

## **Section 4.8: Hydrology, Water Quality and Flooding**

### **4.8.1 Environmental Setting**

The City of Ontario is located in the western section of the San Bernardino Valley, which is underlain by the Chino groundwater basin.

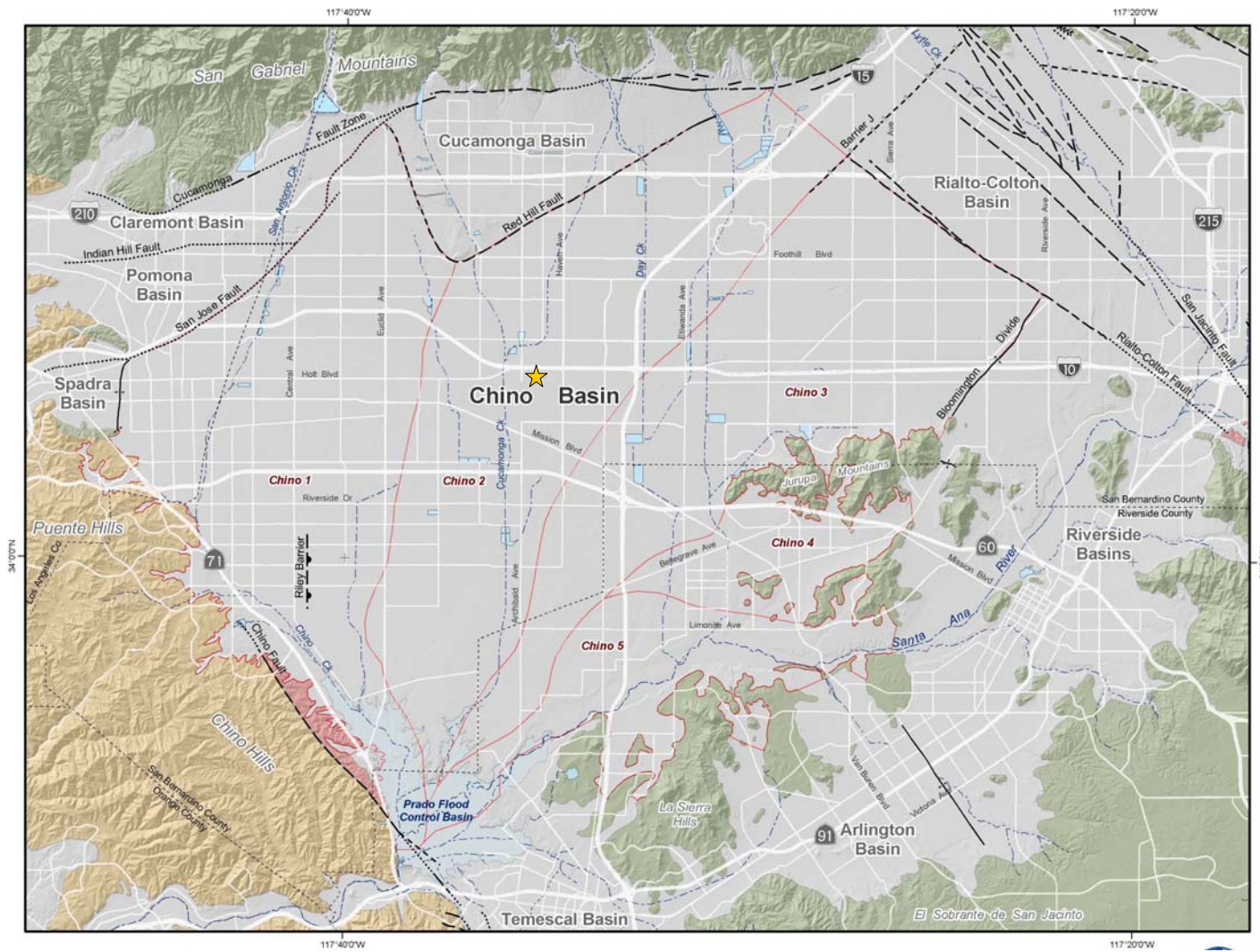
#### **Groundwater Resources**

The Chino Groundwater Basin is found under approximately 235 square miles of the upper Santa Ana River Watershed, as shown in Figure 4.8-1, *Chino Basin Boundaries*. The basin is bounded by the Redhill Fault, San Gabriel Mountains and the Cucamonga Basin to the north; the Rialto-Colton Fault to the northeast; the groundwater divide to the Rialto-Colton Basin to the east; the Jurupa Hills, Pedley Hills and the Riverside Narrows to the southeast; the La Sierra Hills and Temescal Basin to the south; the Chino Hills and Puente Hills to the southwest; the groundwater divide to the Pomona and Claremont Groundwater Basins to the west; and San Jose Fault to the northwest.

