Archibald Avenue / Schaefer Avenue  
 Schaefer Avenue / Edison Avenue  
 Haven Avenue / Merrill Avenue  
 Project Street (E) / Merrill Avenue

Haven Avenue / Edison Avenue  
 Mill Creek Avenue / Merrill Avenue  
 Project Street (W) / Merrill Avenue  
 Mill Creek Avenue / Bellegrave Avenue

**Table III -11-D Buildout Year (2015) Without Project**

Intersection	Traffic Control Status	AM Peak Hour		PM Peak Hour	
		Delay (Sec)	LOS	Delay (Sec)	LOS
1. Milliken Avenue / SR-60 WB Ramps	Signal	28.5	C	151.8	F
2. Milliken Avenue / SR-60 EB Ramps	Signal	46.8	D	OFL	F
3. Milliken/Hamner Avenue / Riverside Avenue	Signal	OFL	F	OFL	F
4. Milliken/Hamner Avenue / Chino Avenue	Signal	25.6	C	OFL	F
5. Archibald Avenue / Schaefer Avenue	TWSC	OFL	F	OFL	F
6. Archibald Avenue / Edison Avenue	Signal	122.7	F	OFL	F
7. Schaefer Avenue / Edison Avenue	TWSC	24.3	C	OFL	F
8. Haven Avenue / Edison Avenue	TWSC	OFL	F	OFL	F
9. Archibald Avenue / Merrill Avenue	TWSC	OFL	F	OFL	F
10. Haven Avenue / Merrill Avenue	TWSC	OFL	F	OFL	F
11. Cleveland Avenue / Merrill Avenue	TWSC	OFL	F	OFL	F
12. Project Street (W) / Merrill Avenue	<i>Not Applicable</i>				
13. Project Street (E) / Merrill Avenue	<i>Not Applicable</i>				
14. Milliken/Hamner Avenue / Merrill Avenue	TWSC	OFL	F	OFL	F
15. Cleveland Avenue / Bellegrave Avenue	TWSC	OFL	F	OFL	F
16. Milliken/Hamner Avenue / Bellegrave Avenue	Signal	OFL	F	OFL	F
17. Hamner Avenue / Limonite Avenue	Signal	29.4	C	154.8	F
18. I-15 Southbound Ramps / Limonite Avenue	Signal	193.0	F	OFL	F
19. I-15 Northbound Ramps / Limonite Avenue	Signal	OFL	F	OFL	F

TWSC – Two Way Stop Controlled

AWSC – All Way Stop Controlled

OFL- Overflow conditions, Delay > 200 seconds

Bus transit service is provided to the City of Ontario by Omnitrans). However, Omnitrans Bus Service does not currently provide bus service in this portion of the City of Ontario. The closest transit service is provided at the northern boundary of the New Model Colony, at Riverside Drive where two Omnitrans routes – Route 70, Ontario – Creekside, and Route 75 Creekside – Ontario Mills operate. No specific routes are planned to serve the project site.

The closest rail line to the site is commuter rail service, commonly known as Metrolink, provided by the Southern California Regional Rail Authority (SCRRA). SCRRA operates seven commuter lines in the Los Angeles region. The nearest line to the project site is the Riverside Line which offers service between downtown Riverside and downtown Los Angeles' Union Station. The nearest station on this line, East Ontario Station, is located approximately 3 miles north of the project site off of Haven Avenue on Francis Avenue.

According to the GPA for the NMC, several bike trails are planned near the project site. They are as follows: Class I Bike Paths (bike path that is completely separated from vehicular traffic) are planned along Haven Avenue (for the entire length of the NMC planning area), and along the future alignment of Edison Avenue and Cantu Galleano Ranch Road. A Class III bike trail (shared use with motor vehicle traffic) is planned along Merrill Avenue which roughly bisects the project site.

### **Thresholds for Determining Significance**

Impacts related to transportation/traffic may be considered potentially significant if the proposed project would:

- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;
- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access;
- Result in inadequate parking capacity; and
- Conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

### **Project Compliance with Existing Regulations**

As stated in the GPA for the NMC, City of Ontario established performance standards for acceptable levels of service of a minimum LOS C for all local residential streets in peak periods, and LOS D for intersections during peak hours and for collector and arterial roadways (GPA for the NMC Policies 11.21 – 11.2.3).

To ensure that the Specific Plan's circulation system adequately serves local trips while minimizing impacts on the surrounding neighborhoods and the existing system, the City of Ontario established "transportation impact" mitigation fees, which the proposed project will be required to pay in order to offset the cost of transportation improvement required by new development. According to the Ontario NMC Transportation Implementation Plan, educational, sports, public and amenity categories are exempt from the transportation fee. The trips to/from such land uses will generally be made by residents or employees of the NMC and the fees for trips generated by those persons can be captured through residential and employment land use transportation development impact fees (Section IV of NMC TIP, 2001). The proposed project will be subject to fees established at the time of development.

The GPA for the NMC Circulation Element provides for the circulation of people, goods, and public services that support the GPA for the NMC Land Use Element for proposed projects. Project development will meet and comply with all applicable Circulation policies. These policies address: Road Rights-of-Way and Dedication; Consistency with the San Bernardino County-wide Congestion Management Program, Roadway Design; Alignment; Access; Intersections; On-Site Road Improvements; Off-Site Road Improvements; Arterial Highways; Collector Streets; Commercial and Industrial Development; Circulation Hazards; Flooding; Dust and Blowsand; Congestion Relief/Level of Service; Parking; Pedestrian Facilities and Bikeways. For a descriptive response to each of these Circulation Policies, see the discussion in Section 9 of the Specific Plan.

The project is also required to pay its fair share costs of offsite improvements required to maintain acceptable levels-of-service (MM Trans 13). Costs of all of the required offsite improvements are calculated using *Preliminary Construction Cost Estimates for Congestion Management Plans* as provided by the San Bernardino Association of Governments (SANBAG). The recommended improvements are shown as offsite in Table 1-1 of the Traffic Impact Study Report Esperanza Specific Plan (Appendix H). For a detailed breakdown of the cost of each specific item, see the traffic report (Appendix H). The project's fair share cost of improvements is \$776,622. Fair share cost is computed by the ratio between project traffic to total new traffic. Total new traffic is all future traffic minus existing traffic. Table III-11-E shows how these costs were calculated by study area intersection.

**Table III-11-E Project Fair Share Cost and  
Traffic Contribution Per Study Area Intersection**

Location	Total Cost	Existing Traffic (2005) vph	Future Traffic (2015) vph	Project Traffic vph	Total New Traffic vph	Project % of New Traffic	Project Fair Share Cost
1. Milliken Avenue / SR-60 Westbound Ramps	\$175,000	1455	4144	183	2689	6.81%	\$11,910
2. Milliken Avenue / SR-60 Eastbound Ramps	\$263,636	1573	5705	241	4132	5.83%	\$15,377
3. Milliken/Hamner Avenue / Riverside Avenue	\$585,227	1897	7246	243	5349	4.54%	\$26,586
4. Milliken/Hamner Avenue / Chino Avenue	\$357,955	1491	3824	258	2333	11.06%	\$39,585
5. Archibald Avenue / Schaefer Avenue	\$438,636	827	4275	0	3448	0.00%	\$0
6. Archibald Avenue / Edison Avenue	\$363,636	1821	6019	94	4198	2.24%	\$8,142
7. Schaefer Avenue / Edison Avenue	\$300,000	0	1716	0	1716	0.00%	\$0
8. Haven Avenue / Edison Avenue	\$550,000	508	2917	0	2409	0.00%	\$0
9. Archibald Avenue / Merrill Avenue	\$638,636	1358	5194	164	3836	4.28%	\$27,304
10. Haven Avenue / Merrill Avenue	\$538,636	0	3756	252	3756	6.71%	\$36,139
11. Cleveland Avenue / Merrill Avenue	\$450,000	0	2846	361	2846	12.68%	\$57,080
12. Project Street (W) / Merrill Avenue	\$350,000	0	2669	480	2669	17.98%	\$62,945
13. Project Street (E) / Merrill Avenue	\$438,636	0	2860	670	2860	23.43%	\$102,757
14. Milliken/Hamner Avenue / Merrill Avenue	\$727,273	1423	4482	707	3059	23.11%	\$168,088
15. Cleveland Avenue / Bellegrave Avenue	\$400,000	0	2127	97	2127	4.56%	\$18,242
16. Milliken/Hamner Avenue / Bellegrave Avenue	\$540,909	2159	5336	545	3177	17.15%	\$92,791
17. Hamner Avenue / Limonite Avenue	\$382,955	3118	7215	290	4097	7.08%	\$27,107
18. I-15 Southbound Ramps / Limonite Avenue	\$963,636	2710	7026	217	4316	5.03%	\$48,450
19. I-15 Northbound Ramps / Limonite Avenue	\$963,636	2779	7552	169	4773	3.54%	\$34,120
<b>GRAND TOTAL</b>	<b>\$9,428,409</b>						<b>\$776,622</b>

### **Design Considerations**

The Specific Plan provides improvements to adjacent local roadways as well as the construction of internal roadways. In-tract local and collector streets will be constructed to the City of Ontario standards and will consist of 60' rights-of-way.

Improvements to regional adjacent roadways are as follows:

**Merrill Avenue:** Full-width improvements to Merrill Avenue will be completed as part of the project. These include 84 feet of pavement (2 lanes each for eastbound and westbound traffic), 12-foot parkways which include 5-foot sidewalks, and 7 feet of landscaped parkway, and an additional 23 feet of landscaped buffer area. Appropriate signage will be included to indicate that a Class III Bike Path is included within the Merrill Avenue right-of-way.

**Hamner/ Milliken Avenue:** Improvements to Milliken Avenue include the western half of the roadway from Bellegrave Avenue to the northern project boundary. These half-width improvements include a 14-foot landscaped half-median, three southbound travel lanes (40 feet of pavement), and a 20-foot landscaped parkway which includes a 5-foot sidewalk separated from the street by a 15-foot landscaped buffer.

**Mill Creek Avenue:** Mill Creek Avenue forms the western boundary of the project site and is classified as a Collector roadway. East-side half-width improvements to Mill Creek will be completed as part of this project. These improvements include 32 feet of pavement (two northbound traffic lanes), a 12-foot parkway including a 5-foot sidewalk and 7-foot landscaped buffer, and an additional 18 feet of landscaped buffer area.

**Bellegrave Avenue:** Half-width improvements to Bellegrave will be constructed from Mill Creek Avenue to Milliken Avenue. These improvements include 42-feet of pavement (2 westbound traffic lanes), a 12-foot landscaped parkway (including a 5-foot sidewalk separated from the street by 7-feet of landscaped buffer area), as well as a 23-foot additional landscaped buffer. Half-width improvements on the south side of Bellegrave have already been completed.

### **Environmental Impacts Before Mitigation**

*Threshold: The project will exceed, either individually or cumulatively, the level of service standard established by the county congestion management agency for designated roads or highways – LOS D or better for intersections during peak hours for collector and arterial roadways and LOS C or better for residential streets;*

Traffic projections for the proposed project take into consideration several factors. Trip generation represents the amount of traffic traveling to and from the proposed project. Trip distribution considers the directional orientation of traffic associated with the project. Modal split takes into account the traffic reducing potential of public transit or other modes of transportation. The City of Ontario Transportation Department requires the use of the Highway Capacity Manual (HCM) to determine the level of service at study area intersections based on the average controlled delay per vehicle by approach. The traffic study utilized the 2000 HCM methodology to determine LOS (Appendix H).

#### *Trip Generation*

Trip generation rates for development proposals of many kinds are found in the Institute of Transportation Engineers (ITE) "Trip Generation," 7<sup>th</sup> Edition, a standard source used for traffic studies. Based upon this publication, the proposed project is anticipated to generate approximately 12,050 daily vehicle trips, 1,166 trip ends will occur during the morning peak hour and 1,315 trip ends will occur during the evening peak hour (see Table III-11-F).

#### *Trip Distribution*

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is influenced by the geographical location of the site, type of land uses in the study area such as shopping centers and recreational sites, and proximity to the regional freeway system. The directional distribution of traffic for the proposed project was determined based upon the 2015 New Model Colony Traffic Forecast.

