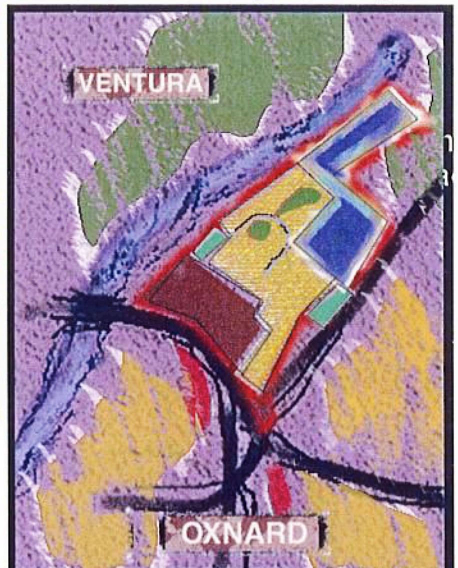
CITY OF OXNARD
Draft Environmental Impact Report

VOLUME I



RIVERPARK PROJECT

SCH #2000051046

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SUMMARY

PURPOSE

This section summarizes the information and analyses presented in the main body of this Draft Environmental Impact Report (DEIR). Section 15123 of the California Environmental Quality Act (CEQA) Guidelines *requires an EIR to include a brief summary of the proposed project and its impacts in language as clear and simple as reasonably practical. The* Guidelines *also state that the length of this summary should normally not exceed 15 pages. In accordance with the CEQA* Guidelines *this summary presents information on the proposed RiverPark Project, the potential environmental effects of this project, and measures identified to mitigate these effects. A summary of the analysis of alternatives contained in the DEIR is also provided. In addition, this summary addresses areas of controversy associated with the proposed project, including issues raised by public agencies and the public, known to the City of Oxnard. Issues to be resolved, including the choice among alternatives and measures to mitigate the environmental effects of the project, are discussed.*

PROJECT DESCRIPTION AND BACKGROUND

The proposed RiverPark Specific Plan would allow the development of a new mixed-use community containing open space, residential, commercial, and public facilities uses within the 701-acre Specific Plan Area. The project site is located immediately north of the Ventura Freeway (U.S. 101) between the Santa Clara River and Vineyard Avenue (State Route 232) in Oxnard. The project site is located within the Local Agency formation Commission (LAFCO) Sphere of Influence line for the City of Oxnard and within the 20-year City Urban Restriction Boundary (CURB) established by the City's 2020 *General Plan*. The southern 269 acres, presently located within the City of Oxnard, is referred to as RiverPark Area 'A' in this EIR. This portion of the site is located within the existing Historic Enhancement and Revitalization of Oxnard (HERO) Redevelopment Project area. The majority of RiverPark Area 'A' is also located in an existing specific plan area. The Oxnard Town Center Specific Plan, adopted in 1986 by the City of Oxnard, currently allows development of up to 4.4 million square feet of commercial space on this portion of the site. Two office buildings, streets and related infrastructure have been developed in this part of the site in conformance with this existing Specific Plan. The remainder of RiverPark Area 'A' consists of agricultural land, vacant land and the County of Ventura El Rio Maintenance Yard. This yard includes a fire station and various County offices and facilities.

The northern 432 acres of the project site is currently located outside of the City of Oxnard in an unincorporated area and is under the jurisdiction of the County of Ventura. This portion of the site, referred to as RiverPark Area 'B' in this EIR, contains an existing sand and gravel mine and two Ventura County Flood Control District retention basins. While mining on this portion of the site ended in the 1990s, materials processing still occurs on the mine site. Active plant facilities include two ready-mix concrete batch plants, an asphalt plant, and a materials recycling plant. The mine site contains four mining pits up to 100 feet in depth. Because the mine pits were excavated below the current average groundwater elevation in the area, the water table is exposed most of the time in one or more of the mine pits. Water levels in the pits were between 40 and 50 feet above mean sea level (msl) in October/November 2000. The County of Ventura has approved a reclamation plan for this mine site that requires the existing pits to be partially filled. The remainder of RiverPark Area 'B' consists of two existing retention basins, built by the Ventura County Flood Control District to accept runoff from agricultural areas to the east of Vineyard Avenue.

The RiverPark Specific Plan would permit the development of an integrated mixed-use community consisting of open space, residential, commercial, and public facilities uses. The community design of RiverPark follows the design principles of the 'New Urbanism' and 'Smart Growth' movements, which emphasize the importance of mixed land uses, communities scaled for pedestrian movement, limiting automobile usage and the importance of physical design in creating communities that people want to live, work, and shop in. The RiverPark community would be made up of four basic land uses: (1) the commercial area proposed within the southern portion of RiverPark Area 'A'; (2) the residential neighborhoods proposed to the north and east of the commercial areas; (3) the open space area proposed in the northern portion of the Specific Plan Area; and (4) public facilities. These land use areas would be linked and unified by a landscaped pedestrian, bicycle, and vehicular circulation system.

Approximately 38 percent (266 acres) of the 701-acre Specific Plan Area would remain in open space uses, 35 percent (244 acres) would contain residential uses, 21 percent (147 acres) would contain commercial uses, and 6 percent (44 acres) would contain public facilities. The RiverPark Specific Plan would allow the construction of up to 2,805 residential units and 2.485 million square feet of commercial development. The RiverPark Specific Plan would create 13 Planning Districts to regulate the location and configuration of the planned land uses. Each Planning District would have a specific range of permitted and specially-permitted land uses, densities, parking requirements, and other development controls.

The RiverPark Specific Plan includes an Affordable Housing Program requiring 15 percent of the total number of housing units built under the Specific Plan to be affordable to low- and very low-income households. The Specific Plan also identifies sites for two new elementary and one new intermediate school, new City of Oxnard and County of Ventura Fire Stations, neighborhood parks and community open space. The existing mine pits would be reclaimed and remain as open space. The proposed Specific Plan designates the reclaimed mine pits for use as water storage and recharge basins and allows the pits to be used by the United Water Conservation District (UWCD) as water storage and recharge basins at some future date. UWCD has expressed interest in using the existing mine pits within the Specific Plan Area for the storage of water diverted from the Santa Clara River at the Freeman Diversion structure. Water stored in the pits would be allowed to infiltrate in the basins to recharge the aquifer or be transferred to other UWCD facilities for recharge or delivery to customers for use.

The proposed RiverPark Specific Plan includes master plans for grading, circulation, drainage and stormwater quality treatment, water, sewer, electricity and natural gas service. Grading would be balanced within the Specific Plan Area, with no import or export of earth materials required. Stormwater flows generated within the RiverPark Specific Plan Area and those generated from off-site areas that drain to the Specific Plan Area will be treated by passing through a system of water quality basins and/or dry grassy swales before being discharged to the Santa Clara River through existing drain outlets, or to the mine pits, depending upon the magnitude of the rainfall event and location of the individual drainage area.

The first occupancy of residences or commercial buildings within the Specific Plan Area would be in 2003. It is anticipated that the community would take between 12 and 15 years to be fully built, depending on economic conditions. For purposes of analysis in this EIR, it is assumed that the Specific Plan Area would be fully developed by the year 2020. The overall phasing schedule established in the Specific Plan has been coordinated with the schedule for the State Route 101 and Santa Clara River Bridge Improvement Project, which calls for the four northbound lanes of the Ventura Freeway, including the new replacement bridge over the Santa Clara River, to be completed in the second quarter of 2003, and the new Oxnard Boulevard Interchange with the freeway completed in the third quarter of 2003.

In addition to the Specific Plan, several related actions are proposed including approval of a new Reclamation Plan for the existing sand and gravel mine; a general plan amendment; zone change and pre-zone actions; a change to the text of the City's zoning code; a tentative tract map; a development agreement; an amendment to an existing owner participation agreement; and annexation of RiverPark Area 'B' to the City of Oxnard.

ENVIRONMENTAL IMPACT AND MITIGATION SUMMARY

A summary of the impacts of the proposed project is presented below. This summary also discusses the measures proposed to mitigate the impact of the project and identifies the level of impact anticipated after these measures are implemented.

Land Use Planning, Programs & Policies

The consistency of the proposed RiverPark Specific Plan project with applicable land use plans and policies and the compatibility of the proposed development with surrounding land uses was analyzed. The consistency of the project with the City's 2020 *General Plan*, the HERO Redevelopment Plan, the Southern California Association of Governments (SCAG) *Regional Comprehensive Plan & Guide* and LAFCO policies was assessed. Annexation of RiverPark Area 'B' to the City and development of the entire Specific Plan Area with the proposed uses would be consistent with the City's land use plans and policies. Annexation of RiverPark Area 'B', which is located within the LAFCO Sphere of Influence line for the City, would also be consistent with LAFCO policies. The RiverPark Project is consistent with the SCAG *Regional Comprehensive Plan & Guide* as the amount of growth allowed by the Specific Plan would be consistent with adopted regional growth forecasts, and the characteristics of the project are consistent with relevant objectives of this regional plan. In addition, the RiverPark Specific Plan defines a pattern of land uses that would be consistent with the residential, agricultural and open space uses around the Specific Plan Area. No significant impacts related to inconsistencies with applicable land uses plans and policies have been identified.