The Chino Groundwater Basin is found in an alluvial valley that is relatively flat from east to west and slopes from the north to the south at a one to two percent grade. The Basin was formed by sedimentary infilling of a structural depression by eroded sediments from the San Gabriel Mountains, Chino Hills, Puente Hills, and the San Bernardino Mountains. The bottom of the basin, which is essentially the base of the freshwater aquifer, consists of impermeable sedimentary and igneous rocks. The base of the aquifer is overlain by older alluvium of the Pleistocene period, followed by younger alluvium of the Holocene period. The thickness of the older alluvium averages about 500 feet in the Basin, although it is as thick as 1,100 feet in some parts, and as thin as 100 feet in others. Ground elevations range from approximately 500 feet above mean sea level to 2,000 feet above mean sea level.

The Chino Basin is hydrologically subdivided into five groundwater flow systems that act as distinct basins. Each flow system has a unique hydrology, and the effect of water resources management activities in each flow system does not greatly impact the other systems. The project site is located in Management Zone 2 of the Chino Basin, as shown in Figure 4.8-1. Chino Basin Management Zone 2 is bounded by Management Zone 1 to the west and Chino Basin Management Zone 3 to the east. The northern border of this management zone is defined by the Red Hill Fault and the extension of the Rialto-Colton Fault.

Sources of water in the Basin include infiltration of water flow within unlined stream channels overlying the Basin, infiltration of stormwater and municipal wastewater discharges within the channel of the Santa Ana River, underflow from the saturated sediments and fractures within the nearby mountains and hills, artificial recharge at spreading grounds of stormwater, imported water, and recycled water, underflow from seepage across the Red Hill Fault (from the Cucamonga Basin), the San Jose Fault (from the Claremont Heights and Pomona basins), and the Rialto-Colton Fault (from the Rialto-Colton Basin), intermittent underflow from the Temescal Basin, and percolation of rainfall and returns from irrigation use. The total storage capacity of the Chino Basin is estimated at approximately 18.3 million acre-feet. Water in storage was estimated in the Fall of 2000 to be approximately 5.325 million acre-feet. Discharge is mainly through groundwater production and potentially small amounts of rising groundwater in the area near Prado Dam.



★ Project Location

Source: Chino Basin Optimum Basin Management Program, 2006



**Figure 4.8-1**  
**Chino Groundwater Basin**  
 Guasti Plaza Specific Plan Amendment  
 Supplemental EIR

## **Section 4.8: Hydrology, Water Quality and Flooding**

The nearest groundwater wells are located north of the site and the freeway, east of the site, and northeast of the site, where water levels were recorded at 350 to 360 feet below the ground surface.

Depth to groundwater elevation at the project site is approximately 675 feet above mean sea level or 330 feet below the ground surface, according to data recorded during the Fall of 2006. Groundwater flow is toward the southwest. Figure 4.8-2, *Depth to Groundwater*, shows groundwater depths within the Chino Basin. The site and surrounding area are not located within the areas of the City identified to have high nitrate concentrations or a plume of contaminated groundwater.

### **Surface Water**

The principal drainage course of the Chino Groundwater Basin is the Santa Ana River. The river flows for 69 miles across the Santa Ana Watershed, from its origin in the San Bernardino Mountains to the Pacific Ocean. Several creeks also traverse the basin, typically only carrying significant flows during winter storm events.

The City of Ontario is located in the northern part of the Santa Ana River Watershed, with storm drainage generally in a north-to-south direction from the San Bernardino Mountains to Prado Lake. From Prado Lake, stormwater is discharged into the Santa Ana River for conveyance to the Pacific Ocean farther south. Creeks and washes in the City of Ontario that convey stormwater are the West Cucamonga Creek, Cucamonga Creek, and Lower Deer Creek.

The project site is located within the Cucamonga Creek drainage area. Cucamonga Creek flows from the Angeles National Forest southerly into the cities of Upland and Rancho Cucamonga, and enters the City of Ontario at the Cucamonga Guasti Regional Park, where it joins Deer Creek. The Creek continues southerly on the west side of Archibald Avenue and through the Ontario International Airport property, bending southwest into Prado Lake.