**Table III-11-F Project Trip Generation**

Land Use	AM Peak			PM Peak			Daily
	Total	In	Out	Total	In	Out	
Condominiums/ Town homes (645 units)	284	45	239	336	226	110	3,780
Single-Family Residential (765 units)	573	145	528	773	490	283	7,321
Elementary School (736 Students)	309	169	140	206	96	110	949
<b>TOTAL</b>	<b>1,166</b>	<b>359</b>	<b>907</b>	<b>1,315</b>	<b>812</b>	<b>503</b>	<b>12,050</b>

Source: Traffic Impact Study Report Esperanza Specific Plan, Webb 2005, Table 4-2.

### *Modal Split*

The traffic reducing potential of public transit has not been considered for the purposes of this report. Essentially the traffic projections are conservative in that public transit might be able to reduce the traffic volumes.

### *Traffic Generation by Other Development*

Table III-11-G below depicts the traffic impacts expected by other pending development in the study area. There are a significant number of daily trips that will be generated by these developments. As seen below, an additional 107,523 daily trips will be generated by other development at the opening year.

**Table III-11-G Pending Future Development Within Study Area**

Project	Land Use	Quantity	Units <sup>1</sup>	Daily Trips
Countryside	Single-Family Residential	650	DU	6,220
West Haven Specific Plan	Single-Family Residential	1,037	DU	9,924
	Shopping Center	115	TSF	7,740
Sub-Area 7 Specific Plan	Single-Family Residential	184	DU	1,760
	Multi-Family Residential	400	DU	2,688
	Shopping Center	271.51	TSF	17,460
	Business Park	550	TSF	7,018
Subarea 29 Specific Plan	Single-Family Residential	2,220	DU	21,245
	Elementary School	900	Student	6,867
	Shopping Center	87	TSF	5,855
Parkside Specific Plan	Single-Family Residential	430	DU	4,116
	Shopping Center	115	TSF	7,740
	Low-Rise Condos/ Townhomes	1,517	DU	8,890
<b>Total</b>				<b>107,523</b>

<sup>1</sup>DU=Dwelling Units; TSF= Thousand Square Feet

*Project Impacts*

The proposed project is expected to generate 12,050 daily trip-ends, including 1,166 trip-ends during the AM Peak hour and 1,315 trip-ends during the PM Peak hour. Project buildout year is estimated to be 2015, and has been analyzed as such in the Traffic Study. The impacts of the project were analyzed by examining the conditions projected at the buildout year (2015) with the project (Table III-11-H) but without the implementation of improvements. These results were then compared with the existing traffic conditions (CIII-11-B) as well as with the buildout year without the construction of the project (Table III-11-D).

In 2015, there is an overall degradation of LOS at all area intersections from existing conditions. Both With and Without the Project, LOS degrades below the City of Ontario threshold in either the AM or PM peak hours or both at all study area intersections.

**Table III -11-H Levels of Service for 2015 WITH Project Plus Area Projects Without Improvements**

Intersection	Traffic Control Status	AM Peak Hour		PM Peak Hour	
		Delay (Sec)	LOS	Delay (Sec)	LOS
1. Milliken Avenue / SR-60 WB Ramps	Signal	29.4	C	168.0	F
2. Milliken Avenue / SR-60 EB Ramps	Signal	63.5	E	OFL	F
3. Milliken/Hamner Avenue / Riverside Avenue	Signal	OFL	F	OFL	F
4. Milliken/Hamner Avenue / Chino Avenue	Signal	30.5	C	OFL	F
5. Archibald Avenue / Schaefer Avenue	TWSC	OFL	F	OFL	F
6. Archibald Avenue / Edison Avenue	Signal	132.0	F	OFL	F
7. Schaefer Avenue / Edison Avenue	TWSC	24.3	C	OFL	F
8. Haven Avenue / Edison Avenue	TWSC	OFL	F	OFL	F
9. Archibald Avenue / Merrill Avenue	TWSC	OFL	F	OFL	F
10. Haven Avenue / Merrill Avenue	TWSC	OFL	F	OFL	F
11. Cleveland Avenue / Merrill Avenue	TWSC	OFL	F	OFL	F
12. Project Street (W) / Merrill Avenue	TWSC	OFL	F	OFL	F
13. Project Street (E) / Merrill Avenue	TWSC	OFL	F	OFL	F
14. Milliken/Hamner Avenue / Merrill Avenue	TWSC	OFL	F	OFL	F
15. Cleveland Avenue / Bellegrave Avenue	TWSC	OFL	F	OFL	F
16. Milliken/Hamner Avenue / Bellegrave Avenue	Signal	OFL	F	OFL	F
17. Hamner Avenue / Limonite Avenue	Signal	30.6	C	153.8	F
18. I-15 Southbound Ramps / Limonite Avenue	Signal	OFL	F	OFL	F
19. I-15 Northbound Ramps / Limonite Avenue	Signal	OFL	F	OFL	F

TWSC – Two Way Stop Controlled      AWSC – All Way Stop Controlled      OFL- Overflow conditions, Delay > 200 seconds

In 2015, With Project, the intersection delays are slightly higher than 2015 Without Project (see Table III-11-D). However, there is no change in LOS rating at any intersection. Since the City thresholds are exceeded in 2015, even without the construction of the proposed project, the effects of the project are cumulative when considered with the traffic that will be generated by other area development. Through the payment of fees (for a detailed breakdown of project-

caused percentages, see Table III-11-E) and with the implementation of the below-listed mitigation measures, the impacts related to intersection LOS will be reduced to levels below significance at all intersections except I-15 Northbound Ramps/Limonite Avenue and Hamner Avenue/Limonite Avenue (see Table III-11-I) which remain significant.

#### *Cumulative Impacts*

The GPA for the NMC Final EIR evaluated cumulative traffic impacts for the year 2015 with and without the development of the entire GPA for the NMC. That analysis is included in section 5.7.3 of the Final EIR for the GPA and is incorporated by reference. In summary, the study area was within a 5-mile radius of the NMC and included all the City of Ontario, portions of the cities of Upland, Rancho Cucamonga, Fontana, Montclair, Chino, Chino Hills and Norco, and portions of the counties of Riverside and San Bernardino. The vehicle to capacity ratio analysis concluded that significant impacts to roadways both within the NMC and in outside the NMC would occur as a result of the proposed project, but that with implementation of the GPA Circulation Element and mitigation measures, impacts would be less than significant. GPA for the NMC Final EIR mitigation measures T-1 through T-3 require the City of Ontario to make improvements such as additional lanes, restriping, and signal system coordination in other jurisdictions to restore impacted areas to LOS D or to the No Project conditions levels of service if worse than LOS D. At build-out in 2015, the GPA for the NMC Final EIR identified the I-15 /Limonite Avenue and Hamner Avenue/Limonite Avenue locations as operating at LOS F with or without the development of the NMC pursuant to the GPA. In the existing condition, as shown in Table III-11-C on page III-11-7, the intersection of Limonite Avenue and Hamner Avenue currently operates at LOS E. Since the LOS of these areas is worse than LOS D in the current situation and in the future with or without the project, the General Plan Mitigation measures do not apply. Because the project contributes traffic to Limonite/Hamner intersection and the I-15/Limonite ramps, cumulative impacts to traffic will be significant even with all required GPA for the NMC Circulation Element improvements built out.

In addition, at the time the project is operational, it is not known which of the off-site regional improvements will be constructed. Therefore, there is a possibility that project-generated traffic will result in temporary cumulatively significant impacts to traffic in the project vicinity.

*Threshold: The project will cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);*

As discussed above, the project will contribute to the overall violation of the City of Ontario LOS standards at all study area intersections. However, according to the traffic report, these threshold violations would occur in 2015 even without the construction of the project. Since the project will be required to pay fair share impact fees to fund improvements cumulatively necessitated by area development in addition to the below-listed mitigation measures, impacts related to the increase of volume/capacity ratio as a result of the project are considered less than significant.

*Threshold: The project will result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.*

This project site is located approximately 2.5 miles from the nearest airport, Chino Airport. The proposed project does not include any components that could alter air traffic patterns at Chino or any other airport. This issue is considered to be less than significant and no mitigation measures are required.

*Threshold: The project will substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).*

With the development of residential units, the means of automobile conveyance with relation to design features could be a potential problem. However with the implementation of the MM Trans 7 and 8, impacts related to design-feature hazards will be less than significant.

The Specific Plan will be built over time. The project area is an area in transition from agriculture/dairy uses to urban use. However, there are still existing dairy farms and cropland. Farm equipment will be used for dairy and field crop operations. Such agricultural equipment may use some local roadways as long as the dairies are operating in the area. However, the ubiquity of agricultural-related traffic is steadily declining as development continues to occur and this potential impact is considered less than significant.

*Threshold: The project will result in inadequate emergency access.*

Development of the proposed project site will improve emergency access by completing unimproved road segments in the project area. The project site will be developed per all City of Ontario standard conditions of approval and permits related to emergency access. This issue is considered to be less than significant and no mitigation measures are required. See also the Public Services section of this EIR for mitigation measures related to emergency services providers.

*Threshold: The project will result in inadequate parking capacity;*

The proposed specific plan requires parking spaces in accordance with the City of Ontario's Zoning Ordinance for all development proposed on-site. All tracts and site plans approved for the specific plan area will meet these standards as well. This issue is considered to be less than significant when codes are met and no mitigation measures are required.

*Threshold: The project will conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).*

The GPA for the NMC has policies addressing alternative transportation with which the proposed project will not conflict. Currently, Omnitrans Bus Service does not provide bus service in this portion of the City, and transit services come as close as the northern edges of the New Model Colony area. The northern boundary of the NMC, Riverside Drive, is served by two Omnitrans routes – Route 70, Ontario – Creekside, and Route 71 Ontario – Ontario Airport. No specific routes are planned to serve the project site.

According to the Specific Plan, the project is anticipated to generate demand for extended bus service. The City is currently working with Omnitrans to identify routes to best serve the NMC. Bus turnouts and shelters to serve Esperanza residents shall be provided as required by Omnitrans and as approved by the City, if bus routes are located within or adjacent to the Esperanza Specific Plan. Therefore, impacts to public transportation are considered less than significant.

The GPA for the NMC sets forth a plan for future bike paths within the project area. The Esperanza Specific Plan includes the Class III bikeway set forth in the GPA for the NMC. In addition, the design guidelines of the project include wide parkways with sidewalks/bikeways separated from the street, thus offering alternatives to automobile usage. Impacts related to adopted policies, plans, or programs supporting alternative forms of transportation are considered less than significant.

## **Proposed Mitigation Measures**

An Environmental Impact Report is required to describe feasible mitigation measures which could minimize significant adverse impacts (CEQA Guidelines, Section 15126.4). Mitigation measures were evaluated for their ability to eliminate the potential significant adverse impacts upon traffic or to reduce impacts to below the level of significance. Based on the above analysis and the traffic study for the project, the project along with area-wide growth can be accommodated with the existing circulation system and given the following mitigation measures are implemented.

### ***Year 2015 With Project (On-Site)***

*The following Mitigation Measures have been identified to reduce the direct project-specific traffic impacts to a less than significant level and are required to attain the required LOS of intersections in the project area. The applicant shall pay their proportionate share (prior to building permit issuance) or install (prior to occupancy of any structure) the following transportation improvements needed to serve the project. The determination of whether the payment of proportionate share or installation of the improvements is required shall be made by the City Engineer at the time of Tentative Tract Map approval. The method for determining proportionate share is identified in the Traffic Impact Analysis.*

**MM Trans 1:** Install traffic signal at the intersection of Mill Creek Avenue/Merrill Avenue with the following geometrics:

Northbound: One left-turn lane. One shared through and right-turn lane.

Southbound: One left-turn lane. One shared through and right-turn lane.

Eastbound: One left-turn lane. One shared through and right-turn lane. (These developments to be constructed by development located west of the Specific Plan.)

Westbound: One left-turn lane. One shared through and right-turn lane.

**MM Trans 2:** Install traffic signal at the intersection of Project Street (W)/Merrill Avenue with the following geometrics:

Northbound: One shared left, through and right-turn lane.

Southbound: One shared left, through and right-turn lane.

Eastbound: One left-turn lane. One shared through and right-turn lane.

Westbound: One left-turn lane. One shared through and right-turn lane.

**MM Trans 3:** Install traffic signal at the intersection of Project Street (E)/Merrill Avenue with the following geometrics:

Northbound: One shared left, through and right-turn lane.

Southbound: One shared left, through and right-turn lane.

Eastbound: One left-turn lane. One through lane. One shared through and right-turn lane.

Westbound: One left-turn lane. One through lane. One shared through and right-turn lane.