Aesthetics

Analysis is provided on the significance of changes to the visual character of the area that would result from implementation of the RiverPark Project. The Community Design Element of the City of Oxnard *General Plan* identifies scenic resources within the City. Roadways that provide views of the scenic resources and agricultural lands within and around the City are designated as image corridors. The Ventura Freeway is designated as Regional Image Corridor, and Vineyard Avenue is a City Image Corridor. In addition, the intersection of the Ventura Freeway and Vineyard Avenue is designated as a Regional Gateway. Although Oxnard Boulevard, which is proposed to be extended into the Specific Plan Area, is also identified as a City Image Corridor, views between the project site and Oxnard Boulevard are currently obstructed by the Ventura Freeway. As viewed from surrounding roadways and uses, the Specific Plan Area currently has an open space visual character due to the small number of existing structures.

While the visual character of the Specific Plan Area will change as a result of the development allowed by the proposed RiverPark Specific Plan, this change will not result in a significant impact on the visual character of the area. The allowed development will not obstruct long range views of the mountains and hills in the Los Padres National Forest to the north from the Ventura Freeway or Vineyard Avenue. The height and character of the residential and commercial development proposed will be consistent with existing development in the area. RiverPark Area 'B' will continue to have an open space character as the existing mine pits will be preserved, a native woodland habitat will be established along the western edge of the Specific Plan Area, and no buildings will be located near Vineyard Avenue.

The Specific Plan would allow the development of a ballpark facility in RiverPark Area 'A' subject to the issuance of a Special Use Permit by the City. This facility would be lighted and could potentially impact residential uses allowed by the Specific Plan. This potential impact can be avoided through proper lighting design. No unavoidable significant impacts to the visual character of the area would result from the RiverPark Project.

Earth Resources

This section of the DEIR addresses potential impacts related to the soils conditions on the site and the geology of the area. The Specific Plan Area contains a variety of topographic and soils conditions as a result of the historic mining and agricultural activities. The mine site in RiverPark Area 'B' contains substantial areas of artificial fill which are potentially unstable. Significant impacts related to the potential instability of the slopes of the existing mine pits have been identified. Areas adjacent to the existing and proposed pit slopes may be impacted by: (1) gross instability of the pit slopes under static or seismic conditions, and/or (2) seismically induced lateral movements. Approximately 10 million cubic yards of earth materials will be graded over the entire 701-acre site. A balanced grading program involving excavation and replacement of the 10 million cubic yards of material is planned. The majority of this grading would consist of the excavation and/or replacement of earth materials in RiverPark Area 'B' to improve the structural characteristics of the soils in the mine site stockpile and plant areas and to stabilize the slopes of the existing mining pits. A comprehensive program of 44 specific measures is proposed to mitigate all identified geotechnical impacts to a level that is less than significant.

The Specific Plan Area is located in an area designated by the State Mining and Geology Board as containing sand and gravel resources of regional significance. While the available resources in the RiverPark Area 'B' have been mined, aggregate resources remain in RiverPark Area 'A'. Mining of these resources is not considered economically feasible as a relatively small amount of low quality aggregate is available under the existing agricultural land. This portion of the Specific Plan Area has also been designated for urban development since 1986. Development of the area is consistent with the mineral resource policies of the City's 2020 *General Plan*. Nonetheless, the loss of access to the approximate 2.2 million tons of mineral resources underlying the agricultural soils in RiverPark Area 'A' is considered an unavoidable significant impact of the RiverPark Project.

Biological Resources

The Specific Plan Area contains limited natural habitat as a result of the long-term disturbance of the site for agricultural and mining activities. RiverPark Area 'A' supports no native plant communities. Vegetation within this area is limited to agricultural crops, landscaping associated with existing development, and non-native weedy species in disturbed areas. RiverPark Area 'B' includes scattered patches of disturbed open space, two rows of trees, a small amount of active agricultural land and the El Rio Retention Basins No. 1 and 2. The mine site includes mine pits containing exposed groundwater, currently providing resting and limited foraging area for a number of waterfowl and other water-associated bird species. No special status plant or wildlife species were identified within the Specific Plan Area during biological surveys. Though not included within the Specific Plan Area, the predominant biological feature in the vicinity is the Santa Clara River. Several fish and wildlife species associated with the river are considered to be of special status, including southern steelhead, arroyo chub, and tidewater gobi, which have adapted to the seasonal and daily changing conditions of the river.

The proposed mine reclamation plan and specific plan include proposals to plant native vegetation on the reconstructed slopes of the mine pits and on the western edge of RiverPark Area 'B' along the Santa Clara River levee. No significant impacts to native plant communities would result. Native habitat values on the site would be enhanced as a result of the project.

Construction activities could impact native bird species nesting on the site. There is also a potential for significant indirect impacts to the natural habitat in the Santa Clara River from new lighting sources within the Specific Plan Area and the use of invasive non-native plant species in landscaping. Measures are identified to mitigate these impacts to a level that is less than significant. The RiverPark Specific Plan includes a water quality treatment system designed to treat runoff from the new land uses proposed within the Specific Plan Area and from off-site areas that presently drain to the Specific Plan Area. The water quality treatment system proposed will be sufficient to trap and remove pollutants and urban sediments to the degree necessary to ensure high water quality levels.

Therefore, impacts to biological resources in the Santa Clara River as a result of stormwater runoff into the River are not significant. No unavoidable significant impacts to biological resources would result from the RiverPark Project.

Water Resources

An extensive analysis was conducted on the potential impacts to groundwater and surface water quality, and on groundwater quantity. This analysis determined that the RiverPark Project would result in a beneficial impact on groundwater quantity. Over the 20-year period analyzed, the existing conditions on the site resulted in a net loss of 573 acre feet of groundwater per year because of evaporation from the existing mine pits and the consumption of groundwater pumped from on-site wells. The RiverPark Project will result in a net gain to the groundwater system of approximately 8,000 acre-feet per year as a result of the surface water diversions proposed by UWCD and the elimination of groundwater pumping for agricultural and industrial supply.

Construction of the project will require dewatering in the stockpile area on the existing mine site. Depending on the volume of groundwater pumped and the discharge location, this dewatering operation could result in significant impacts on groundwater quantity and quality. A mitigation measure recommending the discharge of this water to the nearby UWCD El Rio Spreading Grounds is proposed to mitigate this impact.

The RiverPark Project would change the amount, quality and direction of stormwater drainage flows in the Specific Plan Area. Stormwater flows generated within the RiverPark Specific Plan Area and those generated from off-site areas that drain onto the Specific Plan Area will be conveyed and treated by a system of water quality detention basins and/or Best Management Practice devices (such as dry swales, centrifugal separators, etc.). These flows are then discharged to the Santa Clara River through existing drain outlets, or to the mine pits, depending upon the magnitude of the rainfall event and location of the individual drainage area. Runoff from off-site industrial and agricultural areas that presently drain to RiverPark Area 'B' and the western portion of the residential area proposed in RiverPark Area 'B' would drain to three water quality treatment basins. These water quality detention basins have the capacity to hold, treat and convey runoff from a 10-year storm event to the Santa Clara River. The excess runoff generated from storms larger than a 10-year event will overflow via engineered spillways into the existing mine pits.

Changes in minerals, nutrients, metals, pesticides, hydrocarbon and microbial contaminants in runoff discharged to the Santa Clara River and the mine pits were analyzed. Conservative thresholds of significance were selected for determining impacts. This analysis determined that the potential use of the pits by UWCD for diverted surface water flows from the Santa Clara River would not have a significant impact on groundwater quality.

The concentrations of fecal coliform, iron, manganese, and nickel in runoff would be higher than the thresholds of significance used in this analysis. Fecal coliform concentrations discharged to the Santa Clara River would exceed the threshold selected for this numerical constituent, but would be less than the concentration in existing runoff. The estimated concentration also falls within the observed maximum ambient concentration in the river. Concentrations of iron, manganese and nickel in runoff discharged to the Water Storage/Recharge Basins from storms larger than a 10-year event are calculated to remain above the thresholds of significance being used for these constituents in the water quality analysis. Given the low frequency of these large storm events, this impact would not occur often. Based on the historical rainfall data from 1979 to 1999, no runoff would have reached pits during this 20-year period if the proposed stormwater treatment system had been in place. Because runoff from storms with a frequency less than a 10-year event would not enter the pits, overall mass loading of these and other pollutant constituents would be reduced. Iron concentration in discharges to the Water Storage/Recharge Basins would be greater than ambient groundwater concentrations, but would be lower than the Secondary Maximum Contaminant Levels (SMCL) set by the State Department of Health Services for drinking water and the existing discharge concentration. Manganese concentration in discharges to the Water Storage/Recharge Basins would be greater than ambient groundwater concentrations, but would be less than the existing discharge concentration and matches the SMCL. Nickel concentration in discharges to the Water Storage/Recharge Basins would be greater than ambient groundwater concentrations, but would be lower than the Primary Maximum Contaminant Levels set by the State Department of Health Services for drinking water.