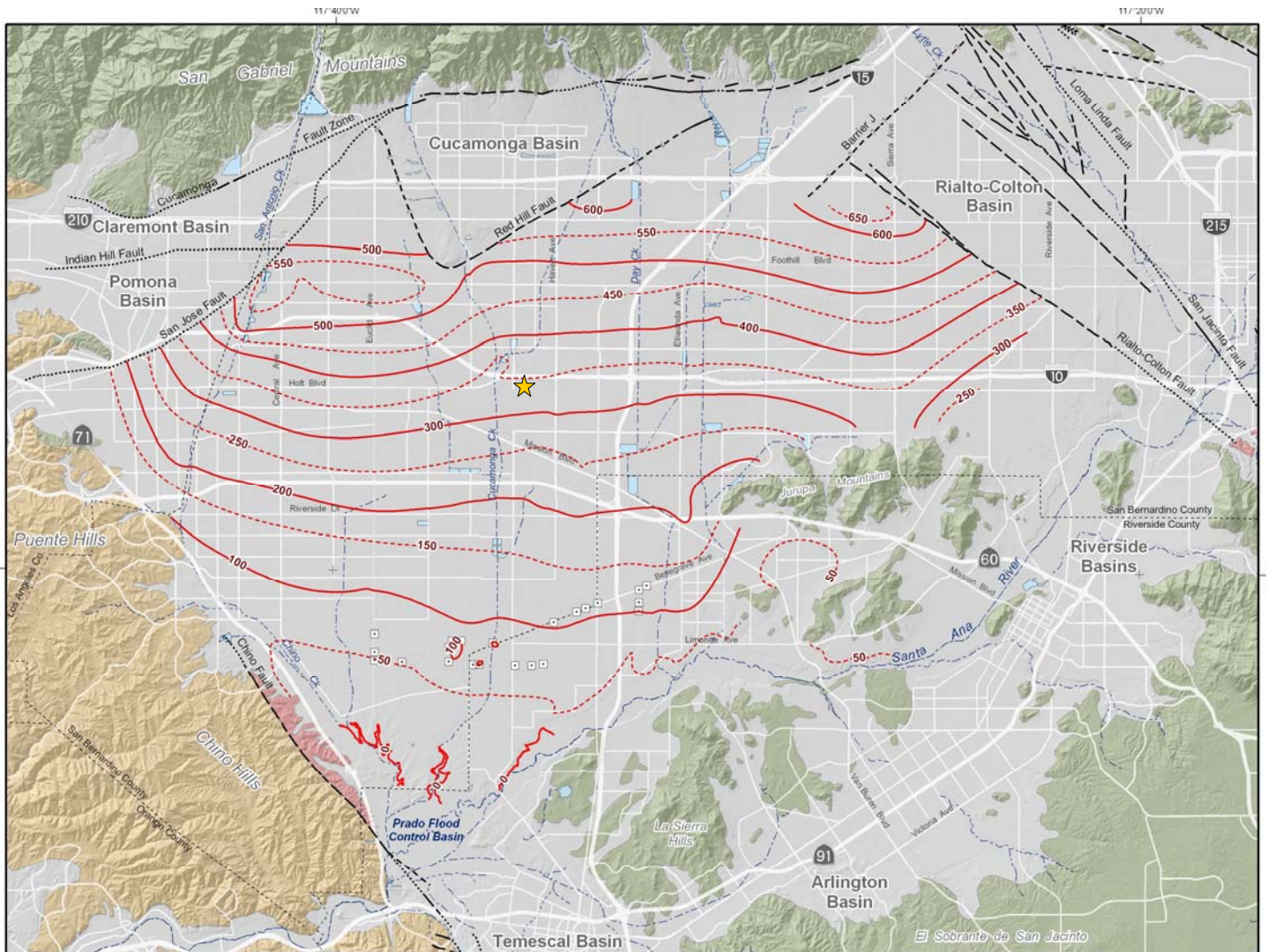
Two culverts convey stormwater from the area north of the Guasti Specific Plan Area and the I-10 Freeway toward a storm drain line on New Guasti Road. This storm drain line runs westerly and then southerly across the UPRR tracks. The line then turns southwesterly and joins Cucamonga Creek approximately 0.5 mile southwest of the Specific Plan area.

Turner Channel is a concrete-lined open channel along the east side of Turner Avenue that conveys stormwater from the office developments east and northeast of the Guasti Plaza Specific Plan area, southerly across the UPRR tracks.

### **Flood Hazards**

Review of the Flood Insurance Rate Maps of the Federal Emergency Management Agency (FEMA) shows that the majority of the Specific Plan area is located within the 500-year floodplain or the 100-year floodplain with depths less than 1 foot (Zone X). However, an area along Old Guasti Road and the UPRR tracks is located within the 100-year floodplain with depths of 1 foot. Turner Avenue is also located within the 100-year floodplain with depths of 1 foot (Zone AO). Figure 4.8-3, *Flood Hazards*, shows the floodplain limits in the area.







★ Project Location

Source: Chino Basin Optimum Basin Management Program, 2006



**Figure 4.8-2**  
**Groundwater Elevation**  
**Guasti Plaza Specific Plan Amendment**  
**Supplemental EIR**



-  Guasti Plaza Specific Plan Area
-  Proposed Residential Overlay Zone

Source: City of Ontario



**Figure 4.8-3**  
**Flood Hazards**  
 Guasti Plaza Specific Plan Amendment  
 Supplemental EIR

## **Section 4.8: Hydrology, Water Quality and Flooding**

There are no dams, reservoirs, or large bodies of open water near the project site. The project site is located just outside the dam inundation area of the San Antonio Dam. Thus, there are no dam inundation or seiche hazards on the site. The site is also not subject to hazards associated with a tsunami (tidal wave) due to its inland location.

### **4.8.2 Threshold of Significance**

According to Appendix G of the CEQA Guidelines, a project could have a significant adverse impact on hydrology and water quality, if its implementation results in any of the following:

- ◆ Violates any water quality standards or waste discharge requirements;
- ◆ Substantially depletes 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);
- ◆ Substantially alters the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- ◆ Substantially alters the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or
- ◆ Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; creates or contributes runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- ◆ Otherwise substantially degrades water quality;
- ◆ Places housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- ◆ Places within a 100-year flood hazard area structures which would impede or redirect flood flows; or
- ◆ Exposes people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or, inundation by seiche, tsunami, or mudflow.