**MM Trans 4:** Install traffic signal at the intersection of Milliken/Hamner Avenue/Merrill Avenue with the following geometrics:

Northbound: One left-turn lane. Two through lanes. One shared through and right-turn lane.

Southbound: One left-turn lane. Three through lanes. One right-turn lane.

Eastbound: Two left-turn lanes. One shared through and right-turn lane.

Westbound: (This leg of the intersection to be constructed by development in Riverside County.) One left-turn lane. One shared through and right-turn lane.

**MM Trans 5:** Install traffic signal at the intersection of Mill Creek Avenue/Bellegrave Avenue with the following geometrics (Note: Riverside County encroachment permits required for some improvements.):

Northbound: One shared left, through and right-turn lane.

Southbound: One shared left, through and right-turn lane.

Eastbound: One left-turn lane. One shared through and right-turn lane.

Westbound: Two left-turn lanes. One shared through and right-turn lane.

**MM Trans 6:** Modify the intersection of Milliken/Hamner Avenue/Bellegrave Avenue to include the following geometrics (Note: Riverside County encroachment permits required for some improvements.):

Northbound: One left-turn lane. Two through lanes. One shared through and right-turn lane.

Southbound: Two left-turn lanes. Two through lanes. One shared through and right-turn lane.

Eastbound: One left-turn lane. Two through lanes. One right-turn lane.

Westbound: Two left-turn lanes. Two through lanes. One right-turn lane.

**MM Trans 7:** Sight distance at the project entrance roadways should be reviewed with respect to the City of Ontario Standard Drawing for Sight Distance in effect at the time of preparation of final grading, landscape and street improvement plans.

**MM Trans 8:** Signing/stripping should be implemented in conjunction with detailed construction plans for the project site.

**MM Trans 9:** Intersection, median opening and traffic signal spacing shall be in accordance with the City of Ontario New Model Colony Access Guidelines.

**MM Trans 10:** Construction of full width of internal roadways and part width of the following roadways shall comply with City of Ontario Standards:

- Construct partial width improvements on the easterly side of Mill Creek Avenue at its ultimate cross-section as a collector street (88' right-of-way) adjacent to project boundary line.
- Construct partial width improvements on the westerly of Milliken/Hamner Avenue at its ultimate cross-section as a divided arterial parkway 1 (140' or more right-of-way) adjacent to project boundary line.
- Construct partial width improvements on the northerly side of Bellegrave Avenue at its ultimate cross-section as a standard arterial (100' right-of-way) adjacent to project boundary line.

**MM Trans 11:** In order to provide alternative modes of transportation and reduce vehicle trips, the City shall work with Omnitrans to develop additional routes and service to the project area.

**MM Trans 12:** In order to ease traffic flow, reduce trips, and implement GPA for the NMC Final EIR mitigation measures, the City shall establish a Transportation System Management (TSM) Program with the goal of reducing vehicle trips to and from land uses within the City, and particularly focusing on the reduction of drive-alone vehicle use in work commuting.

**MM Trans 13:** The project will participate in the cost of off-site improvements through fair-share payment of the Development Impact fee as established by the City of Ontario. These fees should be collected and utilized by the City to construct the improvements necessary to maintain the required level of service.

***Year 2015 With Project (Off-Site)***

*The following Mitigation Measures have been identified to reduce the cumulative traffic impacts to a less than significant level and are required to attain the required LOS of intersections in the project area. The project will either install these improvements or pay their fair share mitigation fee, as determined by the City Engineer.*

**MM Trans 14:** Reconfigure Milliken Avenue/SR 60 WB Ramps to include the following geometrics:

Northbound: Two left turn lanes and two through lanes.

Southbound: Two through lanes and one right-turn lane.

Eastbound: NA

Westbound: One left-turn lane. One shared left and through lane. One right-turn lane.

**MM Trans 15:** Reconfigure Milliken Avenue/SR 60 EB Ramps to include the following geometrics:

Northbound: Three through lanes. One right-turn lane.

Southbound: One left turn lane. Three through lanes.

Eastbound: One shared left and through lane. One through lane. Two right-turn lanes.

Westbound: NA

**MM Trans 16:** Reconfigure Milliken/Hamner Avenue/Riverside Avenue intersection to include the following geometrics:

Northbound: One left-turn lane. Three through lanes. One shared right-turn and through lane.

Southbound: Two left-turn lanes. Four through lanes. One right-turn lane.

Eastbound: Two left-turn lanes. Two through lanes. One shared through and right-turn lane.

Westbound: One left-turn lane. Two through lanes. One right-turn lane.

**MM Trans 17:** Reconfigure Milliken/Hamner Avenue/Chino Avenue intersection to include the following geometrics:

Northbound: Two left-turn lanes. Two through lanes. One shared right-turn and through lane.

Southbound: One left-turn lane. Two through lanes. One shared through and right-turn lane.

Eastbound: One left-turn lane. One through lane. One shared through and right-turn lane.

Westbound: One left-turn lane. One through lane. One shared through and right-turn lane.

**MM Trans 18:** Install traffic signal at the intersection of Archibald Avenue/Schaefer Avenue and configure with the following geometrics:

Northbound: One left-turn lane. Two through lanes. One shared through and right-turn lane.

Southbound: One left-turn lane. Two through lanes. One shared through and right-turn lane.

Eastbound: One shared through and left-turn lane. One through lane. One shared through and right-turn lane.

Westbound: One shared through and left-turn lane. One through lane. One shared through and right-turn lane.

**MM Trans 19:** Reconfigure Archibald Avenue/Edison Avenue intersection to include the following geometrics:

Northbound: Two left-turn lanes. Four through lanes. One right-turn lane.

Southbound: Two left-turn lanes. Four through lanes. One right-turn lane.

Eastbound: Two left-turn lanes. Three through lanes. Two shared right-turn/shared lanes.

Westbound: Two left-turn lanes. Three through lanes. One right-turn lane.

**MM Trans 20:** Install traffic signal at the intersection of Schaefer Avenue/Edison Avenue and reconfigure with the following geometrics:

Northbound: NA

Southbound: One shared left and right-turn lane.

Eastbound: One left-turn lane. One through lane.

Westbound: One through lane. One shared through and right-turn lane.

**MM Trans 21:** Install traffic signal at the intersection of Haven Avenue/Edison Avenue and reconfigure with the following geometrics:

Northbound: One left-turn lane. One through lane. One shared through and right-turn lane.

Southbound: One left-turn lane. One through lane. One right-turn lane.

Eastbound: Two left-turn lanes. One through lane. One shared through and right-turn lane.

Westbound: One left-turn lane. One through lane. One shared through and right-turn lane.

**MM Trans 22:** Install traffic signal at the intersection of Archibald Avenue/Merrill Avenue and reconfigure with the following geometrics:

Northbound: One left-turn lane. Three through lanes. One shared through and right-turn lane.

Southbound: Two left-turn lanes. Three through lanes. One shared through and right-turn lane.

Eastbound: One left-turn lane. One through lane. One shared through and right-turn lane.

Westbound: Two left-turn lanes. One through lane. One shared through and right-turn lane.

**MM Trans 23:** Install traffic signal at the intersection of Haven Avenue/Merrill Avenue and reconfigure with the following geometrics:

Northbound: One left-turn lane. One through lane. One shared through and right-turn lane.

Southbound: One left-turn lane. One through lane. One shared through and right-turn lane.

Eastbound: One left-turn lane. Two through lanes. One shared through and right-turn lane.

Westbound: One left-turn lane. Two through lanes. One shared through and right-turn lane.

**MM Trans 24:** Install traffic signal at the intersection of Mill Creek (Cleveland) Avenue/Merrill Avenue and reconfigure with the following geometrics:

Northbound: One left-turn lane. One through lane. One shared through and right-turn lane.

Southbound: One left-turn lane. One through lane. One shared through and right-turn lane.

Eastbound: One left-turn lane. One through lane. One shared through and right-turn lane.

Westbound: One left-turn lane. One through lane. One shared through and right-turn lane.

**MM Trans 25:** Install traffic signal at the intersection of Project Street West/Merrill Avenue and reconfigure with the following geometrics:

Northbound: One shared through and left-turn lane. One through lane. One shared through and right-turn lane.

Southbound: One shared through and left-turn lane. One through lane. One shared through and right-turn lane.

Eastbound: One left-turn lane. One through lane. One shared through and right-turn lane.

Westbound: One left-turn lane. One through lane. One shared through and right-turn lane.

**MM Trans 26:** Install traffic signal at the intersection of Project Street East/Merrill Avenue and reconfigure with the following geometrics:

Northbound: One shared through and left-turn lane. One through lane. One shared through and right-turn lane.

Southbound: One left-turn lane. One through lane. One shared through and right-turn lane.

Eastbound: One left-turn lane. One through lane. One shared through and right-turn lane.

Westbound: One left-turn lane. One through lane. One shared through and right-turn lane.

**MM Trans 27:** Install traffic signal at the intersection of Milliken/Hamner Avenue/Merrill Avenue and reconfigure with the following geometrics:

Northbound: One left-turn lane. Three through lanes. One shared through and right-turn lane.

Southbound: One left-turn lane. Three through lanes. One right-turn lane.

Eastbound: Two left-turn lanes. One through lane. One shared through and right-turn lane.

Westbound: One left-turn lane. One through lane. One shared through and right-turn lane.

**MM Trans 28:** Install traffic signal at the intersection of Mill Creek (Cleveland) Avenue/Bellegrave Avenue and reconfigure with the following geometrics:

Northbound: One shared left-turn lane. One through lane. One shared through and right-turn lane.

Southbound: One shared through and left-turn lane. One through lane. One shared through and right-turn lane.

Eastbound: One left-turn lane. One through lane. One shared through and right-turn lane.

Westbound: Two left-turn lanes. One through lane. One shared through and right-turn lane.

**MM Trans 29:** Reconfigure Milliken/Hamner Avenue/Bellegrave Avenue intersection to include the following geometrics:

Northbound: One left-turn lane. Three through lanes. One shared through and right-turn lane.

Southbound: Two left-turn lanes. Three through lanes. One shared through and right-turn lane.

Eastbound: One left-turn lane. Two through lanes. One right-turn lane.

Westbound: Two left-turn lanes. Two through lanes. One right-turn lane.

**MM Trans 30:** Reconfigure Hamner Avenue/Limonite Avenue intersection to include the following geometrics:

Northbound: Two left-turn lanes. Three through lanes. One right-turn lane.

Southbound: Two left-turn lanes. Three through lanes. One right-turn lane.

Eastbound: Two left-turn lanes. Three through lanes. One right-turn lane.

Westbound: Two left-turn lanes. Three through lanes. One right-turn lane.

**MM Trans 31:** Reconfigure I-15/Limonite SB Ramps to include the following geometrics:

Northbound: NA

Southbound: One left-turn lane. One shared left, through, and right-turn lane. One right-turn lane.

Eastbound: Three through lanes. One right-turn lane.

Westbound: Three through lanes. One free-right-turn lane.

**MM Trans 32:** Reconfigure I-15/Limonite NB Ramps to include the following geometrics:

Northbound: One left-turn lane. One shared left, through, and right-turn lane. One right-turn lane.

Southbound: NA.

Eastbound: Three through lanes. One free right-turn lane.

Westbound: Three through lanes. One right-turn lane.

The applicant shall pay their proportionate share (prior to building permit issuance) for or install (prior to occupancy of any structure) the above transportation improvements needed to serve the project. The determination of whether the payment of proportionate share or installation of the improvements is required shall be made by the City Engineer at the time of Tentative Tract Map approval. The method for determining proportionate share is identified in the Traffic Impact Analysis.

### **Summary of Project-Specific Environmental Effects After Mitigation Measures are Implemented**

Table III-11-I shows the LOS for project area intersection after the implementation of the recommended intersection improvements listed above as mitigation measures. After the implementation thereof, all of the project area intersections will operate at LOS D or better except Limonite/I-15 Northbound Ramps and Hamner Avenue/Limonite Avenue which will operate at LOS E during the PM peak hour (indicated by shading). These intersections are not located in the City of Ontario. However, at build-out in 2015, the GPA for the NMC Final EIR identified these same locations as operating at LOS F with or without the development of the NMC pursuant to the GPA. In the existing condition, as shown in Table III-11-C on page III-11-7, the intersection of Limonite Avenue and Hamner Avenue operates at LOS E. Therefore, impacts to these intersections are not a result of this project alone. Since traffic is created from many sources in the area (County of Riverside, City of Chino, City of Norco, City of Ontario, and beyond) it is very difficult to assign relative responsibility for cumulative traffic increases. Legally, the City of Ontario has no ability to require the County of Riverside or City of Chino to

mitigate traffic impacts resulting from traffic that originates in one of those jurisdictions when such impacts affect roadways in the NMC. The reverse is also true in that Ontario cannot mandate developers to mitigate outside the City's jurisdiction. Improvements to the Limonite/I-15 interchange or the addition of other interchanges in the future may reduce traffic in this location. Therefore, it is speculative at best to determine relative responsibility and is legally infeasible to mitigate in jurisdictions outside the City of Ontario. However, since the LOS exceeds the thresholds and the project contributes to traffic at these intersections, impacts remain significant.