Reduction of the concentrations of these constituents to a level that is lower than the numeric thresholds of significance used in the water quality analysis is not feasible because of the significant capital, operational and stand-by costs associated with the treatment systems examined as potential mitigation measures and because of the potential low reliability of treatment systems that would operate infrequently. The identified impacts to surface and groundwater quality would be an unavoidable significant impact of the RiverPark Project.

Agricultural Resources

Approximately 155 acres of agricultural land is located in RiverPark Area ‘A’. In addition to this agricultural land in RiverPark Area ‘A’, there is a small amount of agricultural land in RiverPark Area

'B'. There is a small strip of agricultural land located between Vineyard Avenue and El Rio Retention Basin No. 2. In addition, the County of Ventura currently leases the bottom of El Rio Retention Basin No. 2 for agricultural use. When this land currently used for agricultural purposes in RiverPark Area 'B' is considered, a total of 209 acres of agricultural land is located within the Specific Plan Area. All of the agricultural land within the Specific Plan Area is currently under cultivation with strawberries. The 155 acres of agricultural land in RiverPark Area 'A' is mapped as Prime Farmland on the Important Farmlands Map for Ventura County prepared by the State Department of Conservation. The property currently located in RiverPark Area 'B' is not currently identified as farmland on the Important Farmlands Map. The portion of the Specific Plan Area containing the 155 acres of Prime Farmland has been designated for urban uses since 1986 and the Project is consistent with the policies of the Oxnard 2020 *General Plan* addressing the preservation of agricultural land. The loss of agricultural land within the RiverPark Specific Plan Area would be an unavoidable significant impact resulting from the project.

Transportation & Circulation

Analysis of the traffic impacts of the project was conducted according to the guidelines set forth in the City of Oxnard's Traffic Impact Study Standards. Under the City's technical direction, traffic impacts on the study area transportation system were assessed for the proposed RiverPark Project. Existing and future traffic conditions were assessed in accordance with procedures specified by the Ventura County Transportation Commission (VCTC) and SCAG in the Ventura County *Congestion Management Plan* (CMP). The analysis incorporated a detailed evaluation of traffic conditions at 33 intersections, consisting of 25 intersections in Oxnard and immediately surrounding areas and 8 intersections in the City of Ventura. Five segments of the state highway network were also evaluated. These study locations include those roadway facilities most likely to be directly impacted by the traffic generated by the RiverPark Project.

The uses allowed by the proposed RiverPark Specific Plan would generate approximately 94,500 daily trips, of which 9,860 would occur in the evening peak traffic period. Of the total daily trips, 78,840 would leave the Specific Plan Area. The remainder of the daily trips would be trips between the allowed residential, commercial and school uses contained within the Specific Plan Area. As discussed in Section 4.7, Transportation and Circulation, these additional trips would significantly impact 8 of the 33 intersections studied. All of these impacts can be mitigated with identified roadway improvements.

Traffic conditions on the Ventura Freeway were also forecast for future year 2020. All freeway segments analyzed are projected to operate at level of service (LOS) D and better with the exception of the Ventura Freeway south of Central Avenue, where traffic conditions are projected at LOS F in the northbound direction during the morning peak hour and in the southbound during the evening peak hour with all projected cumulative growth. Traffic from the proposed project would contribute to this cumulative impact. As this level of service exceeds the minimum acceptable Level of Service E standard set by the Ventura County CMP, this cumulative impact is significant. Improvements necessary to achieve an acceptable level of service on the Ventura Freeway will be identified and addressed through the Ventura County CMP program. No unavoidable significant traffic impacts would result from the RiverPark Project.

Air Quality

The analysis for potential air quality impacts resulting from the RiverPark Project was completed in accordance with the Ventura County Air Pollution Control District (APCD) *Guidelines for the Preparation of Air Quality Analyses.* The APCD has established criteria for determining significant air quality impacts from a project. The APCD does not consider normal construction-related impacts to be significant. Standard mitigation measures will be applied to the project to minimize any adverse effect from construction to the maximum extent possible.

After the proposed homes are built and occupied, emissions would be generated by both stationary and mobile sources on a regular, day-to-day basis. Based on the threshold of significance recommended by the APCD, a project is considered to have a significant impact on air quality if it would generate over 25 pounds per day of either Reactive Organic Compounds (ROC) or Oxides of Nitrogen (NO_X). Emission modeling completed for the proposed project, assuming full build-out by the year 2020, shows that emissions of NO_X and ROC would exceed this threshold by approximately 173 and 64 pounds per day, respectively. This impact is considered significant. Certain design features, consistent with the *APCD Guidelines*, have been incorporated into the RiverPark Specific Plan. The *APCD Guidelines* state that addressing site design and land use issues at the conceptual stage of development maximizes opportunities to incorporate measures to reduce potential air quality impacts. Land use design features suggested in the *APCD Guidelines* which have been incorporated into the RiverPark Project include:

- Encourage the development of higher density housing and employment centers near public transit corridors;
- Encourage compact development featuring a mix of uses that locates residences near jobs and services;

- Provide services, such as food services, banks, post offices, and other personal services, within office parks and other large developments;
- Encourage infill development;
- Ensure that the design of streets, sidewalks, and bike paths within a development encourage walking and biking; and
- Provide landscaping to reduce energy demand for cooling.

The incorporation of a number of other standard mitigation measures recommended by the APCD would reduce daily emissions of these pollutants to the extent feasible, not to the 25 pounds per day significance threshold. The remaining impacts can be mitigated by the contribution of funds to an off-site Transportation Demand Management fund administered by the City of Oxnard. Contribution of funds would be required for each individual building project within the Specific Plan Area and would fund trip reduction measures to mitigate these impacts to a level considered less than significant. Modeling was also completed to determine if traffic generated by the project would result in significant increases in carbon monoxide levels at any intersections that will be impacted by the project. No significant carbon monoxide impacts will occur. Finally, there would be no significant risk to the health of residents of the homes proposed for this site from air emissions generated by facilities in the immediate vicinity, nor to objectionable odors generated from or experienced on the Specific Plan Area. No unavoidable significant air quality impacts would result from the RiverPark Project.

Noise

Analysis of potential noise impacts resulting from construction activities, roadway noise and stationary sources to both on- and off-site land uses has been conducted. Temporary noise impacts from equipment used during site development and individual building projects would result in impacts that are significant to both on- and off-site residential uses. However, with the inclusion of the recommended mitigation measures, these impacts would be reduced to less than significant. Future roadway noise levels were modeled based on the projected traffic volumes in the project traffic study. The increase in roadway noise along roadways, both on and off site, generated by project traffic would not be significant.

The Specific Plan would allow the development of a ballpark facility in RiverPark Area ‘A’ subject to the issuance of a Special Use Permit by the City. Activities at this facility, such as concerts, could generate levels of noise that would impact residential uses allowed by the Specific Plan. Proper siting and design of this facility can mitigate this potential impact. No unavoidable significant noise impacts would result from the RiverPark Project.

Public Services

Impact of the proposed RiverPark Specific Plan on schools, fire and police service, parks and recreation facilities, solid waste disposal and library services was assessed. The residential uses proposed would generate approximately 1,654 K-6 and 337 high school students. As schools in both the Rio Elementary and Oxnard Union High School District are operating at capacity, the impact of these new students would be significant. The proposed Specific Plan provides two school sites for the Rio Elementary School District to develop two elementary and one intermediate school to ensure adequate facilities are provided. School impact fees will also be paid to both school districts to mitigate the impact of these new students. No significant impact on fire services will result as the Specific Plan includes a site for new City and County fire stations. The addition of RiverPark Area 'B' to the City will have a significant impact on police services due to the amount of the area being added to the existing patrol beat in this part of the City. Establishment of a storefront police station in the commercial portion of the project is proposed to mitigate this impact. The Specific Plan also provides sufficient neighborhood and community parkland to meet the City's planning standards for the estimated new resident population of approximately 7,220. The City's existing diversion and recycling programs for solid waste result in impacts associated with solid waste generation not being significant. Impacts on the City's library services will also not be significant given that the Specific Plan permits the development of a storefront library facility to serve the residents in the Specific Plan Area, as well as residents throughout the City. No unavoidable significant impacts to public services would result from the RiverPark Project.

Public Utilities

An analysis of the impacts of the project on drainage, water, sewer, and energy service systems was conducted. The Specific Plan includes master plans for drainage and stormwater treatment, sewer, water, electrical and natural gas service. The City also recently completed updates of the city-wide drainage, wastewater collection and treatment, and water master plans as well as the City's Urban Water Management Plan (UWMP). These city-wide master plans all address the RiverPark Project.

The storm drain master plan included in the proposed RiverPark Specific Plan reflects detailed drainage studies completed to support the planning of the Specific Plan Area. The RiverPark Specific Plan Drainage Master Plan is designed to meet and exceed the Ventura County and City of Oxnard drainage criteria. In addition, the proposed drainage system was designed to provide water quality treatment of all storm flows from on- and off-site tributary areas. As the proposed drainage system has adequate capacity for on- and off-site runoff, no significant impacts to drainage conditions in the area will result from the RiverPark Project. A review of the flood protection provided by the Santa Clara River levee indicates the site is adequately protected.