### **4.8.3 Environmental Impacts**

Future residential development under the proposed Amendment would result in the construction of structures and impervious areas (roads, driveways, parking areas, walking paths) that would lead to changes in drainage patterns; increases in runoff volumes and rates from the site; and the potential for urban pollutants to enter the stormwater.

**Water Quality Standards or Waste Discharge Requirements** *(Would the project violate any water quality standards or waste discharge requirements?)*

#### **Groundwater Quality**

While the former structures on the site utilized septic tank systems, no septic tank system is planned for use by future residential development under the proposed Specific Plan Amendment. The existing septic tanks have been removed as part of past demolition activities. Thus, no



## **Section 4.8: Hydrology, Water Quality and Flooding**

impacts related to the destruction of septic tanks, potential contamination of the underlying soils, and potential degradation of local groundwater resources are expected.

Should any septic tanks be uncovered during grading and excavation activities for future residential development, a licensed contractor would need to remove and abandon these tanks in accordance with the San Bernardino County Environmental Health Department's permits, procedures, and guidelines, to ensure that no adverse impacts on the soil and groundwater occur.

### **Stormwater Quality**

Future residential development under the proposed Amendment would generate urban runoff and wastewater, which may contain pollutants that could impact the groundwater or surface water resources in the area.

Construction activities associated with future residential development would lead to pollutants entering the City's storm drainage system. These may include construction debris, construction equipment fuels, oil and grease, construction materials and solvents, loose soils, organic waste materials, etc. Conveyance of these materials into the storm drain system would add pollutants that could degrade stormwater quality and downstream surface water resources (Cucamonga Creek, Mill Creek, Prado Lake, and the Santa Ana River).

Future residential development will need to comply with the National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activity. This regulation requires the developer to file a Notice of Intent with the State Water Resources Control Board (SWRCB) and to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) for construction activities on sites of one acre or more. The SWPPP would identify erosion, sedimentation and pollution control measures that would be implemented during construction activities, to minimize the discharge of pollutants into the stormwater and existing drainage channels to the maximum extent practicable.

Stormwater and wastewater from occupancy of future residential units would also generate pollutants that may enter the storm drain system. These pollutant sources include runoff over parking areas, landscaped irrigation overflows, waste and debris in the runoff path, vehicle wash downs, and other pollutant sources and activities that could potentially result in wastewater and pollutants affecting stormwater quality in Cucamonga Creek, Mill Creek, Prado Lake, and the Santa Ana River. Attached residential uses are expected to generate nutrients, pesticides, sediments, trash and debris and could potentially generate bacteria/viruses, oil and grease and oxygen-demanding substances. Parking areas are expected to generate heavy metals, organic compounds, trash and debris and oil and grease and could also potentially generate bacteria/viruses, nutrients, pesticides, sediments and oxygen-demanding substances.

Future development projects that would generate urban runoff pollutants are required under the NPDES and the City's stormwater regulations to prepare and implement a Water Quality Management Plan (WQMP), which identifies the site design, source control and treatment control best management practices (BMPs) that would effectively prohibit non-stormwater discharges from entering into the storm drain system and reduce the discharge of pollutants from stormwater conveyance systems to the maximum extent possible. Wastewater that violates discharge requirements would not be allowed in the storm drain system and would need to be treated on-site and/or conveyed to the sewer system, prior to disposal.

## Section 4.8: Hydrology, Water Quality and Flooding

A Water Quality Management Plan (WQMP) would be required as part of future residential development on the site. The WQMP will identify post-construction source control, site design, and treatment control BMPs that would be implemented as part of the project. Structural BMPs may vegetated swales, bio-retention basins, vegetated buffer strips, infiltration and filtration vaults, permeable pavements, dry wells and other treatment and infiltration facilities that would reduce pollutants in the stormwater, prior to conveyance into the storm drain system. Preparation of the WQMP and implementation of BMPs would protect runoff quality and render impacts to be insignificant.

Implementation of a SWPPP and WQMP would avoid violation of water quality standards or waste discharge requirements by future residential development under the proposed Amendment.

**Groundwater Supplies** *(Would the project 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)?)*

No groundwater wells are proposed as part of future residential development or the proposed Amendment. Thus, the Amendment would not lead to a direct withdrawal of groundwater. Construction of future residential development would not interfere with groundwater recharge, since the site does not serve as a recharge basin. Also, groundwater elevation at the site is estimated at 330 feet below the ground surface in 2006. Excavation and grading activities for future residential development would not be deep enough (up to 330 feet) to affect the underlying groundwater resources. No direct impact to the underlying groundwater resources is expected.

The City of Ontario would provide water services to the site. The majority (70 to 80%) of the City's water supplies come from the Chino Groundwater Basin. Future residential development would create a long-term demand for water to be used in kitchens and bathrooms and for landscape irrigation and maintenance activities. This water demand may lead to an increase in groundwater pumping from local wells.