All impacts related to design safety will be reduced to the less than significant level with the incorporation of MM Trans 7, 8 and 9. All other impacts related to transportation as a result of this project are considered less than significant with the incorporation of the above-listed mitigation measures.

**Table III -11-I Levels of Service for Opening Year (2015)  
WITH Project Plus Area Projects WITH Improvements**

Intersection	Traffic Control Status	AM Peak Hour		PM Peak Hour	
		Delay (Sec)	LOS	Delay (Sec)	LOS
1. Milliken Avenue / SR-60 WB Ramps	Signal	28.7	C	49.9	D
2. Milliken Avenue / SR-60 EB Ramps	Signal	17.8	B	49.5	D
3. Milliken/Hamner Avenue / Riverside Avenue	Signal	36.4	D	50.9	D
4. Milliken/Hamner Avenue / Chino Avenue	Signal	16.3	B	32.4	C
5. Archibald Avenue / Schaefer Avenue	Signal	25.0	C	28.1	C
6. Archibald Avenue / Edison Avenue	Signal	33.5	C	40.8	D
7. Schaefer Avenue / Edison Avenue	Signal	13.4	B	20.5	C
8. Haven Avenue / Edison Avenue	Signal	34.4	C	43.2	D
9. Archibald Avenue / Merrill Avenue	Signal	37.2	D	39.2	D
10. Haven Avenue / Merrill Avenue	Signal	34.5	C	54.1	D
11. Cleveland Avenue / Merrill Avenue	Signal	19.6	B	48.8	D
12. Project Street (W) / Merrill Avenue	Signal	11.3	B	23.2	C
13. Project Street (E) / Merrill Avenue	Signal	13.6	B	30.9	C
14. Milliken/Hamner Avenue / Merrill Avenue	Signal	24.4	C	35.6	D
15. Cleveland Avenue / Bellegrave Avenue	Signal	27.3	C	27.7	C
16. Milliken/Hamner Avenue / Bellegrave Avenue	Signal	32.4	C	40.5	D
17. Hamner Avenue / Limonite Avenue	Signal	28.9	C	59.4	E
18. I-15 Southbound Ramps / Limonite Avenue	Signal	18.7	B	24.2	C
19. I-15 Northbound Ramps / Limonite Avenue	Signal	28.8	C	69.4	E

TWSC – Two Way Stop Controlled

AWSC – All Way Stop Controlled

OFL- Overflow conditions, Delay > 200 seconds

**Summary of Cumulative Environmental Effects After Mitigation Measures are Implemented**

Traffic analysis is by nature cumulative. Table III-11-I, above, includes all background and reasonably foreseeable projects in both San Bernardino and Riverside Counties within its modeling based on General Plan land uses. The cumulative impacts analysis uses year 2015 because it was the year used in the GPA for the NMC EIR. Additionally, the GPA for the NMC EIR used 2015 because that is the build-out year for the City's Land Use Element and San Bernardino County's Comprehensive Transportation Plan. The GPA for the NMC Final EIR included a much larger study area and build out of the entire NMC .Because the project contributes traffic to Limonite/Hammer intersection and the I-15/Limonite ramps, cumulative impacts to traffic will be significant even with all required GPA for the NMC Circulation Element improvements built out. However, at the time the project is operational, it is not known which of the off-site regional improvements will be constructed. Therefore, there is a possibility that project-generated traffic will result in temporary cumulatively significant impacts to traffic in the project vicinity. A Statement of Overriding Consideration would be required for temporary traffic impacts if the project is approved.

## 12. UTILITIES/SERVICE SYSTEMS

Potential impacts from, (1) exceeding the wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board, and (2) resulting in the construction of new storm water drainage facilities are covered in other sections of this DEIR or considered less than significant and are therefore, discussed in Section II – Effects Not Found Significant of this document.

The focus of the following discussion is related to the potential impacts from the proposed project on utilities including water, sewer, solid waste, electricity, natural gas, communications systems, and energy conservation plans including the mitigation measures that will be incorporated to reduce impacts. If the additional 46 single-family residences are constructed in lieu of the elementary school, the need for the types of utilities and service systems discussed below will change. Therefore, for the purposes of the following analysis, the potential impacts of the project are identified for both the 1,410 dwellings and the possible 1,456 dwelling units.

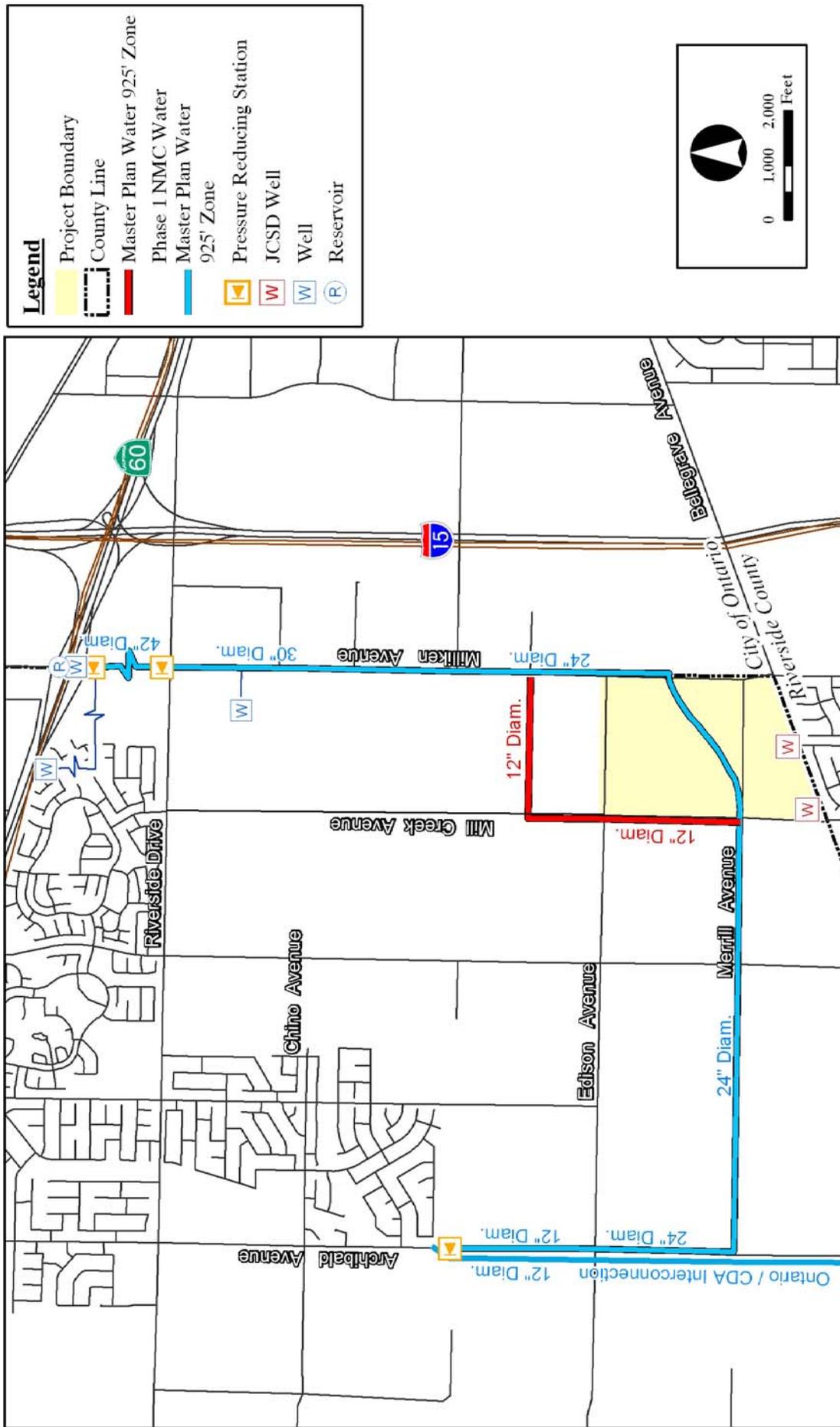
### Setting

The project site is located within the City of Ontario New Model Colony (NMC). This area was historically used for agricultural and rural residential purposes which were served by wells and septic systems. The NMC General Plan Amendment identified the need for urban-level infrastructure facilities and established goals and objectives for master plans of water and sewer. The master plans that were envisioned by the General Plan have been completed and provide the framework to meet infrastructure needs of the Subarea 25 (Esperanza) Specific Plan (the Specific Plan) area.

#### *Water and Recycled Water Supply System*

The City of Ontario Water Master Plan describes the NMC area as being located within the 925 Pressure Zone (PZ). This 6,925 acre pressure zone is not currently served by the City. Present water service is provided to the area by wells. The 925 PZ is bounded by Euclid Avenue to the west, Milliken Avenue to the east, Chino Avenue to the north and Merrill and Bellegrave Avenues to the south. The natural topography within the 925 Pressure Zone ranges from approximately 800 feet above mean sea level in the northeastern-most corner of the NMC to approximately 635 feet in its southernmost areas. The high water line for this zone is 925 feet. The Specific Plan is located between 690 and 720 feet above mean sea level.

The City of Ontario Water Master Plan describes the location and diameters of the major “backbone” water pipelines to be located within the NMC area that will serve the project site. In the project vicinity, the backbone system includes a 24” Master Plan water main in Milliken Avenue north of Merrill Avenue, a 24” main in Merrill Avenue, and a 12” line in Mill Creek Avenue (Figure III-12-1). Key components of the backbone system include a 6.0-million-gallon (MG) tank to be located near the Milliken Avenue and Jurupa Avenue intersection and major feeder lines (42- and 30-inch) in Milliken Avenue will serve the NMC. Contracts have been awarded for the design of the 42” Milliken line. Construction of the onsite and offsite Master Plan water service facilities shall be the responsibility of the developer(s) and is required prior to issuance of building permits.



Source: LD King, 2005



Esperanza Specific Plan Draft EIR  
Water System Map

Figure III-12-1

New recycled water lines in conformance with the City's Recycled Water Master Plan will be constructed as part of the development of Esperanza. The source of recycled water is the RP-1 outfall located parallel to, and east of, the Cucamonga Creek Channel. The 12" and 16" recycled water lines proposed to be located in Merrill Avenue will connect RP-1 to Esperanza recycled waterlines. The offsite improvements adjacent to the site, will include a 12"-recycled water line in Mill Creek Avenue from northerly boundary of the Project Site to Merrill Avenue; an 8" recycled waterline in Merrill Avenue from Mill Creek Avenue to Milliken Avenue; and an 8"-recycled water line in Milliken Avenue from the northerly boundary of the Project Site to Merrill Avenue (Figure III-12-2). On-site recycled water lines will be installed as required by the City Engineer. It is the City of Ontario's goal to maximize the use of recycled water including but not limited to irrigation for public landscape areas, such as parkways, buffer areas, schools, homeowner association common areas, recreational trails, commercial/industrial areas, and parks.

According to the Water Supply Assessment and Written Verification of Sufficient Water Supply for the New Model Colony, October 27, 2004 (available at the City of Ontario), the City of Ontario has three sources of water supply (groundwater, desalter water from the Chino Desalter Authority, and recycled water) which will have to be expanded in order to meet the projected water demand for the entire NMC. The City of Ontario also has a fourth source of supply which is not anticipated to be expanded in the future to serve the NMC.