The proposed water transmission system has been designed to conform to all City of Oxnard standards. Analysis completed shows that the proposed water distribution system would support the maximum day demand of all uses permitted by the proposed Specific Plan at the City's flow and pressure requirements. Based on the water demand factors used in the UWMP, the proposed uses would use 1,835 acre-feet of water annually. The Specific Plan Area contains existing wells with agricultural and industrial groundwater extraction allocations from the Fox Canyon Groundwater Management Agency. These allocations, totaling 1,580 acre-feet annually, will be transferred to the City, largely offsetting the increased demand associated with the project. The UWMP identifies additional water sources to meet projected demands through the year 2020. The City plans to meet the majority of this new demand with additional local water resources brought about by conservation and new water supply programs. No significant impacts to the City's water supply or distribution network will result from the project. UWCD has expressed interest in using the existing mine pits within the Specific Plan Area, after implementation of the proposed reclamation plan, for the storage of water diverted from the Santa Clara River at the Freeman Diversion structure. Water stored in the pits would be allowed to infiltrate or be transferred to other UWCD facilities for recharge. This allowed use would increase the reliability of local groundwater resources and would be a beneficial impact of the project.

The Specific Plan Sewer Master Plan is consistent with the City Wastewater Collection System Master Plan. The City's master plan identifies improvements needed to serve the proposed RiverPark Project and other areas tributary to the Central Trunk Sewer. The City's treatment plant has also been planned to serve projected growth throughout the City. No significant impacts will result to the City's collection, conveyance or treatment system.

The demand for electricity and natural gas supplies and service can be accommodated within the long-term source and distribution planning of the utilities serving the area, and no significant impacts will result from the RiverPark Project. No unavoidable significant impacts to public utilities would result from the RiverPark Project.

Cultural Resources

Archeological and historic resource surveys of the Specific Plan Area were completed. The archeological survey included a records search and a field survey. RiverPark Area 'A' was previously surveyed as part of the environmental review of the Oxnard Town Center Specific Plan project. No sites of any kind had been previously recorded within the study area or adjacent properties, and no new sites were discovered during the Phase I survey. A low density, mixed scatter of historical debris, possibly dating between 1879 and 1884, was found southeast of Myrtle Street and El Rio Drive. This is currently an open lot which is in a disturbed state as a result of the fairly recent demolition of structures that were present on this parcel. These surface materials may be an indication of a buried historical deposit at this location. Development of the proposed project would result in grading and earthwork at this location that may impact a potential historical deposit. This is considered a potential significant impact on archaeological resources.

All existing structures within the Specific Plan Area were reviewed for possible historical significance. The historic resource study identified 33 existing buildings and structures on the project site that would be demolished. Eighteen of these buildings, including sixteen buildings in the Ventura County El Rio Maintenance Yard, and an existing home and a commercial showroom building on El Rio Drive, are not eligible as historic resources under CEQA because they are not 50 or more years of age. Three other residential structures and the buildings on the mine site were surveyed and researched to determine whether any of these structures are historically significant. This research found that five of the existing buildings on the mine site, including an office building, garage, and three metal storage buildings are of sufficient age to be potential historic resources. In this case, these five buildings and structures are associated with an industry that has made a significant contribution to the physical development of Ventura County through the construction of roads, bases, airfields and buildings. While these existing structures are not eligible for listing on the national or state registers of historical resources, they may be eligible for listing as Ventura County Landmarks, a designation that has no integrity criteria. For this reason, these five structures are considered to be of local historical significance and demolition is considered to be a significant impact.

As the existing mine property derives some of its significance from the historic industrial style it represents, recordation should be regarded as an appropriate mitigation technique. Since the significance of the property is not in its architecture, design-based mitigation would not be appropriate. As the property derives its significance partially from its associations with historic themes, interpretative measures are warranted. Mitigation measures to document these structures and their associated history is proposed. Even with this mitigation, demolition of these five structures is considered an unavoidable significant impact of the project.

Hazards

A series of Phase I and Phase II Environmental Site Assessment (ESA) reports have been prepared for the properties included in the proposed Specific Plan Area to determine the potential for impacts related to the presence and use of hazardous materials by existing and historical uses within and around the Specific Plan Area. These risks are primarily associated with the potential for on-site hazards from abandoned oil wells, storage of materials categorized as hazardous under existing regulations, underground and above-ground storage tanks, and the operations of facilities historically located within the boundaries of the proposed Specific Plan Area.

Analysis of soils in the agricultural portions of the Specific Plan Area determined that no significant concentrations of herbicides or pesticides are present in the soils. These studies determined that the Specific Plan Area contains several abandoned oil wells that many need to be re-abandoned to current standards. In addition, the existing buildings on the site that would be demolished are of sufficient age to contain asbestos building materials and lead paint. Demolition of these structures in conformance with existing regulations would mitigate any potential impacts. No unavoidable significant impacts related to hazardous conditions within the Specific Plan Area would result from the RiverPark Project.

PROJECT ALTERNATIVES

Analysis of a range of alternatives has been performed to provide information on ways to lessen or avoid the impacts of the proposed RiverPark Project. Eight alternatives are analyzed, including: the No Project/Existing Conditions Alternative; the No Project/Existing Approvals Alternative; a RiverPark 'A' Only Alternative; a Reduced Density Alternative; two alternative water quality treatment systems; an alternative that preserves the structures with local historic significance on the site; and Alternative Locations. Of these alternatives, the Reduced Density Alternative, which considers development of 75 percent of the proposed uses within the Specific Plan Area, is identified as the environmentally superior alternative. Financial analysis of this alternative indicates that the reduction in allowed development results in insufficient revenues to pay for the costs of the project, rendering this alternative infeasible.

ISSUES RAISED DURING ENVIRONMENTAL REVIEW

The primary issue raised during the environmental review of this proposed project has been the impact of stormwater runoff on the groundwater exposed in the existing mine pits on the site. The City of Oxnard and the project applicant have consulted extensively with interested public agencies, including the County of Ventura, the United Water Conservation District and the Fox Canyon Groundwater Management Agency to determine the most appropriate drainage and stormwater quality treatment system and the ultimate use and disposition of the pits. The City has also worked closely with the Rio Elementary School District on the planning for new elementary and intermediate schools in the project.

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1.0 INTRODUCTION

PURPOSE

Although not required by the California Environmental Quality Act (CEQA), this introduction is included to provide the reader with an overview of the environmental review process being conducted by the City of Oxnard for the proposed RiverPark Project. The intent of this section is to familiarize the reader with the purpose, content, and format of this EIR and its relation to the planning process.

ENVIRONMENTAL REVIEW PROCESS

Purpose of an EIR

Under State law, environmental review must be conducted for activities and approvals which involve discretionary actions. This law is entitled the California Environmental Quality Act (CEQA). The first step in the CEQA process is to determine whether a proposed project is subject to CEQA. There are a number of statutory and categorical exemptions. If a project is subject to CEQA, the lead agency must determine if an EIR is required. The intent of an EIR is to accomplish several objectives as follows: (1) To disclose to decision makers and the public the significant environmental effects of proposed activities; (2) To identify ways to avoid or reduce environmental damage; (3) To prevent significant, avoidable environmental damage by requiring implementation of feasible alternatives or mitigation measures, and; (4) To disclose to the public reasons for agency approvals of projects with significant environmental effects. In later actions, the California legislature added two additional EIR objectives, as follows: (5) To foster inter-agency coordination; and (6) To enhance public participation.

To meet these objectives, an EIR contains information on what the environment is like today, and how that environment would change with implementation of the proposed action.

Environmental Processing

In accordance with the requirements of the California Environmental Quality Act (CEQA), the City of Oxnard conducted a preliminary review of the application for the proposed RiverPark Specific Plan Project and determined that an Environmental Impact Report (EIR) should be prepared to analyze the potential impacts associated with the approval and implementation of the proposed project.

A Notice of Preparation (NOP) was prepared by the City of Oxnard in May 2000 and sent to public agencies and other parties stating that an EIR was going to be prepared by the City. In accordance with the requirements of CEQA, a 30-day period was provided for responses to the NOP. This review period ended in June 2000. In June 2001 the City sent out a revised NOP to reflect changes in the project description and provide additional opportunity for comment. The NOPs issued by the City and the comment letters received are contained in Appendix 1.0 to this DEIR.

Based on the City's review of the project and consideration of the responses to the NOPs, this Draft EIR addresses all environmental topics identified in CEQA *Guidelines* Appendix G (Environmental Checklist Form) including:

- Land Use Planning, Programs & Policies
- Aesthetics
- Earth Resources
- Biological Resources
- Water Resources
- Agricultural Resources
- Transportation & Circulation
- Air Quality
- Noise
- Public Services
- Public Utilities
- Cultural Resources
- Hazards

This Draft EIR is being circulated for a 45-day public review period as required by state law. During this 45-day period, the City of Oxnard Planning Commission will hold a public hearing on the Draft EIR and will accept oral testimony on the EIR from the public. In addition, the City will accept written comments during this 45-day period. After the close of the public review period, written responses will be prepared to all written and oral comments on the Draft EIR. These comments and responses, in combination with the text of the Draft EIR, will constitute the Final EIR. The City of Oxnard Planning Commission will hold a public hearing to review the Final EIR and consider its certification. The Final EIR must be certified as adequate and complete before any discretionary approvals are granted, or any discretionary actions to implement the project are taken by the City of Oxnard.