Residential water demand is expected to replace the water demand that would have been generated by the planned office uses on the site. A higher demand for water from residential uses is expected, as discussed in Section 4.12.1, *Water Services*, of this SEIR. Thus, an increase in projected demand and groundwater pumping is expected with residential uses under the Amendment.

However, the Water Supply Assessment (WSA) for the proposed Amendment has indicated that the City's water supplies are more than the estimated demand in the City from 2010 through 2030. Adding the estimated demand from 500 dwelling units (101 acre-feet per year) still shows that there would be excess water supplies from 2010 to 2030. No new water supplies, wells or facilities are needed to serve the residential uses proposed under the Amendment.

During single- or multiple-dry year scenarios, an increase in groundwater pumping is anticipated, which would be made through the purchase or lease of unused water rights from other parties in the agricultural or appropriative pools for the Chino Groundwater Basin. The City purchases replenishment water to offset pumping in excess of its water rights. Thus, no



## **Section 4.8: Hydrology, Water Quality and Flooding**

significant adverse impact on groundwater supplies is expected with future residential development on the project site.

Implementation of water conservation measures and the use of reclaimed water would reduce demand for groundwater resources. Based on the City's Urban Water Management Plan (UWMP) and the WSA for the proposed Amendment, local and imported water supplies are expected to be available to meet the water demand of the City to the year 2030. Water service and demand is discussed in Section 4.12.1, *Utilities – Water Services*. Indirect impacts on groundwater supplies would be less than significant.

**Change in Drainage Patterns** *(Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?)*

With the site largely vacant, future residential development under the Amendment would lead to changes in existing drainage patterns, associated with the introduction of impervious and paved areas. The change in existing hydrology would be through the reduction of water infiltration into the ground and the increase in runoff volumes and rates. At this time, there are no storm drain facilities on the site to provide for the conveyance of stormwater and runoff into the City's storm drainage system. Thus, future residential development would lead to potential water ponding, sheetflow, and runoff into adjacent properties. This is considered a significant adverse impact.

*Impact 4.8.1: There is no existing on-site storm drainage system to serve future residential development.*

Storm drainage facilities would have to be constructed on-site to handle stormwater, with off-site extension of storm drain lines to connect to existing lines near the site. The storm drainage plan for the Guasti Plaza, as revised in the proposed Amendment, shows that a storm drain line is proposed on Old Guasti Road, running westerly toward an existing 84-inch pipe that crosses the railroad. This is discussed further in Section 4.12.3, *Storm Drainage*.

The change in drainage patterns would largely be internal to the site and impacts to regional hydrology or drainage flows in the surrounding area would be minimized since the downstream storm drainage system is fully developed. Payment of storm drain impact fees would allow the City to construct or upgrade the City-wide storm drainage system, as necessary.

Runoff from the site would enter an existing drainage pipe and would not lead to downstream erosion or siltation on Cucamonga Creek. Compliance with the WQMP mandates on preventing any hydrologic conditions of concern (HCOC) on downstream facilities would prevent erosion or siltation at downstream drainage channels. No significant adverse impacts to drainage patterns on the site or changes in the course of downstream channels are expected with the proposed Amendment or future residential development on the site.

**Increase in Surface Runoff** *(Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?)*

## **Section 4.8: Hydrology, Water Quality and Flooding**

### **Runoff Volumes**

Future residential development would change the existing hydrology of the site through the addition of impervious surface (buildings, roads, driveways, parking areas, pathways, etc.), resulting in increases in runoff volumes and the reduction in ground percolation. The increase in runoff volumes could result in the potential for water ponding, sheetflow, and runoff into adjacent properties. As discussed above, in accordance with City regulations, future residential development would have to provide for conveyance of on-site runoff to the City's existing storm drainage facilities in the project area, as well as the construction of the needed improvements to the infrastructure system to ensure adequate runoff conveyance and prevention of flood hazards.

Runoff from the site would need to be directed into inlets, catch basins, and curbs and gutters and into the storm drain line on Old Guasti Road that would have to be constructed to serve the site. Connection of this line to the existing 84-inch pipe that joins the Cucamonga Creek farther southwest would eliminate existing flood hazards along the UPRR tracks and prevent flood hazards on-site by conveying runoff from the site into the regional system.

Minor changes to flows within downstream rivers, streams, or channels are expected, due to the size of the site when compared to the total size of the tributary area of Cucamonga Creek and the Santa Ana River drainage watershed. Runoff from the site would also not be large enough to affect the course of Cucamonga Creek, Mill Creek, the Santa Ana River or any other stream or river. Less than significant adverse impacts are expected.

City requirements for the provision of private and public open space areas for multi-family residential uses would reduce the amount of paved surfaces on the site, over those anticipated with future office uses. The decrease in runoff volume would reduce the demand for downstream capacity in Cucamonga Creek, Mill Creek, and the Santa Ana River.

### **Sources of Polluted Runoff**

As discussed above, construction activities associated with future residential development would lead to pollutants entering the storm drainage system. Future development will need to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) for construction activities on sites of one acre or more. The SWPPP would identify erosion, sedimentation and pollution control measures that would be implemented during construction activities, to minimize the discharge of pollutants into the stormwater and existing drainage channels to the maximum extent practicable.