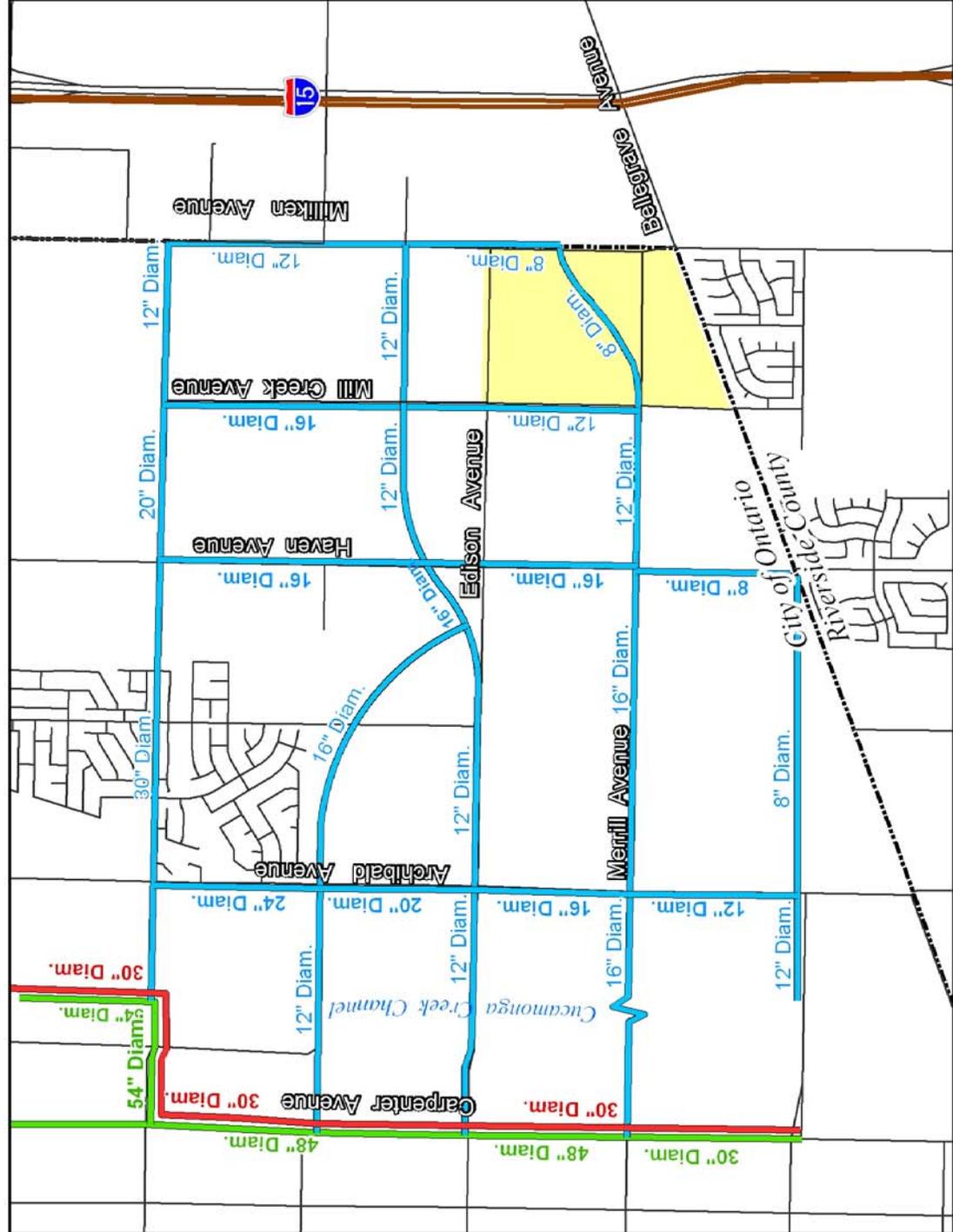
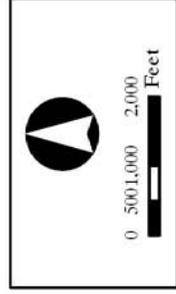
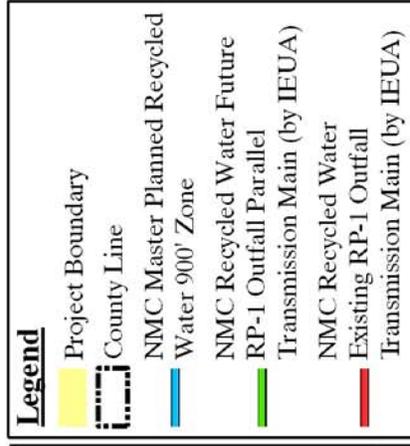
In 2002, total water production for the City was 44,751 acre-feet; local groundwater comprised approximately 79 percent of the potable water supply and imported surface water constituted the remaining 21 percent. At build out of the NMC, municipal water supply sources will consist predominantly of groundwater wells through direct use or treatment and use, and imported surface water from The Metropolitan Water District of Southern California (MWD) supplies. By 2030, total forecasted maximum day water demand for the NMC will total 33.6 million gallons per day (MGD) with 75 percent of the water supplied from groundwater, 13 percent supplied from desalter water and 12 percent supplied from recycled water.

The City of Ontario is a member of the Chino Basin Desalting Authority (CDA), which issued revenue bonds in 2002 for expanding the Chino 1 and Chino 2 desalter units to a combined maximum production capacity of 24,600 acre-feet per year. The City has agreed to purchase 5,000 acre-feet per year of this maximum production to supply its future customers. Two groundwater wells will be located on site. These wells, as well as proposed water transmission lines in Bellegrave Avenue, will be owned and operated by CDA to serve Jurupa Community Facilities District.

The City of Ontario currently has 26 production wells in the Chino Basin with a combined capacity of approximately 43,071 gallons per minute (gpm), or 62 mgd at 100% utilization. In addition to the nine (9) new wells proposed in the City's Master Water Plan, the City has also prepared a long-range replacement plan for older wells that lose production and/or produce poor quality of water. The capacity and status of use of the existing agricultural wells on site is not known, as this is proprietary information. The exact number and location of existing wells is approximate on Figure III-12-3. It is not the intent of the Specific Plan applicant or subsequent developers to remove all wells at one time. Should some wells need to remain in service

temporarily as the Specific Plan transitions from agricultural to urban uses, this will be accommodated or existing domestic users could be transitioned to the new water system for the area. All existing agricultural wells on the project site will be destroyed/abandoned pursuant to the California Department of Water Resources Standards (Bulletin 74-90) prior to issuance of certificates of occupancy. Water from the agricultural wells may be used for dust control purposes during construction if recycled water is not available.

The January 27, 1978 adjudication (“the Judgment”) by the Superior Court of the State of California for the County of San Bernardino established all water rights in the Chino Ground Water Basin in order to control and regulate water pumped from the Basin in order to ensure that the source is utilized in an optimum manner. Each water producer, including the City of Ontario, is allowed a “base water right,” which is simply a percentage of what can be safely pumped from the Chino Basin. Water producers can pump in excess of their base water right and either replenish the water or purchase water rights from other users. During the fiscal year 2001-2002, the City pumped a total of 32,601 acre-feet from the Chino Basin. Of that, the amount of water that the City could pump without being subject to a replenishment assessment was 19,281 acre-feet. Therefore, the City was subject to replenishment costs for 13,320 acre-feet, representing 41% of the total produced. (1 acre-foot = 325,851 gallons. An acre-foot covers one acre of land, one-foot deep, and supplies two average southern California families for one year.) According to the Water Supply Assessment the City plans to have ultimate well production at 90,217 gpm, which will include all well replacements and installations.

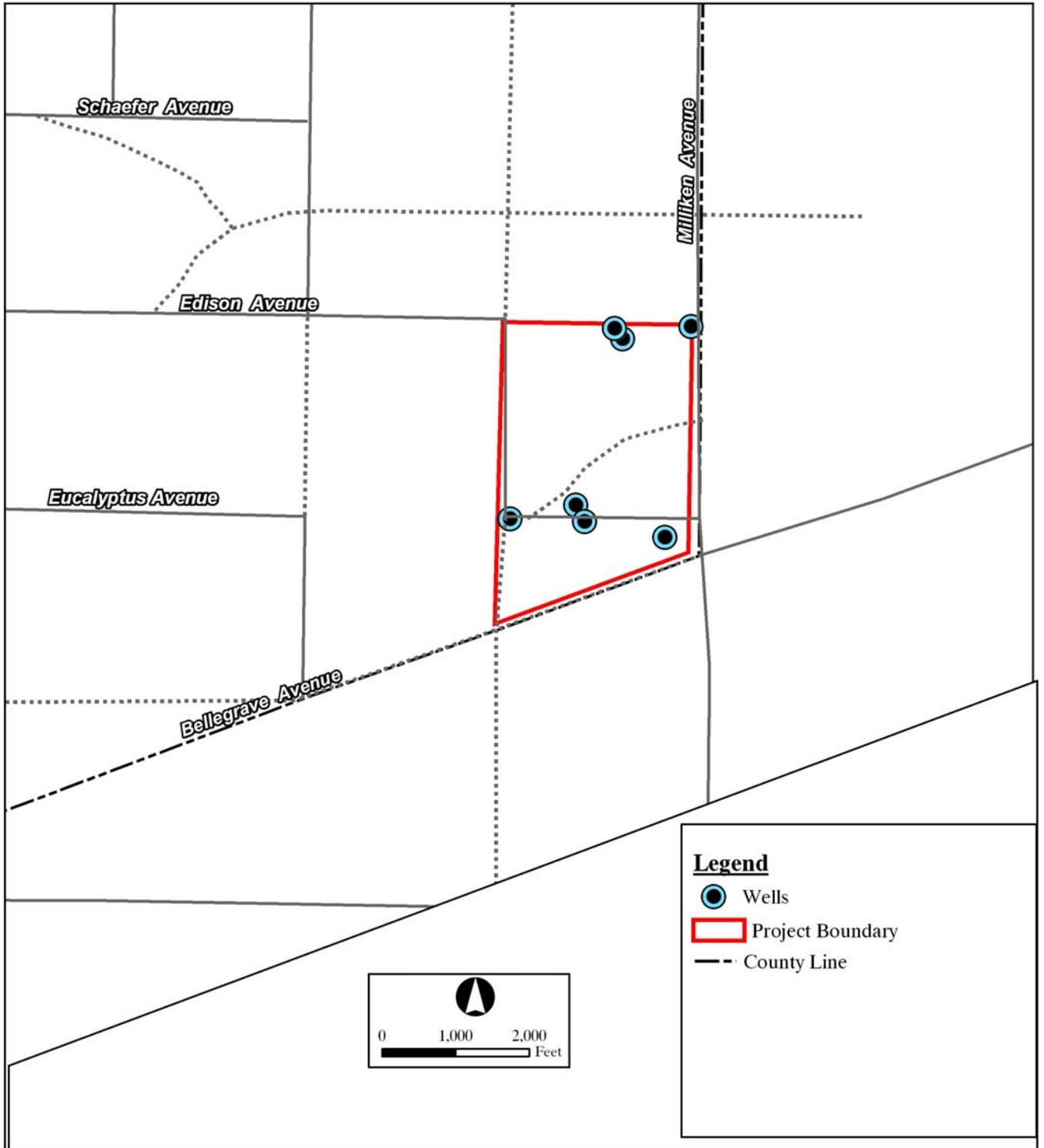


Source: City of Ontario Recycled Water Master Plan



Esperanza Specific Plan Draft EIR  
 Recycled Water Systems Map

Figure III-12-2



Source: City of Ontario City-Wide Evaluation of Groundwater Production Potential, Plate 2, 11/22/02



Esperanza Specific Plan Draft EIR  
 Generalized Well Locations

Figure III-12-3  
 III-12-6

*Sewer Treatment and Conveyance System*

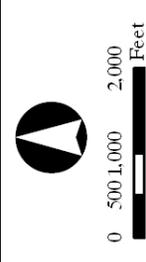
The City of Ontario is a member agency with Inland Empire Utilities Agency (IEUA) which accepts and treats all wastewater (sewerage) produced within the City. IEUA is a wholesale distributor of water and recycled water as well as a wastewater services provider. Wastewater services provided by IEUA include collection through regional wastewater interceptors, two non-reclaimable waste pipeline systems, treatment at four regional treatment plants, biosolids management and other related utility services. The Specific Plan is located within the IEUA New Model Colony Tributary Area (Area 13) within the Southern Service Area (SSA). Area 13 will be served by Regional Wastewater Treatment Plant No. 5 (RP-5).

The City of Ontario and IEUA have planned the construction of a network of pipelines to collect and convey sewage from all regions of the NMC to RP-5 which is located on Kimball Avenue near El Prado Road. The Specific Plan is located east of the Cucamonga Creek Channel and is planned to be served by the Eastern Trunk Sewer (ETS) facilities as outlined in the City's Sewer Master Plan (Figure III-12-4). Construction of the ETS, also known as the Archibald relief line, began June 20, 2005. It will be constructed in three stages with completion anticipated in June 2006. At the point of connection, the ETS size is 36-inches. The Esperanza Specific Plan will connect to the ETS via a 15-inch and 21-inch main in Cleveland Avenue (Mill Creek) and a 24-inch line in Bellegrave Avenue.