REPORT FORMAT

As stated, a principal objective of CEQA is that the environmental review process involve and inform the public. In meeting this objective, this EIR must inform members of the public and public officials responsible for reviewing and approving the projects, as well as other interested parties, of the physical impacts associated with the proposed project. Towards this end, specific features have been incorporated into this EIR to make it more understandable while providing the technical information necessary for the public as well as public officials.

As required by law, this EIR contains terminology specific to the CEQA process that is used throughout the document. "Baseline or existing conditions" means the environment as it exists today, "environmental impacts" are changes to the existing environment which would result from the project, while "mitigation measures" are ways the design, construction, or operation of the project could be modified to minimize potential impacts. Finally, "alternatives" are variations on the project which are considered as ways to minimize potential significant impacts, while being consistent with the primary objectives identified for the project. This EIR provides the general public and decision-makers the information necessary to visualize the future environment and make an informed decision which weighs the potential effects of the project against other relevant factors.

In order to provide a clear, accurate depiction of the potential effects associated with the project, the environmental evaluation is presented under separate headings based on the environmental issue under consideration. The format of this EIR and the general contents of each section are provided below to assist the reader in using this EIR. Sections of the Draft EIR following this introduction are organized as follows:

Section 2.0, Environmental Setting, includes a general description of the existing environmental characteristics of the region and local area to help orient the reader.

Section 3.0, Project Description, presents a detailed description of the proposed Project as required by the CEQA *Guidelines*. The topics addressed in this section include the project objectives, the characteristics of the project, uses of the EIR, and discretionary approvals required by the lead and responsible agencies for the project assessed in this document.

Section 4.0, Environmental Impact Analysis, contains analysis of each of the environmental topics addressed in this EIR. Each topic is addressed in separate subsections as follows: existing conditions;

project impacts; cumulative impacts; mitigation measures; and unavoidable significant impacts after mitigation.

Section 5.0, Alternatives, provides analysis of alternatives to the project. As required by the CEQA *Guidelines*, a discussion of the reasons for selection of the alternatives analyzed is provided with a comparative analysis of each alternative with the project.

Section 6.0, Growth Inducing Impact Analysis, addresses the physical and economic characteristics of the project which have the potential to induce growth in the surrounding environment.

Section 7.0, Significant Irreversible Environmental Changes, discusses the irreversible or irretrievable commitment of resources that would occur as a result of approval of the project.

Section 8.0, References, lists all documents and persons contacted which were used as a basis of information for the Draft EIR.

Section 9.0, Organizations and Persons Consulted, provides a list of all persons and organizations contributing to the preparation of the Draft EIR.

Appendices to this EIR include the Notices of Preparation and technical studies and data supporting the analysis in the EIR.

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2.0 ENVIRONMENTAL SETTING

INTRODUCTION

The CEQA Guidelines *require a description of the environment as it exists, from both a local and regional perspective, in an EIR. This section presents an overview of the existing conditions of the site and surrounding areas to orient the reader to important local land use and environmental conditions reflected in the proposed RiverPark Specific Plan. Additional detailed information on existing environmental conditions is provided in* **Section 4.0** *of this EIR.*

PROJECT LOCATION

The City of Oxnard is located on the Oxnard Plain in the County of Ventura midway between Santa Barbara and Los Angeles. Figure 2.0-1 illustrates the location of the City of Oxnard within Ventura County. As shown, the City of Oxnard is in southern Ventura County near the coastline. The 701-acre site for the proposed RiverPark Specific Plan ("Specific Plan") in relation to the City of Oxnard is illustrated in Figure 2.0-2. The Specific Plan site is located in the northern part of the City immediately north of the Ventura Freeway (U.S. 101), between Vineyard Avenue and the Santa Clara River.

JURISDICTIONAL BOUNDARIES

As shown in Figure 2.0-3, the entire RiverPark site is located within the existing Sphere of Influence for the City of Oxnard as adopted by the Ventura County Local Agency Formation Commission (LAFCO). The Sphere of Influence Line represents the probable ultimate physical boundaries and service area for the City.

Figure 2.0-3 also shows the current boundaries of the City of Oxnard and the City Urban Restriction Boundary (known as the "CURB"). As shown in this figure, the southern portion of the Specific Plan Area is located within the City at this time. This portion of the project site is referred to as "RiverPark Area 'A'," and consists of approximately 269 acres of the proposed Specific Plan Area. The remaining 432 acres of the site are currently located outside of the City of Oxnard in unincorporated area and is under the jurisdiction of the County of Ventura. This portion of the site is referred to as "RiverPark Area 'B'."

SITE CHARACTERISTICS

An aerial photograph of the project site and surrounding areas is provided in Figure 2.0-4. RiverPark Areas 'A' and 'B' are also identified on this photograph. As shown in this photograph, the western edge of the proposed Specific Plan Area is formed by the existing earthern levee along the edge of the Santa Clara River. Several existing drains in the levee drain portions of the site to the river.

RiverPark Area 'A'

Presently, RiverPark Area 'A' includes existing developed areas and active agricultural land. As shown in Figure 2.0-5, the southwestern corner of RiverPark Area 'A' has been previously developed with streets and two office buildings. These northernmost of these two office buildings, known as the State Compensation Fund Insurance Building, is a three-story building containing 115,000 square feet of space. The southernmost of these two buildings, known as the Nordman, Cormany, Hair and Compton Building, is a seven-story, 106,000 square foot building. Vacant development sites are located between these existing buildings and the freeway.

Immediately east of this developed area is the 14-acre El Rio Maintenance Yard, containing a complex of buildings housing various County of Ventura offices and facilities. This complex, owned by the County of Ventura, was originally developed between 1953 and 1959. Other buildings were added in the 1960s, 70s, and 90s. Approximately 16 buildings remain on the site. Currently this site contains a county fire station, as well as facilities and storage yards for several County agencies including Resource Management Agency Weights and Measures Division, Public Works Agency Road Maintenance, Flood Control, General Services Agency Fleet Services and Parks and Recreation Department Maintenance Services. The areas to the north and east of these developed portions of RiverPark Area 'A' are currently in agricultural production.

Access to this part of the Specific Plan Area is currently provided by local streets and ramps from the Ventura Freeway. The existing streets on the site include Ventura Road, which crosses under the freeway from the south, Town Center Drive, and El Rio Drive. Ventura Road currently provides access to the State Compensation building. Town Center Drive currently extends east from Ventura Road to the south of the Nordman, Cormany, Hair and Compton Building. El Rio Drive is a frontage road, located immediately north of the Ventura Freeway that connects to Myrtle Street to the east. Myrtle Street provides a connection to Vineyard Avenue at a signalized intersection. Existing on- and off-ramps from the northbound lanes of the Ventura Freeway connect to Town Center Drive. The eastern portion of RiverPark Area 'A' extends to Vineyard Avenue and also includes previously developed areas.