Stormwater and wastewater from occupancy of future residential uses could also generate pollutants that may enter the storm drain system. Development projects that would generate urban runoff pollutants are required under the NPDES to prepare and implement a Water Quality Management Plan (WQMP), which identifies the site design, source control and treatment control best management practices (BMPs) that would effectively prohibit non-stormwater discharges from entering into the storm drain system and reduce the discharge of pollutants from stormwater conveyance systems to the maximum extent possible.

A Water Quality Management Plan (WQMP) would have to be prepared for future residential development, which will identify post-construction source control, site design, and treatment control BMPs that would be implemented as part of future development. The BMPs would reduce pollutants in the stormwater, prior to conveyance into the regional storm drain system.

## **Section 4.8: Hydrology, Water Quality and Flooding**

Compliance with the NPDES through the implementation of a SWPPP and WQMP, as standard conditions, would reduce impacts associated with increases in runoff and pollutant sources. Impacts would be less than significant.

### **Change in Water Quality** *(Would the project otherwise substantially degrade water quality?)*

The site and the surrounding area are not identified in TOP as overlying groundwater aquifers with high nitrate concentrations or plumes of contaminated groundwater. No impact on these groundwater concerns would occur with the proposed Amendment.

RWQCB's *Water Quality Control Plan for the Santa Ana River* provides water quality standards for water resources in the region and an implementation plan to maintain these standards. The Plan discusses the existing water quality, beneficial uses of the ground and surface waters, and local water quality conditions and problems. The Plan also sets water quality goals and is used as a basis for the basin's regulatory programs.

As indicated earlier, the project site drains into the Cucamonga Creek, Prado Lake, the Santa Ana River, and the Pacific Ocean. Cucamonga Creek is not listed as an impaired water body under Section 303(d) of the Clean Water Act (CWA). Prado Lake is listed as an impaired water body due to nutrients from non-point sources. The segment of the Santa Ana River downstream of Prado Lake is not listed as an impaired water body.

Future residential development on the project site would generate nutrients that could add to the impairment of Prado Lake. However, these nutrients would enter Cucamonga Creek, which is not an impaired body. Also, the NPDES requires that future development prepare and implement a Water Quality Management Plan (WQMP), which would identify site design, source control and treatment control best management practices (BMPs) that would effectively prohibit non-stormwater discharges from entering into the storm drain system. This would ensure that no conflict with the Water Quality Control Plan for the Santa Ana River would occur with future residential development. Implementation of BMPs in the SWPPP for future development would also reduce stormwater pollutants during construction. No substantial degradation of water quality is expected. Impacts related to water quality would be less than significant.

### **Flood Hazards** *(Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? Would the project place within a 100-year flood hazard area structures, which would impede or redirect flood flows?)*

A portion of the project site is located within the 100-year floodplain, as shown in FEMA Flood Insurance Rate Maps. This flood hazard is due to the lack of storm drain infrastructure, rather than overflows along the drainage channel. Thus, future residential development under the proposed Amendment could be subject to flood hazards. This is considered a significant adverse impact.

#### **Impact 4.8.2: Future residential development would be exposed to on-site flood hazards.**

City regulations require future residential development to construct the necessary storm drain infrastructure to convey stormwater from the site into the City's storm drain system. This would include the grading of building pads to direct stormwater runoff into the proposed on-site



## Section 4.8: Hydrology, Water Quality and Flooding

drainage system of curbs and gutters, storm drain lines, and stormwater treatment control facilities. Storm drainage improvements would eliminate the flood hazards on-site, as well as the potential for flooding downstream areas of the site.

**Inundation Hazards** (*Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or, inundation by seiche, tsunami, or mudflow?*)

The project site is located outside the dam inundation area of the San Antonio Dam or other upstream dams. Thus, no hazards from dam inundation are expected to affect future residential development on the site. Also, the project site and the surrounding areas are located inland and would not be subject to tsunami hazards. The project area has a relatively flat topography; and there are no hillside areas nearby, which may create mudflow hazards. In addition, there are no large open bodies of water near the project site, which may lead to seiche hazards. Therefore, there would be no risk of significant loss, injury, or death involving inundation by seiche, tsunami, or mudflow to future residential development on the site. No impacts are expected.

### 4.8.4 Previous Analysis

To the extent applicable, this Supplemental EIR tiers off previous environmental documents relating to the development of the project site, which include the EIR for the Guasti Plaza Specific Plan and the EIR for the Guasti Redevelopment Plan. The following discussion summarizes the similarities/differences in potential impacts between the previous documents and this Supplemental EIR and, where similar impacts are present, applicable policies, standard conditions or mitigation measures in the previous documents are identified for incorporation or implementation by the current project, where appropriate.

#### Guasti Plaza Specific Plan EIR

The EIR for the Guasti Plaza Specific Plan indicated that future development within the Specific Plan area could lead to changes in water quality due to activities that may generate urban contaminants. Compliance with NPDES requirements related to filing a Notice of Intent and implementation of a SWPPP are expected to prevent degradation of stormwater quality during construction. Mitigation for on-site measures to reduce the load strength of sewage was also recommended. Impacts were expected to be acceptable after mitigation.