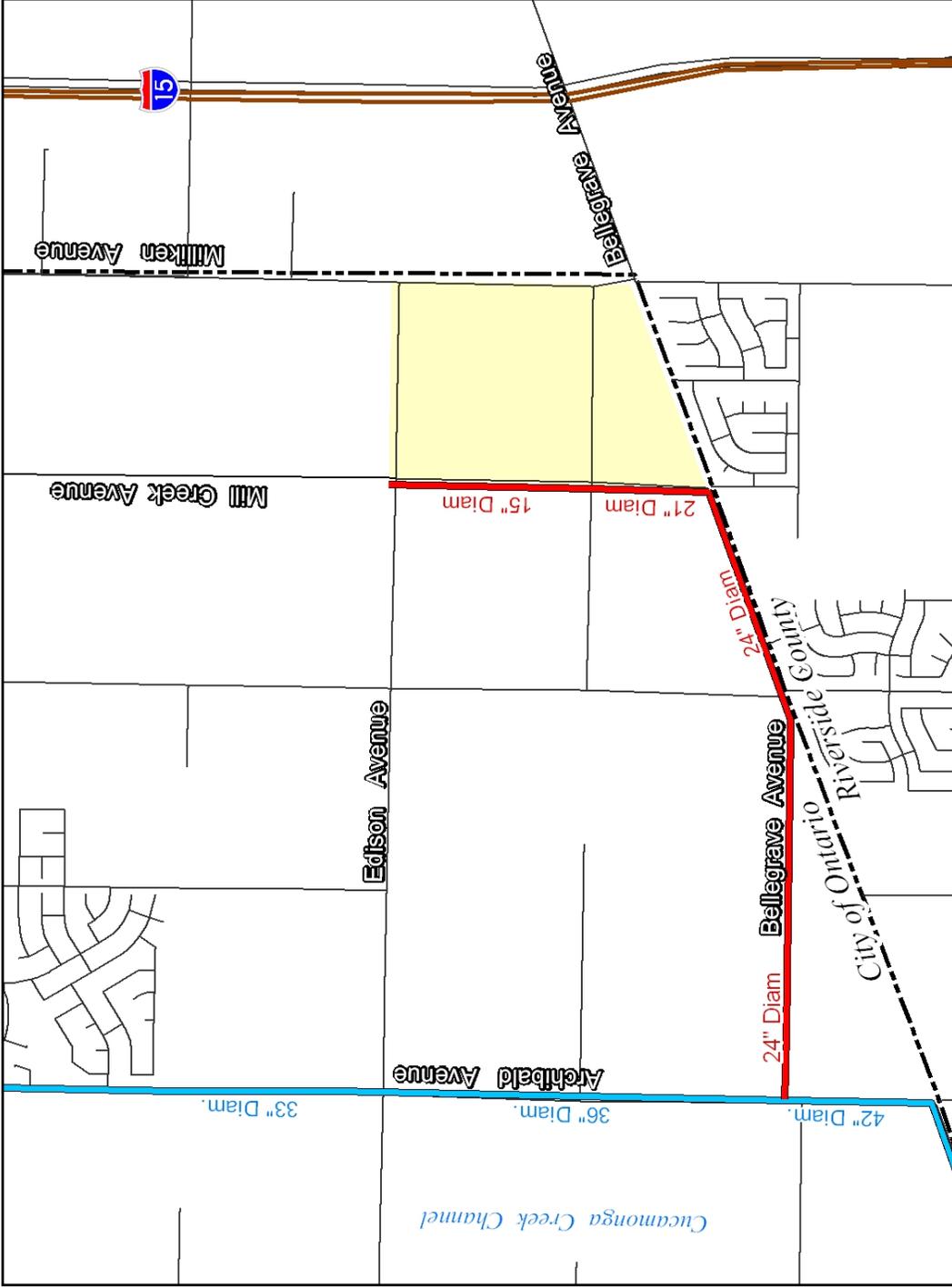
Regional Plant 5 was opened in March of 2004 to provide tertiary wastewater treatment for the SSA. According to IEUA, the current influent (incoming) rate is about 6.5 million gallons per day (mgd), yet the plant has current capacity of 15 mgd (personal communication, IEUA Manager of Planning, Gary Hackney, 1/17/05). Pursuant to the IEUA Wastewater Facilities Master Plan, April 2002, the plan capacity should be increased to 30 mgd by 2010 with RP-5's ultimate, master plan-designed capacity at 48 mgd by 2050. Effluent (discharge) from RP 5 is currently discharged into Chino Creek which ultimately discharges into the Santa Ana River. RP-5 discharge will be looped into the recycled water system currently associated with RP-1 and Carbon Canyon Wastewater Regional Plant (CCWRP) which is used for irrigation of the Whispering Lakes Golf Course, El Prado Golf Course, Westwind Park, and water to the Prado Regional Park Lake. As described in Section III-6, *Hydrology and Water Quality*, storm water runoff from the project area also discharges into Cucamonga Creek Flood Control Channel.

**Legend**

-  Project Boundary
-  County Line
-  NMC Master Planned Sewer Main
-  Eastern Trunk Sewer (by others); Proposed Completion Date: May 2006



0 500 1,000 2,000 Feet



Source: LD King, 2005



Esperanza Specific Plan Draft EIR  
Sewer System Map

Figure III-12-4

*Solid Waste*

Solid waste generated within the NMC will be collected by the City's Public Works Agency using City crews and equipment. Since the Milliken landfill is inactive and is in the process of closing, the City has entered into an agreement with a private solid waste disposal company, which allows the solid waste collected by the City to be taken to a privately operated transfer station. The private company then hauls the solid waste to final disposal locations, as appropriate. Currently, the solid waste generated in Ontario is hauled away to the El Sobrante Landfill, a Riverside County regional municipal solid waste landfill, located to the southeast of the City of Corona, east of Interstate 15 and Temescal Canyon Road at 10910 Dawson Canyon Road. The landfill is owned and operated by USA Waste of California, a subsidiary of Waste Management, Inc. The County of Riverside Waste Management Department operates the facility gate. The landfill has been in operation since 1986, and is undergoing an expansion, increasing its overall capacity from approximately 9 million tons to approximately 109 million tons. The 100 million ton expansion project, of which 40 million tons of disposal capacity is reserved for Riverside County waste with 60 million tons available for non-County waste, was first approved by the Riverside County Board of Supervisors on September 1, 1998. After receiving concurrence by the California Integrated Waste on July 26, 2001, the Local Solid Waste Enforcement Agency of Riverside County issued a Solid Waste Facility Permit on August 6, 2001.

The El Sobrante landfill encompasses approximately 1,322 acres, of which 645 acres will be disturbed by landfill activities. The landfill is permitted to receive up to 10,000 tons of municipal solid waste for disposal on a daily basis, of which 6,000 tons per day are dedicated to refuse generated from jurisdictions outside of Riverside County. During 2003, the landfill accepted about 2.2 million tons of waste, and about 39 percent of this amount was from within Riverside County. Depending on waste flow to the landfill, both from in- and out-of-County, the landfill will remain open to waste disposal until approximately 2030.

*Other Utilities*

Other utilities including telephone, natural gas, electricity and cable services will need to be extended into the area to serve the project site. The following utility providers will provide services to the project area:

Telephone	Verizon provides telephone services via underground facilities located adjacent to the project.
Natural Gas	The Gas Company provides natural gas. A 2"-main is located in Eucalyptus Avenue and a 16"-inch main is located in Milliken Avenue.
Electricity	Southern California Edison provides electricity to the project site from existing facilities within the vicinity. On-site electrical facilities will be underground.

The City will provide a fiber network that will accommodate phone, cable, and internet.

### **Thresholds for Determining Significance**

Impacts on utilities systems/services would be considered potentially significant if the proposed project would:

- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effect;
- Have insufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements. In making this determination, the City shall consider whether the project is subject to the water supply assessment requirements of Water Code Section 10910, *et seq.* (SB610), and the requirements of Government code Section 664737 (SB 221);
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs;
- Not comply with federal, state, and local statutes and regulations related to solid waste; and
- Result in adverse impacts to natural gas or other dry utility systems.

### **Project Compliance with Existing Regulations**

The California Integrated Waste Management Act of 1989 (AB 939) redefined solid waste management in terms of both objectives and planning responsibilities for local jurisdictions and the state. The act was adopted in an effort to reduce the volume and toxicity of solid waste that is landfilled and incinerated by requiring local governments to prepare and implement plans to improve the management of waste resources. AB 939 requires each of the cities and unincorporated portions of the counties to divert a minimum of 25% of the solid waste landfilled by 1995 and 50% by the year 2000. To attain goals for reductions in disposal, AB 939 established a planning hierarchy utilizing new integrated solid waste management practices. These practices include source reduction, recycling and composting, and environmentally safe landfill disposal and transformation.

Other state statutes pertaining to solid waste include compliance with the California Solid Waste Reuse and Recycling Act of 1991 (AB 1327), which requires adequate areas for collecting and loading recyclable materials within the project site. The project proponent shall provide adequate areas for the collection and loading of recyclable materials for each single family residence.

A Water Supply Assessment (WSA) has been prepared for the entire NMC in accordance with California Senate Bill No. 610. The WSA confirms whether that supply is available to the project from the City's existing and future entitlements.

The proposed project is required to comply with Senate Bills 221 and 610. Senate Bills (SB) 221 and 610 were signed into California state law with an effective date of January 1, 2002. SB 221 prohibits cities or counties from approving a tentative tract map, parcel map, or development agreement for a residential development project of greater than 500 dwelling units without a written verification of sufficient water supply. SB 610 amended existing legal requirements for confirmation of water supply sufficiency as a condition of approval for development projects as part of the environmental review process. The confirmation of water supply sufficiency is achieved through an analysis of the water purveyor's existing and future water sources and existing and projected water demand in relation to a "project" as defined by SB 610, resulting in the production of a project-specific Water Supply Assessment (WSA). The WSA also requires additional analysis if any portion of the water purveyor's water supplies includes groundwater.

The requirements of SB 610 are triggered for projects going through the California Environmental Quality Act (CEQA) process. During the CEQA process, the city or county processing the project is required to request a Water Supply Assessment from the identified water purveyor for any "project," as defined by SB 610. SB 610 allows the water purveyor 90 days to prepare the project-specific WSA.

SB 610 defines a "project" as:

- a residential subdivision of 500 dwelling units or more;
- a shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (sq. ft.) of floor space;
- a commercial office building employing more than 1,000 persons or having more than 250,000 sq. ft. of floor space;
- a hotel or motel having more than 500 rooms;
- an industrial, manufacturing, or processing plant or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 sq. ft. of floor space; or a mixed use project including one or more of the aforementioned projects or any other project demanding an amount of water equivalent to or greater than the amount of water required by a 500 dwelling unit project.

A Water Supply Assessment (WSA) has been prepared for the entire NMC in accordance with California Senate Bills No. 221 and 610. The WSA confirms whether or not water supply is available to the project from the purveyor's existing and future entitlements.

The project will be required to construct all sewer, water and other utility systems as required to serve the project planning areas, pursuant to the standards and specifications of the provider of each utility and secure permits to tie into each line from IEUA and City of Ontario, as appropriate.

Prior to the use of recycled water, an Engineers Report prepared by a qualified engineer registered in California with wastewater treatment experience must be submitted to and approved by the City, California Regional Water Quality Control Board, and the Department of Health

Services. The Engineers Report will describe the manner by which the project will comply with the Water Recycling Criteria (CCR Title 22, Sections 60301 through 60355).

### **Design Considerations**

Conceptual water, sewer and recycled water systems presented in the Specific Plan are consistent with City plans and policies. Designs of the site and utility systems should incorporate energy use reduction, water conservation and waste reducing measures, if possible.

### **Environmental Impacts before Mitigation**

*Threshold: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.*

### **Wastewater Treatment Facilities**

Table III-12-A calculates the projected wastewater generation from the project's land uses.