FIGURE 2.0-1

Regional Location

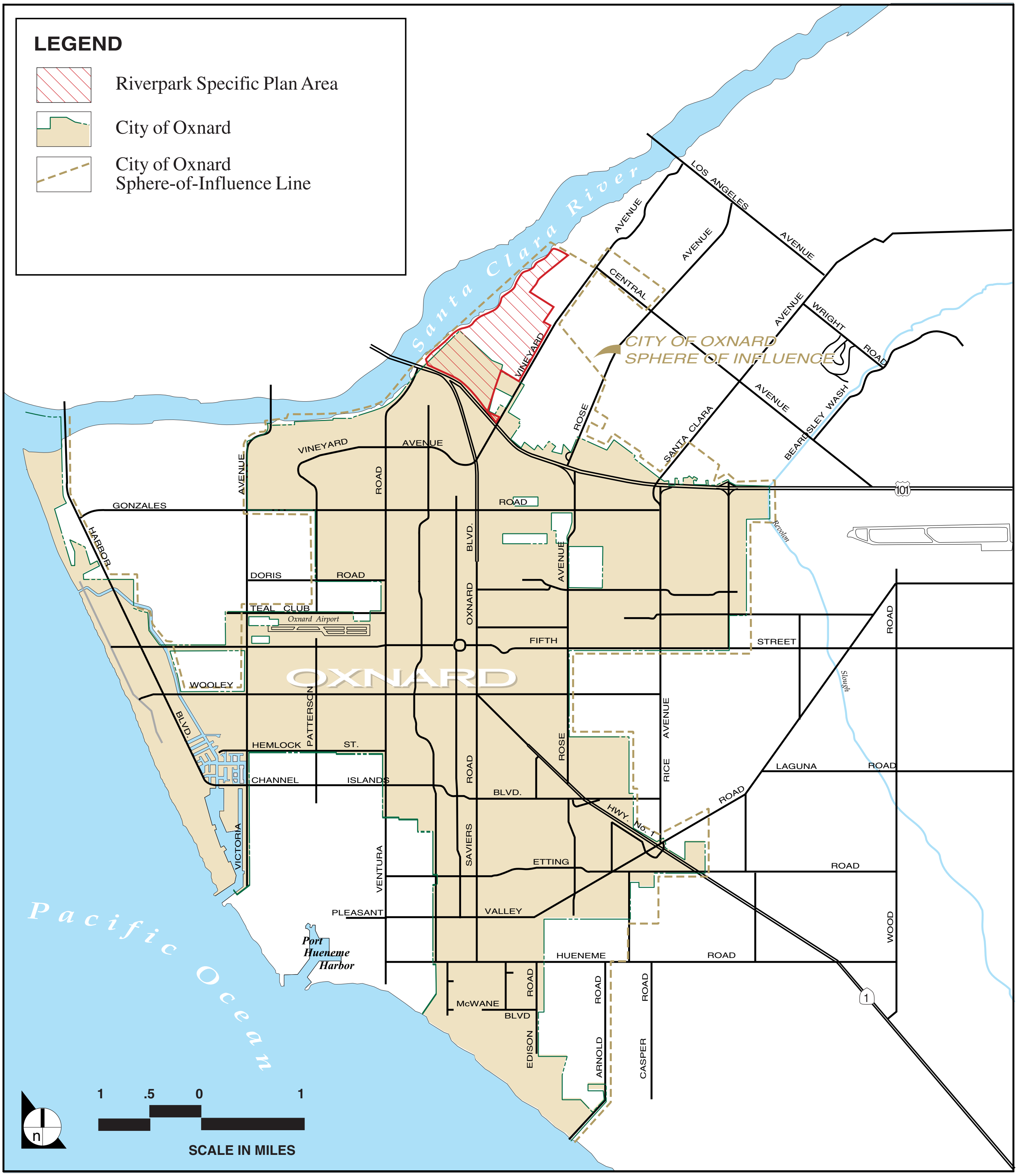

FIGURE 2.0-2

Project Vicinity Map

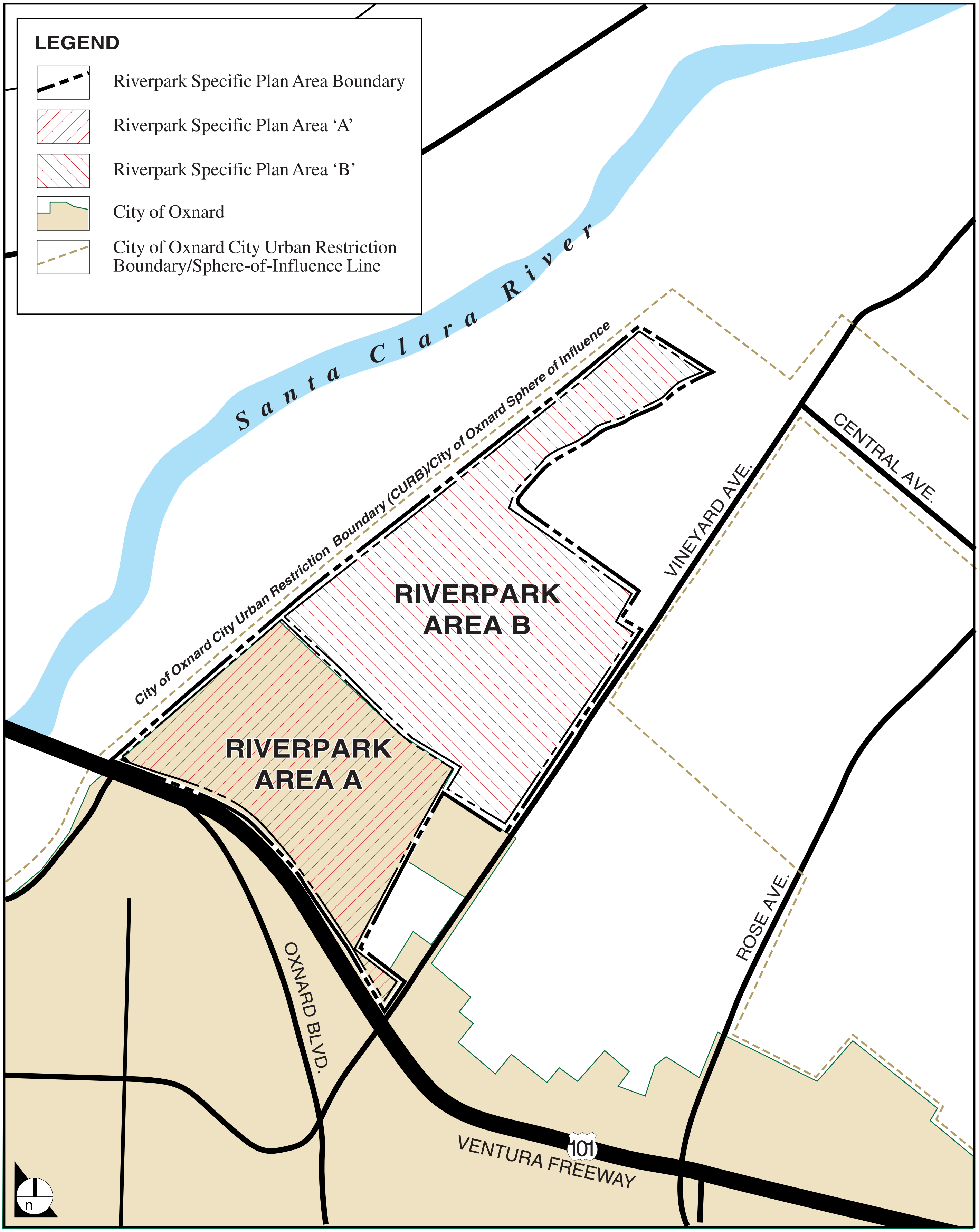

FIGURE 2.0-3

Project Location

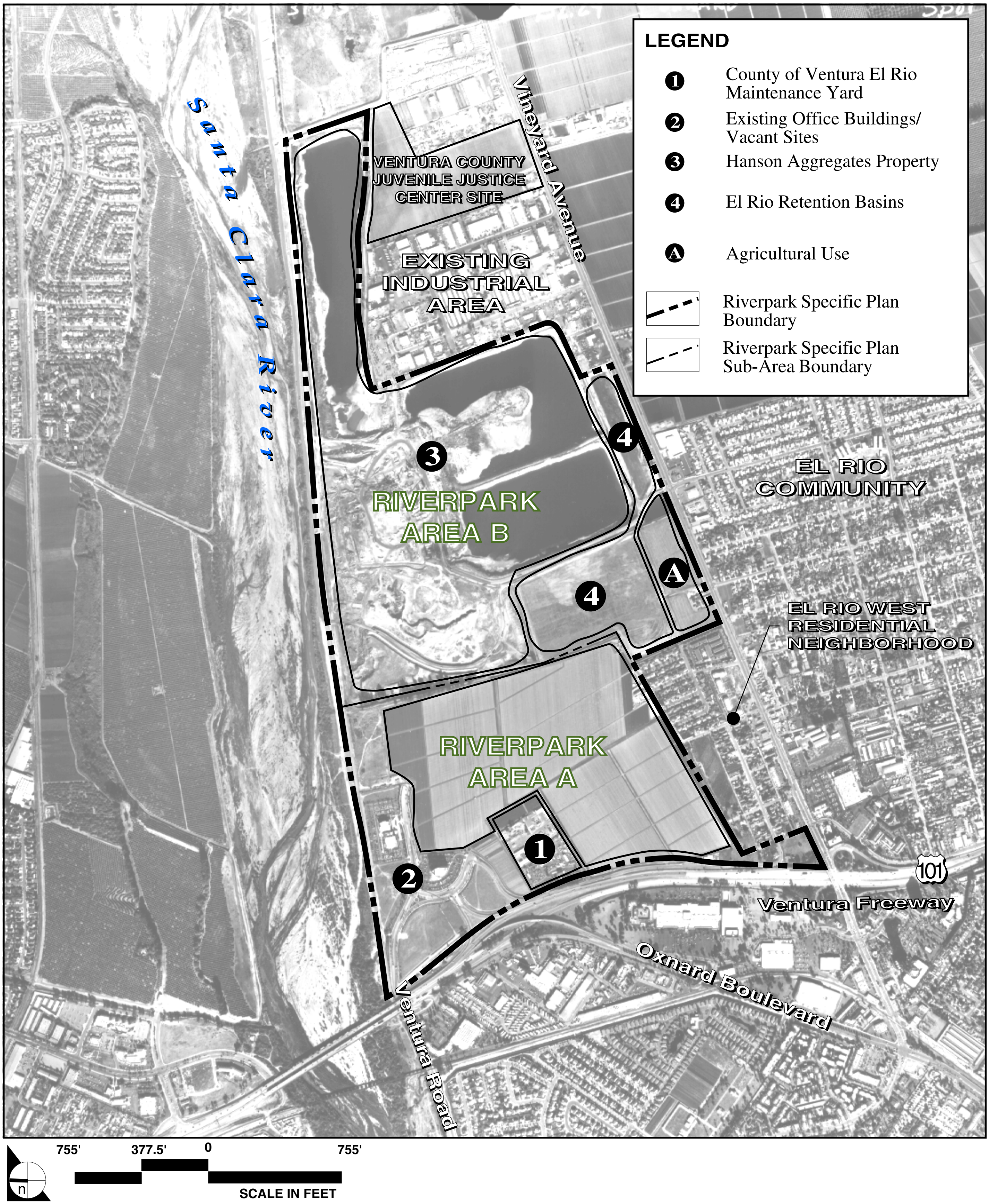

FIGURE **2.0-4**

Onsite Land Uses

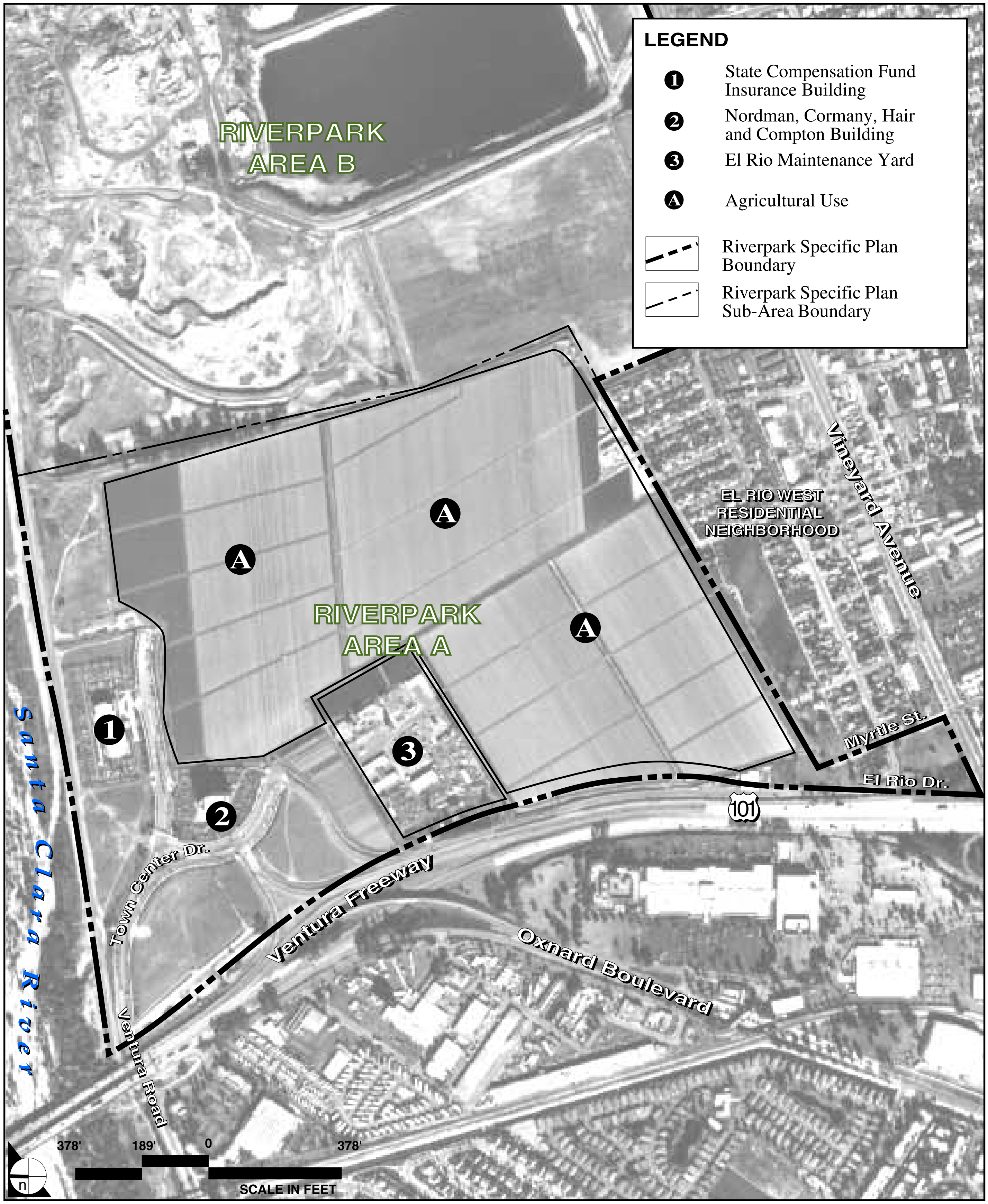

FIGURE 2.0-5

Riverpark Area "A" Features

The southeast corner of the Specific Plan Area consists of vacant land, vacant commercial and residential structures, and small single family homes located to the south of Myrtle Street and to the north of El Rio Drive. One of these homes is presently occupied.

RiverPark Area 'B'

RiverPark Area 'B' contains an existing sand and gravel mine owned and operated by Hanson Aggregates, and drainage facilities owned and operated by the Ventura County Flood Control District. As shown in Figure 2.0-6, the majority of this part of the site consists of the Hanson Aggregates sand and gravel mine and associated production facilities. The entire RiverPark site and surrounding areas are located in an area identified as containing regionally significant aggregate (sand and gravel) resources by the State Mines and Geology Board. The Hanson site is one of several sand and gravel mining sites located along the eastern edge of the Santa Clara River in the area. As shown on Figure 2.0-6, most of the site consists of the Hanson Aggregates sand gravel mining site which includes the plant area, a stockpile area and three open mining pits.

Mining of the site began in the early 1950's and the mining operator obtained approval from the County of Ventura on March 22, 1979 to continue the mining of construction-grade aggregate with the approval of a Conditional Use Permit (CUP No. 1942) and to continue operating the processing facilities with the approval of a second Conditional Use Permit (CUP No. 2425. Both of these permits expired at the end of 1999. The processing facility is still in use under a temporary status authorized by the County of Ventura through December 2001. Hanson Aggregates has filed a new permit application (CUP 5093), to allow the company to continue to operate the processing facilities.

The plant facilities include two ready mix concrete batch plants operated by Associated Ready Mix, an asphalt plant operated by Sully Miller, a recycling plant operated by Hanson Aggregates, and related shop areas and offices. Hanson Aggregates has recently removed some facilities and completed other site maintenance activities in accordance with the approved reclamation plan for the site. Over the past year Hanson Aggregates has removed a rock and sand plant, various equipment in other locations on the property, an underground asphalt oil tank, and three transformers. In addition, two structures, a tire shop and a Quonset hut, have been removed from the site.