The EIR also indicated that flood hazards are present at the southern section of the Specific Plan area and discussed the needed storm drain infrastructure to serve future development. Construction of the storm drain lines to serve the Specific Plan area would eliminate flood hazards on or near the project site. Construction of a 66-inch storm drain line on Old Guasti Road is expected to eliminate flood hazards on or near the project site. It did not identify dam inundation hazards, tsunami, seiche, tsunami, or mudflow hazards in the Specific Plan area. It estimated the water consumption from future development within the Specific Plan area and indicated that future development would need to implement water conservation measures recommended by the Department of Water Resources.

*Consistent with the EIR for the Specific Plan, future residential development under the proposed Amendment would generate pollutants that may affect stormwater quality and would need to comply with NPDES mandates. Also, flood hazards on-site remain the same, with housing units and households now to be exposed to these hazards, under*

## Section 4.8: Hydrology, Water Quality and Flooding

*the proposed Amendment. Storm drain improvements would be needed to eliminate flood hazards, based on revised estimates of runoff from the site.*

A number of mitigation measures were provided in the EIR for Guasti Plaza Specific Plan:

1. The PAP for each Planning Area shall include a detailed discussion of drainage system requirements, phasing and financing that will be prepared to the satisfaction of the City.
2. Construction of required storm drain improvements within the Project Areas shall be the responsibility of the applicant.
3. Prior to the issuance of any building permit in the Project Area, required drainage system improvements consistent with the City Master Plan of Drainage shall be in place.
4. Precise drainage system requirements will be determined during specific project design review. Drainage design requirements will be subject to the provisions of site plan review by the City of Ontario.
5. Prior to the issuance of any building permit in the Project Area, the applicant must obtain a General Construction Activity Storm Water Runoff Permit from the State Water Resources Control Board. A notice of Intent, in addition to applicable fees, must be submitted at least thirty (30) days prior to initiation of construction activity on the site.

*These mitigation measures remain applicable to future residential development under the proposed Specific Plan Amendment and have been included as a standard condition and mitigation.*

### **Guasti Redevelopment Plan EIR**

The EIR for the Guasti Redevelopment Plan stated that drainage patterns would change as natural sheet flow is conveyed into a controlled drainage collection system. Increases in runoff volume would exceed capacities of the existing drainage infrastructure and infrastructure improvements are needed, along with the implementation of mitigation measures in the Specific Plan EIR. The EIR stated that urban runoff would contain pollutants and compliance with the NPDES would be necessary.

The EIR identified the same flood hazard between Old Guasti Road and the UPRR tracks. New development and rehabilitation would be exposed to these hazards. Mitigation is provided to eliminate flood hazards and reduce exposure of property and structures to flood hazards. It estimated water consumption from existing uses and projected buildout. Water system improvements and water conservation measures were included as mitigation. No dam inundation hazards, tsunamis, seiche or mudflow hazards are present within the Redevelopment Project Area.

*Consistent with the EIR for the Redevelopment Plan, future residential development would generate pollutants that may affect stormwater quality and would need to comply with NPDES mandates. Also, flood hazards on-site remain the same, with housing units and households now to be exposed to these hazards, under the proposed Amendment. Storm drain improvements would be needed to eliminate flood hazards.*

## Section 4.8: Hydrology, Water Quality and Flooding

A number of mitigation measures were provided in the EIR for Guasti Redevelopment Plan, which included the mitigation measures in the EIR for the Guasti Plaza Specific Plan:

### 1. Flooding

Implementation of the following mitigation measures would reduce flooding impacts to less than significant levels:

- Per the Guasti Specific Plan, all on-site drainage facilities will be designed to handle 25-year and 100-year flow. Similarly, all facilities associated with new development in Plan Areas A and C should be sized for maximum flow conditions during a 100-year storm event.
- All development proposals should be reviewed to ensure that the site plans reflect thoughtful design that minimize the potential for flood zone impacts and avoids placement of property and structures in areas vulnerable to flooding. For example, individual projects should locate parking areas toward the south when feasible.

*This mitigation remains applicable to future residential development under the proposed Specific Plan Amendment.*

### 2. Drainage Infrastructure

Implementation of the following mitigation measures would ensure that impacts to infrastructure systems would be less than significant.

- Precise drainage system requirements will be determined during specific project design review. Drainage design requirements will be subject to the provisions of site plan review by the City of Ontario.
- Prior to the issuance of any building permit in the Project Area, the applicant must obtain a General Construction Activity Storm Water Runoff Permit from the State Water Resources Control Board. A Notice of Intent, in addition to applicable fees, must be submitted at least thirty (30) days prior to initiation of construction activity on the site.
- For the Redevelopment Plan, each Planning Area shall include a detailed discussion of drainage system requirements, phasing and financing.
- Construction of required storm drain improvements within the Project Area shall be the responsibility of the individual project developers.
- Prior to issuance of any building permit for developments within the Project Area, required drainage system improvements consistent with the City Master Plan of Drainage shall be in place.