**Table III-12-A Anticipated Wastewater Generation and Contribution From Residential Land Uses**

	<b>Generation Rate <sup>1</sup></b>	<b>Proposed Project Total (gallons/day)</b>	<b>IEUA's Regional Plant 5 daily flow capacity</b>	<b>Proposed Project Percent of Plant's Daily Intake <sup>2</sup></b>
<b>Single-Family Residential Dwelling Units (detached)</b>	270 gallons/day/unit	914 units = 246,780 gpd 960 units = 259,200 gpd	15 million gallons	1.65 or 1.73
			30 million gallons planned capacity	0.82 or 0.86
<b>Multi-Family Residential Dwelling Units (attached)</b>	270 gallons/day/acre	496 units = 133,920 gpd	15 million gallons	0.89
			30 million gallons planned capacity	0.45
<b>Schools 10 acres</b>	2,000 gallons/day/acre	20,000 gpd	15 million gallons	0.13 or 0
			30 million gallons planned capacity	0.07 or 0
<b>Parks/Open Spaces 9 acres</b>	100 gallons/day/acre	900 gpd	15 million gallons	0.006
			30 million gallons planned capacity	0.003
<b>TOTAL</b>		401,600 gpd with school 394,020 gpd with 46 homes		2.68% max. at 15MG 1.34 % ,max at 30MG

<sup>1</sup> = Sewer generation rates from IEUA Wastewater Facilities Master Plan, April 2002.

<sup>2</sup> = Proposed Project Total / Treatment Facility Capacity x100.

The worse case from a wastewater generation standpoint occurs with the school and without the 46 additional homes. Therefore, the total maximum contribution of wastewater to IEUA's Regional Plant 5 for the residential, academic, and parks would be 401,600 gallons per day (gpd). The total contribution of wastewater from the project would constitute approximately 2.68% of the plant's daily intake of 15 million gallons if the plant is not expanded. The project would constitute approximately 1.34% when the plant capacity is expanded to 30 million gallons

per day (mgd) and would constitute 0.84% of the plant's daily intake at ultimate 48 mgd capacity by 2050.

Currently, RP-5 is accepting approximately 6.5 mgd of effluent from existing sources. This leaves an available capacity of 8.5 mgd. The project would represent about 4.7% of the remaining plant capacity if the project were built today. However, the project will be developed in phases over the next 10 years. According to IEUA, their member agencies collect development fees for wastewater plant expansion and IEUA can call in the monies for capital improvements as demand warrants. Thus, the project represents less than 5% of current available capacity and IEUA has the funds available to expand RP-5 as this project and other development warrants expansion. Therefore, the project does not require expansion or construction of new wastewater treatment facilities so impacts are considered less than significant. Future expansions are planned by IEUA under their master plan which has taken into account environmental impacts associated with plant expansion and adequate capacity will be available.

Cumulatively, the Specific Plan for Subarea 25 will be one of many projects developed within the NMC which is only a portion of IEUA's Southern Service Area. The cumulative effects of the IEUA Wastewater Master Plan were evaluated under CEQA in the IEUA Wastewater, Recycled Water and Organics Management Master Plan Program EIR, dated July 3, 2002 (SCH No. 2002011116) and found to be less than significant.

#### **Water and Wastewater Conveyance Facilities**

Figures III-12-1 and III-12-4 show the water and sewer pipelines proposed to be built as a part of the Specific Plan. The wastewater and potable water pipelines needed to convey wastewater from the project to the treatment plant and potable water to the project site are not in place. The proposed project cannot be implemented without installing the segments of water and sewer pipelines that are needed to serve the site. Construction of these necessary pipeline improvements within the NMC were addressed pursuant to CEQA in the mitigated Negative Declaration for the City of Ontario New Model Colony Infrastructure Master Plans, dated September 10, 2002, Res. No. 2002-098, and would not cause significant environmental effects after mitigation. However, without the construction of these pipelines, the project cannot be served/operated.

#### **Water Treatment Facilities**

As stated in the WSA prepared for the NMC, the City of Ontario's existing water supply is 88.1 million gallons per day (mgd) and the projected 2025 water supply is 125 mgd. The projected water demand for the proposed project is approximately 401,600 gallons per day (723.8 acre-feet per year). In order to provide adequate water treatment, the City has capacity rights of 25 mgd in the Water Facilities Authority Treatment Plant. Therefore, the WSA determined that the current water treatment provider is sufficient for the proposed project. Impacts to water treatment facilities are considered less than significant.

*Threshold: Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.*

Storm water facilities are discussed in the Hydrology and Water Quality and Effects Found Not Significant sections of this DEIR.

*Threshold: Does the City of Ontario have sufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements. In making this determination, the City shall consider whether the project is subject to the water supply assessment requirements of Water Code Section 10910, et seq. (SB610), and the requirements of Government code Section 664737 (SB 221). (Source: Water Supply Assessment and Written Verification of Sufficient Water Supply for the New Model Colony, Oct. 27, 2004)*

The WSA for the NMC may be used for individual development projects pursuant to Water Code Section 10910(h) if:

- 1) The project is part of a larger project for which an assessment was prepared.
- 2) The data used to create the assessment still is accurate.
- 3) The assessment found sufficient water for the project.

As stated in the WSA prepared for the NMC within which the project is located, the projected water demand for the NMC is 10.2 mgd (31,200 acre-feet) per year. The City's existing water supply (2004) is 71.6 mgd, while the dry weather demand is 64.2 mgd. The projected 2025 water supply is 166.1 mgd and the projected dry weather demand is projected to be 100.9 mgd. Since the project was included in the City's Urban Water Management Plan, and the City has water rights in the Chino Groundwater Basin and capacity rights in the WFA Treatment Plant, 5,000 acre-feet per year contracted from the Chino Desalter Authority, and 7.4 mgd of recycled water, the City has sufficient water supply to provide water to the proposed project during normal, single dry, and multiple dry years during a 20 year projection. In addition, sufficient water supply exists to meet the City's existing and planned future uses. Therefore, impacts to water supplies are considered less than significant after evaluation of the required WSA prepared pursuant to Senate Bill 610.

*Threshold: Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.*

See response to the first threshold in this section of the DEIR (Utilities).

*Threshold: Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.*

### **Construction-Related Solid Waste**

Construction debris constitutes approximately 11 percent of solid waste disposed in the United States. As shown in Table III-12-B, *Estimated Construction Related Solid Waste Generation and*

*Contribution*, the amounts of construction-related waste anticipated to be generated by the project during construction is anticipated to generate approximately 5,719.67 tons of construction-related solid waste during the ten-year construction period of the project. Including the proposed school the Specific Plan will generate approximately 5,846.10 tons of construction-related solid waste. If 46 additional homes are constructed in lieu of the school, approximately 5,906.26 tons of construction-related solid waste will result. Recycling of construction and demolition waste generated during construction can greatly reduce the amount of waste directed into landfills.

Given the limited contribution of construction-related solid waste anticipated to be generated by the proposed project over its estimated ten-year construction period (approximately 0.016 percent of the annual landfill waste stream, with or without the school), development of the project site will not substantially contribute to the exceedance of the permitted capacity of the designated landfill. Also, considering the project's participation in the source reduction programs required by the City, the solid waste stream generated by the project during construction will be reduced over time. Less than significant impacts to the existing landfills are expected.

### Operational Solid Waste

The worse case from an operational solid waste standpoint occurs with the school and without the 46 additional homes. As shown in Table III-12-C, *Anticipated Operational Solid Waste Disposal and Contribution*, the residential portion of the proposed project is anticipated to generate approximately 0.41 tons of solid waste per year per single-family residence. Including the proposed elementary school and parks, the Specific Plan will require landfill disposal of approximately 662.6 tons of solid waste annually.

**Table III-12-B Estimated Construction-Related Solid Waste Generation and Contribution**

	<b>Generation Factor<sup>1</sup></b>	<b>Proposed Project Total (tons)</b>	<b>Disposal Facility - Disposal Capacity<sup>2</sup> (tons per year)</b>	<b>Proposed Project % of Yearly Intake<sup>3</sup></b>
<b>RESIDENTIAL</b> 1,410 or 1,456 Single-Family-Dwelling Units	8,113 lbs per dwelling unit	11,439,330 or 11,812,528 ÷ 2,000 lbs/ton = 5,719.67 or 5,906.26		
<b>ELEMENTARY SCHOOL</b> Estimated 65,000 square feet	3.89 lbs per sq. ft.	252,850 lbs. ÷ 2,000 lbs/ton 126.43 or 0		
<b>PROJECTED TOTAL FROM ALL SOURCES</b>		5,846.1 tons with school or 5,906.26 tons with homes	El Sobrante Landfill – 3,650,000	0.016

<sup>1</sup> Generation rate from “Characterization of Building-Related Construction and Demolition Debris in the United States” prepared for U.S. Environmental Protection Agency by Franklin Associates, June 1998.. This rate includes all materials discarded, whether or not they are later recycled or disposed of in a landfill. ([www.epa.gov/epaoswer/haswaste/sq/c&d-rpt.pdf](http://www.epa.gov/epaoswer/haswaste/sq/c&d-rpt.pdf))

<sup>2</sup> Daily disposal capacity multiplied by 365 days per year.

<sup>3</sup> (Proposed Project Total averaged over 10 year construction period / Disposal Facility Capacity) x 100

**Table III-12-C Anticipated Operational Solid Waste Disposal and Contribution**

	<b>Disposal Factor<sup>1</sup></b>	<b>Proposed Project Total (tons/ year)</b>	<b>Disposal Facility - Disposal Capacity<sup>2</sup> (tons per year)</b>	<b>Proposed Project % of Yearly Intake<sup>3</sup></b>
<b>RESIDENTIAL</b> 1,410 or 1,456 Single-Family Dwelling Units	0.41 annual tons per residence	578.1 or 596.96		
<b>ELEMENTARY SCHOOL</b> 65,000 sq. ft.	0.0013 tons/sf/year	84.5 or 0		
<b>PROJECTED TOTAL FROM ALL SOURCES</b>		662.6 with school or 596.96 with homes	El Sobrante Landfill – 3,650,000	0.018 or 0.017

<sup>1</sup> Waste disposal rates from State Integrated Waste Management Board ([www.ciwmb.ca.gov/wastechar/](http://www.ciwmb.ca.gov/wastechar/)) assuming Commercial retail.

<sup>2</sup> Daily permitted throughput (tons/day) x 365

<sup>3</sup> (Proposed Project Total / Disposal Facility Capacity) x 100

The City of Ontario implements programs that address source reduction and household hazardous waste disposal, with the aim of reducing the amount of solid waste going into landfills. The California Integrated Waste Management Board indicates that 34 percent of the overall waste stream in the City of Ontario is diverted away from landfills. The proposed project will participate in these programs.

Given the limited contribution of solid waste anticipated to be generated by the proposed project (approximately 0.018 percent of the annual landfill waste stream), development of the project site will not substantially contribute to the exceedance of the permitted capacity of the designated landfill. Also, considering the project's future residents' participation in the source reduction and household hazardous waste programs offered by the City, the solid waste stream generated by the project may be reduced over time. Less than significant impacts to the existing landfills are expected.

The GPA for the NMC proposed policies to reduce the impacts from solid waste. Policy 4.1 calls for expanding the recycling program to include multi-family residences, commercial, and industrial uses. Policy 4.6 calls for provision of solid waste recycling programs including exploring the possibility of the development of a Materials Recovery Facility (MRF). Other policies (4.3, 4.8, and 4.9) encourage diverting special waste, backyard composting, supporting regional and statewide efforts to reduce the solid waste stream. Policy 4.7 calls for investigation toward the possibility of a City sponsored program to recycle yard waste and development of end markets for compost. These policies will reduce the solid waste to the maximum extent feasible and no other feasible mitigation measures were proposed in the GPA for the NMC FEIR. However, the GPA for the NMC still found that the cumulative impacts to solid waste are significant and unavoidable.

*Threshold: Not comply with federal, state, and local statutes and regulations related to solid waste.*

As discussed under the previous threshold, the proposed project will comply with City of Ontario requirements for recycling and household hazardous waste. The project will not contribute

significantly to a landfill with inadequate capacity that does not meet federal or state regulations. Through these means the project will comply with federal, state, and local regulations related to solid waste.

*Threshold: Result in adverse impacts to natural gas or other dry utility systems.*

Potential impacts to natural gas, electricity or other utilities could result from direct interruption of service due to severing a line during construction. Inefficient use of utilities (energy resources) is also a potential impact. Since the proposed project includes activities such as demolition and installation of major underground pipelines, without mitigation this has the potential to significantly impact existing utility lines.