The stockpile area is located south of the plant site. The mining pits at the Hanson Aggregate plant include the Brigham, Vickers, Small Woolsey, and Large Woolsey pits. The existing elevations at the top of these pits ranges from about 85 feet at the southern edge of the Brigham Pit to 100 feet at the northern edge of the Large Woolsey Pit. The elevations at the pit bottoms range from about El. -2 feet

(MSL) at the northeastern end of the Large Woolsey pit and at the northwestern end of the Small Woolsey pit, to about Elevation -8 feet in the Brigham pit and Elevation -4 feet in the Vickers pit. As shown in the aerial, these pits now contain exposed groundwater.

Both CUP 1942 and CUP 2425 included a reclamation plan, which set forth requirements for the reclamation of the sites. CUP 1942 calls for the refilling of the mine pits to within 30 feet of the adjacent natural ground surface and defines permeability standards for the refill material. Implementation of this existing reclamation plan would require that approximately 6.4 million cubic yards of material be imported to the site to fill the pits to the levels required by the reclamation plan.

The approved final use of the pit areas after reclamation if "Open Space," which excludes any use that requires irrigation or other artificially supplied water source, the use of fertilizer, or any use which could potentially reduce groundwater quantity or quality. These conditions also require that the pits be secured with adequate fencing, appropriate slope erosion measures be taken to protect adjacent properties, and compliance with all safety and other governmental regulations be maintained. Compliance with this measure requires that runoff from outside the mine site be prevented from entering the pits.

Subsequently, the County administratively approved excavation of the stockpile area to 5-foot above the historic high groundwater level, which is above the 30-foot refill level required by the approved reclamation plan. The County has stated that the material located between the 30-foot refill level and the 5-foot above historic high on the stockpile area can be credited towards the requirement to refill the existing pits. There are approximately 1.8 million cubic yards between the 30-foot and the 5-foot above historic high levels on this part of the site. If the 1.8 million yards of material in the plant area are utilized in the refill, then the required imported fill in the pit area would be reduced to approximately 4.6 million cubic yards and the elevation of the reclaimed pits would be approximately 39 feet below the surrounding elevation, with the elevations at the reclaimed pits varying from a low of about 50 feet at the southern end of the Brigham Pit to 60 feet at the northern end of the Large Woolsey Pit. The final elevations in the plant and stockpile areas would be 5 feet above the historic groundwater level.