*This mitigation includes measures similar to those in the Specific Plan EIR and remains applicable to future residential development under the proposed Specific Plan Amendment. These have been included as standard conditions and mitigation.*

### 3. Runoff

Although the City requires design review, the following mitigation measures are recommended to ensure that the implementation of the Redevelopment Plan would not significantly impact drainage systems.

- Precise drainage system requirements will be determined during specific project design review. Drainage design requirements will be subject to the provisions of site plan review by the City of Ontario.
- Prior to issuance of any building permit in the Project Area, the applicant must obtain a General Construction Activity Storm Water Runoff Permit from the State Water



## Section 4.8: Hydrology, Water Quality and Flooding

Resources Control Board. A Notice of Intent, in addition to applicable fees, must be submitted at least thirty (30) days prior to initiation of construction activity on the site.

- For the finalized Redevelopment Plan, each Plan Area shall include a detailed discussion of drainage system requirements, phasing and financing that will be prepared to the satisfaction of the City.
- Construction of required storm drain improvements within the Redevelopment Project Area shall be the responsibility of the individual project developers.
- Prior to issuance of any building permit for developments within the Project Area, required drainage system improvements consistent with the City Master Plan of Drainage shall be in place
- If off-site drainage system improvements are required, such improvements would be subject to approvals of the County of San Bernardino Transportation/Flood Control Department and/or the U.S. Army Corps of Engineers.

*This mitigation includes measures similar to those in the Specific Plan EIR and under Drainage Infrastructure above. They remain applicable to future residential development under the proposed Specific Plan Amendment, except for the last bullet. Applicable measures have been included as standard conditions and mitigation.*

### 4.8.5 Standard Conditions and Mitigation Measures

#### Standard Conditions

The implementation of the following standard conditions would prevent adverse impacts related to hydrology and stormwater quality:

*Standard Condition 4.8.1: Future residential development shall comply with Title 6, Chapter 6 (Stormwater Drainage System) of the Ontario Municipal Code and the NPDES General Permit for Construction Activity, which requires projects on one acre or more to notify the RWQCB and implement a Stormwater Pollution Prevention Plan (SWPPP) for construction activities. SWPPPs shall be prepared for each construction phase or construction area.*

*Standard Condition 4.8.2: Future residential development shall comply with Title 6, Chapter 6 (Stormwater Drainage System) of the Ontario Municipal Code and the NPDES Permit for the Area-wide Urban Stormwater Runoff Management Program regarding the implementation of source and treatment control measures and other best management practices for long-term stormwater pollutant mitigation, as contained in the project's Water Quality Management Plan (WQMP) and as approved by the City.*

*Standard Condition 4.8.3: Future residential development shall construct the necessary on-site and off-site storm drain infrastructure to connect to the City of Ontario's storm drainage system and prevent the creation of flood hazards on-site and in downstream areas, as approved by the City Engineer.*

*Standard Condition 4.8.4: The project shall pay storm drain impact fees, as required by the City.*

## **Section 4.8: Hydrology, Water Quality and Flooding**

### **Mitigation Measures**

Consistent with the mitigation measures in the EIR for the Guasti Plaza Specific Plan and the EIR for the Guasti Redevelopment Plan, the following mitigation measures shall be implemented as part of future residential development:

*Mitigation Measure 4.8.1: To ensure that adequate storm drainage is provided to future residential development:*

- 1. The PAP for each Planning Area shall include a detailed discussion of drainage system requirements, phasing, and financing that will be prepared to the satisfaction of the City.*
- 2. Construction of required storm drain improvements shall be the responsibility of the project developer.*
- 3. Prior to the issuance of any building permit, required drainage system improvements consistent with the City Master Plan of Drainage shall be in place.*
- 4. Precise drainage system requirements shall be determined during specific project design review. Drainage design requirements shall be subject to the provisions of site plan review by the City of Ontario.*
- 5. In accordance with the Ontario Municipal Code, the storm drainage design shall provide for the proper drainage of the site and all improvements therein, based on the runoff that can be anticipated from ultimate development of the watershed area in which the site is located. Stormwater detention measures shall be provided when required by the City Engineer to reduce any adverse effects of increased runoff from development on downstream properties.*

*Mitigation Measure 4.8.2: To prevent flood hazards, all on-site drainage facilities shall be designed to handle 25-year and 100-year flows. All facilities shall be sized for maximum flow conditions during a 100-year storm event. Future residential development shall be reviewed and approved by the City Engineer to ensure that the site plan reflects thoughtful design that minimizes the potential for flood zone impacts and avoids placement of property and structures in areas vulnerable to flooding. For example, parking areas shall be located toward the south, when feasible.*

### **4.8.6 Unavoidable Significant Adverse Impacts**

Future residential development under the proposed Guasti Plaza Specific Plan Amendment would increase off-site runoff volumes; would have the potential to generate stormwater pollutants; and would be exposed to on-site flood hazards. However, no significant adverse impacts on hydrology, water quality, and flooding are anticipated with implementation of the standard conditions and mitigation measures above. Thus, no unavoidable significant adverse impacts are expected after mitigation.