The proposed project will generate the need for natural gas and electrical service as a result of additional residential and academic uses. Energy consumption can be reduced through design considerations such as reuse of gray water for irrigation or space heating, common water heaters for multiple residential units, solar energy for heating or energy production, and other systems and approaches that are more sustainable than conventional construction. Such systems designed into the project would result in betterment of the project and reduction of energy consumption. Such measures should be considered by the City.

### ***Electricity***

The GPA for the NMC Final EIR evaluated potential impacts to the increased demand for electricity that would result from development of the NMC as a whole. The discussion in this section is based on the GPA for the NMC Final EIR, City of Ontario, 1997, which is incorporated by reference. The GPA for the NMC Final EIR stated that build-out of the NMC would result in the demand for 303,465 megawatt hours-per-year of electricity. The four Southern California Edison (SCE) electrical substations that currently serve the NMC area were designed in a manner that could accept a future increase in demand posed by development of the NMC without the requirement to expand any of the substations or construct new substations. Replacement of the aging circuits that exist in the area (i.e., re-wiring power poles) is needed but not considered a major impediment to future development nor will it require the construction of new distribution facilities beyond those built as part of future development projects.

Statements from Southern California Edison (SCE) referenced in the GPA for the NMC Final EIR stated that existing distribution systems were adequate to accept the increased demand that would result from build-out of the NMC and that excess supply of electricity was available. Subsequent to the publication of the GPA for the NMC Final EIR in 1997, the State has experienced shortages in energy supply. According the staff of the California Energy Commission (CEC), California Public Utilities Commission and California Independent System Operator staff, most recently, insufficient reserves were available in Southern California on September 10, 2004. In the Staff Draft Report “Summer 2006 Electricity Supply and Demand Outlook,” California Energy Commission, December 2005, the CEC staff expects that supplies in all regions will be adequate to meet growing electricity demand and the required operating reserves under average temperature conditions. Southern California resources have improved compared to 2005, but demand response and interruptible programs may need to be used if transmission congestion and high forced outages occur simultaneously during peak electricity

demand (high temperatures). According to the CEC report, improved adequacy of electricity is due to the addition of new generation facilities since 2000, transmission improvements, increased energy efficiency, and voluntary conservation.

Current electrical use on the site is estimated in Table III-12-D. The Specific Plan will result in an increase in electricity demand as shown in Table III-12-E.

**Table III-12-D: Estimated Existing Electrical Demand**

Land Use	Dwelling Units/Square Feet	Generation Factor	Total Demand (million KWH/YR)
Residences	2 DU	5,526.50 KWH/DU/YR	0.01
<b>Total</b>			<b>0.01</b>
KWH/DU/YR = kilowatt-hour per dwelling unit per year KWH/SF/YR = kilowatt-hour per square foot per year Source: Table A9-11-A, South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993.			

**Table III-12-E: Estimated Electrical Demand for Esperanza**

Land Use	Dwelling Units/Square Feet	Generation Factor	Total Demand (million KWH/YR)
Residences	1,410 DU with school 1,456 without school	5,526.50 KWH/DU/YR	7.79 with school 8.05 without school
Elementary School	65,000 SF	5.9 KWH/SF/YR	0.38
<b>Total</b>			<b>8.17 with school</b> <b>8.05 without school</b>
KWH/DU/YR = kilowatt-hour per dwelling unit per year KWH/SF/YR = kilowatt-hour per square foot per year Source: Table A9-11-A, South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993.			

Development of the proposed project at full build-out would result in an increase in demand for electrical service over the existing conditions of approximately 8.16 million kilowatt-hours per year. This represents approximately 2.7 percent of the 303,465 megawatt-hours per year estimated for the NMC. Esperanza’s 1,410 to 1,456 equates to about 4.6 percent of the 31,188 proposed NMC dwelling units. Thus the project is within the estimates for electricity consumption assumed in the GPA for the NMC Final EIR.

SCE, who will serve the site, has considered the potential demands of the NMC thus the proposed project has been factored into SCE’s ongoing planning which analyzes electrical demand on a yearly basis to plan for improvements as needed.

SCE is required to provide service to the proposed project and coordination is typical between applicant/developer and SCE to avoid any notable service disruptions during extension of upgrading of services and facilities. This typical coordination would also ensure that the nature, design and timing of electrical system improvements are adequate to serve the project. The CEC

has noted significant improvements in the adequacy of electricity supply in Southern California due to the addition of new generation facilities since 2000, transmission improvements, increased energy efficiency, and voluntary conservation. Such improvements are expected to continue due to both state and SCE efforts in the future. Therefore, less than significant impacts related to electrical service would result from the development of Esperanza.

### ***Natural Gas***

The GPA for the NMC Final EIR evaluated potential impacts to the increased demand for natural gas that would result from development of the NMC as a whole. The discussion in this section is based on the GPA for the NMC Final EIR, City of Ontario, 1997, which is incorporated by reference; and a letter sent to the City from Southern California Gas Company (The Gas Company). The GPA for the NMC Final EIR stated that build-out of the NMC would result in the demand for 7.1 million cubic-feet per day (2591.5 CF/Year) of natural gas. The Gas Company provides natural gas service within the NMC. The GPA for the NMC Final EIR states that The Gas Company indicates that major feeder lines and high pressure gas lines are already in place to service the NMC and that natural gas demand generated by the proposed NMC development can be met.

Current natural gas use on the site is estimated in Table III-12-F. The Specific Plan will result in an increase in natural gas demand as shown in Table III-12-G.

**Table III-12-F: Estimated Existing Natural Gas Demand**

<b>Land Use</b>	<b>Dwelling Units/Square Feet</b>	<b>Generation Factor</b>	<b>Total Demand (million CF/YR)</b>
Single Family Residences	2 DU (estimated)	219.1 CF/day/DU	0.16
<b>Total</b>			<b>0.16</b>
CF/YR = cubic feet per year Source: Table E-2 of the GPA for the NMC Final EIR.			

**Table III-12-G: Estimated Natural Gas Demand for Esperanza**

<b>Land Use</b>	<b>Dwelling Units/Square Feet/Acre</b>	<b>Generation Factor</b>	<b>Total Demand (million CF/YR)</b>
Single Family Residences	916 DU with school 962 DU without school	219.1 CF/day/DU	73.25 with school or 76.93 without school
Multi-Family Residences	494 DU	132.3 CF/day/DU	23.86
School (Public Facility)	10 ACRE	95.3 CF/day/Acre	0.35 or 0
<b>Total</b>			<b>97.46 with school or 100.79 without school</b>
CF/YR = cubic feet per year Source: Table E-2 of the GPA for the NMC Final EIR and Southern Calif. Gas Co. letter dated 4/19/06 re: Parkside Specific Plan.			

The worse case from a natural gas standpoint occurs without the school and with the 46 additional homes. Development of the proposed project at full build-out (without the school and with 46 additional homes) would result in an increase in demand for natural gas service over the existing conditions of approximately 100.63 million cubic-feet per year. This represents approximately 3.9 percent of the 2,591.5 million cubic-feet per year of natural gas estimated for the NMC. Esperanza's 1,456 equates to 4.7 percent of the 31,188 proposed NMC dwelling units. Thus the project is within the estimates for natural gas consumption assumed in the GPA for the NMC Final EIR.

The Gas Company, who will serve the site, has considered the potential demands of the NMC thus the proposed project has been factored into The Gas Company's ongoing planning which analyzes natural gas demand on a yearly basis to plan for improvements as needed.

The Gas Company is required to provide service to the proposed project and coordination is typical between applicant/developer and SCE The Gas Company to avoid any notable service disruptions during extension of upgrading of services and facilities. This typical coordination would also ensure that the nature, design, and timing of natural gas system improvements are adequate to serve the project. Because the requirements for natural gas demand for the NMC, which includes the project site, were evaluated in the GPA for the NMC Final EIR and no new circumstances exist that warrant a different outcome, implementation of the proposed project would not result in a significant impact to natural gas services of facilities.

Energy consumption can be reduced through design considerations such as reuse of gray water for irrigation or space heating, common water heaters for multiple residential units, solar energy for heating or energy production, and other systems and approaches that are more sustainable than conventional construction. Such systems designed into the project would result in betterment of the project and reduction of energy consumption. Such measures should be considered by the City.

### **Proposed Mitigation Measures**

The following mitigation measures are included to reduce potential environmental impacts:

**MM Util 1:** To provide adequate water and sewer service, all water and sewer pipelines within and adjacent to the project boundaries, as required and conditioned to serve the associated Tentative Tract Map, shall be constructed by the developer based on the NMC Infrastructure Master Plans phased by tract and to the satisfaction of the City.

**MM Util 2:** To ensure that adequate sewer facilities are in place to serve the proposed project, the Archibald trunk sewer line off-site connection to the IEUA Kimbal Avenue interceptor shall be completed by IEUA and operational prior to the City of Ontario's issuance of the first certificates of occupancy. The applicant shall participate on a fair share basis in the development of the necessary sewer facilities.

**MM Util 3:** To ensure adequate water service to the project, off-site water lines, tanks, interconnectors and other facilities required in the Water Master Plan for the Francis loop to

provide water to the site shall be constructed by the City and be in place and operational prior to the City of Ontario's issuance of the first certificate of occupancy. The applicant shall participate on a fair share basis in the development of these off-site facilities.

**MM Util 4:** To mitigate for possible conflicts with existing utilities, prior to obtaining grading permit(s), the project proponent shall coordinate with the applicable natural gas, electrical, and telephone utility providers for the project site to ensure that all existing underground and overhead lines are not damaged during project construction.

**MM Util 5:** To reduce the quantity of energy used and to conserve water resources, the project developer and City of Ontario should work to include sustainable systems for use of water and energy within the project design. One source of assistance in this regard is Southern California Gas Company Commercial/ Industrial Support Center at 1-800-GAS-2000, which should be contacted at the time of development of the commercial center located within the project.

**MM Util 6:** To reduce the need for potable water and ensure adequate water supply, the project applicant shall plan and construct a dual pipe system to supply recycled water when available in the future (GP Policy 5.1.4). An Engineer's Report approved by the City and the Department of Health Services is required prior to the use of recycled water.

**MM Util 7:** To reduce risks associated with improperly abandoned wells and the potential need for temporary water supplies, all existing agricultural wells on the project site will be destroyed/abandoned per the California Department of Water Resources Standards (Bulletin 74-90). A well use/destruction plan and schedule for all existing agricultural wells on the project site shall be prepared and submitted for approval, prior to the issuance of grading permits. This plan shall also include a temporary water supply plan, as applicable, in order to avoid potential significant temporary impacts resulting from the disruption of current water supply through the abandonment of on-site wells. Construction of any temporary pipes or facilities needed to provide water to the existing uses which are to temporarily remain shall be installed per City requirements at the developer's expense.

### **Summary of Project-Specific Environmental Effects after Mitigation Measures are Implemented**

After mitigation measures are incorporated into the project, no significant individual impacts to the City's water system, sewer system, or landfill are expected to occur. In addition, individual impacts to other utilities, including but not limited to natural gas, are not expected after incorporation of the mitigation measures.

### **Summary of Cumulative Environmental Effects after Mitigation Measures are Implemented**

As defined in Section 15355 of the CEQA Guidelines, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the DEIR together with other projects causing related impacts. The proposed project was anticipated and evaluated in the environmental documents for the GPA for the NMC and the NMC Infrastructure Master Plans.

The cumulative impacts related to water and sewer systems are discussed in these documents (incorporated by reference). The discussion of cumulative impacts is limited because the Specific Plan is consistent with the plans used in the evaluation of each environmental issue area discussed here and in Section IV-1, Cumulative Environmental Effects. Once the Infrastructure Master Plans are implemented, as required in the above mitigation measures, cumulative impacts are considered less than significant. Cumulative impacts for water and sewage treatment are considered less than significant since the project is included in the City's Master Sewer and Water Plans and adequate facilities are, or will be provided.

The GPA for the NMC FEIR found that even with incorporation of the mitigation measures listed, residual solid waste impacts remain and the FEIR was certified with overriding consideration findings related to the cumulative negative impact on solid waste. Although the solid waste generated by the project does not exceed the threshold of significance for solid waste, there have been no changes in circumstances and no new mitigation measures added which will reduce the significant cumulative impact to a less than significant level. Therefore, impacts to solid waste are still considered cumulatively significant and a statement of overriding considerations will be required. However, no new issues have been raised by this project which were not considered in the GPA for the NMC FEIR and the statement of overriding considerations for this project will be consistent with the GPA for the NMC FEIR's findings.