The remainder of RiverPark Area 'B' consists of two existing retention basins, built by the Ventura County Flood Control District to accept runoff from areas to the east of Vineyard Avenue. The North El Rio Retention Basin No. 1, built in 1995, is located adjacent to Vineyard Avenue. The larger North El Rio Retention Basin No. 2, located south and west of Basin No. 1, was built in 1997. North El Rio Retention Basin No. 1 is 15 – 20 feet deep and was designed to hold a 5-year frequency storm for storage

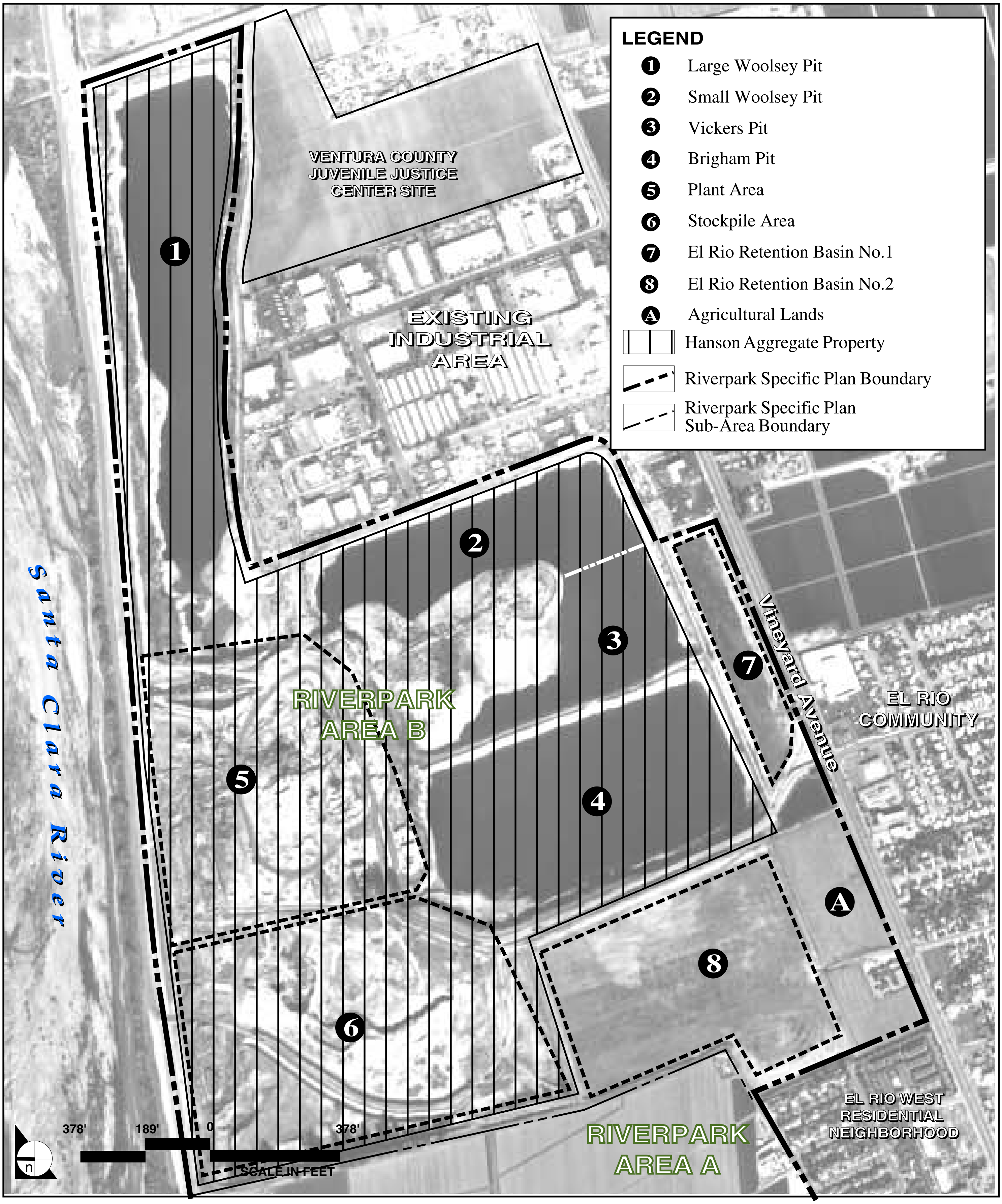

FIGURE 2.0-6

Riverpark Area "B" Features

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and percolation before discharging through a pipe to the larger Retention Basin No. 2 to the southwest. Retention Basin No. 2 is approximately 15 feet deep. A portion of the Retention Basin No. 2 site located along Vineyard Avenue was not excavated and remains as a buffer between the basin and Vineyard Avenue. These basins were built by the County to reduce flooding and eliminate nuisance runoff from impacting the existing El Rio residential community to the east of Vineyard Avenue by retaining the runoff in these basins, allowing for percolation into the groundwater basin. The agricultural area to the east of Vineyard Avenue and north of the El Rio Community drains to these basins.

The RiverPark site is situated in the Oxnard Forebay, a sub-basin of the larger Santa Clara-Calleguas groundwater basin. The basin lies within the 2,000-square mile watershed of the Santa Clara River, Calleguas Creek, and associated tributaries. The basin can be divided into 12 sub-basins based primarily on geologic or hydrogeologic features affecting groundwater levels and/or groundwater flow. The RiverPark site is located in the south-central portion of the Oxnard Forebay along the south bank of the Santa Clara River. The delineation between the Oxnard Forebay and downgradient Oxnard Plain is based on the zone where shallow sands transition into shallow clay deposits beneath the Oxnard Plain, which result in a change from unconfined groundwater beneath the forebay to confined groundwater conditions beneath the plain, which define several aquifers. In the Oxnard Forebay, alluvial sediments in the subsurface are predominantly coarse-grain sands and gravels. Fine grain sediments such as silts and clays that act as confining layers in the groundwater system are generally absent or discontinuous. This condition allows for direct recharge of the upper aquifers from the surface and some recharge of the lower aquifers from the upper aquifers. On the Oxnard Plain, more continuous fine grain layers of silts and clays are present in the subsurface. These fine grain layers retard the vertical movement of groundwater and limit direct surface recharge of deeper aquifers. As such, subsurface inflow from upstream basins including the Oxnard Forebay provide an important source of recharge to the Oxnard Plain.

Water wells near the project site indicate that groundwater occurs beneath the central portion of the RiverPark site at an average elevation of 33 feet mean sea level (msl). The average ground surface elevation on the unexcavated portions of the site is approximately 85 feet msl, resulting in an average depth to water of 52 feet. Groundwater is often exposed in the open mine pits. Water levels beneath the Oxnard Forebay fluctuate primarily in response to precipitation, artificial recharge in nearby spreading basins, and agricultural and municipal pumping. Typically, water levels rise during years of high precipitation and fall during years of low precipitation. Over the last 20 years, the water table beneath the RiverPark site has fluctuated more than 120 feet, ranging from a low of approximately –47 feet msl to a high of approximately 76 feet msl. Using an average ground surface elevation of 85 feet msl, the depth to water has varied from less than 10 feet deep to more than 130 feet beneath the project site.

Over the last 20 years, water levels have fluctuated between near historic water level highs in the early 1980s to historic lows during a drought in the late 1980s/early 1990s, followed by a rebound back to record high water levels in the mid to late 1990s. Both the historic high water level (71.7 feet msl in 1996) and the historic low water level (-36 feet msl in 1991) have occurred during the last 10 years. Water levels also fluctuate on a seasonal basis in response to rainfall, artificial recharge, and to some extent, pumping patterns. As a result, water levels can rise more than 25 feet during the winter and spring months in the vicinity of the project site.

SURROUNDING LAND USES

An aerial photograph showing surrounding land uses is provided in Figure 2.0-7. The lower Santa Clara River is located immediately west of the site. The Santa Clara River is the longest and potentially the most significant river in Southern California because of its existing natural functions. The Santa Clara River flows approximately 100 miles from its headwaters near the community of Acton in Los Angeles County to the Pacific Ocean. The lower river provides habitat for a number of federally listed threatened and endangered species.

Long-term conservation planning efforts for the Santa Clara River have been underway over the past decade. Preparation of the Santa Clara River Enhancement and Management Plan began in 1991. Preparation of this plan is being directed by a 26-member Steering Committee including representatives of federal, state, and local public agencies, owners of property along the river corridor, and local conservation organizations. To date, reports have been prepared on critical issue areas, and maps of the river have been prepared using Geographic Information Systems computer mapping software. The steering committee approved a set of management recommendations in 1999 and is currently seeking funding to prepare the plan document and the related environmental review documents.

The California Coastal Conservancy is proposing to acquire land along approximately 12 miles of the lower portion of the river to form the Santa Clara River Parkway. The primary goal of the proposed acquisition of land along this part of the river is to form a continuous estuarine and riverine corridor. This would facilitate restoration and enhancement of natural river habitat along this portion of the river allowing for flood management and the establishment of a public trail system. The Santa Clara River Parkway project is consistent with the recommendations of the Santa Clara River Enhancement and Management Plan Steering Committee. The initial concept is for the Santa Clara River Parkway

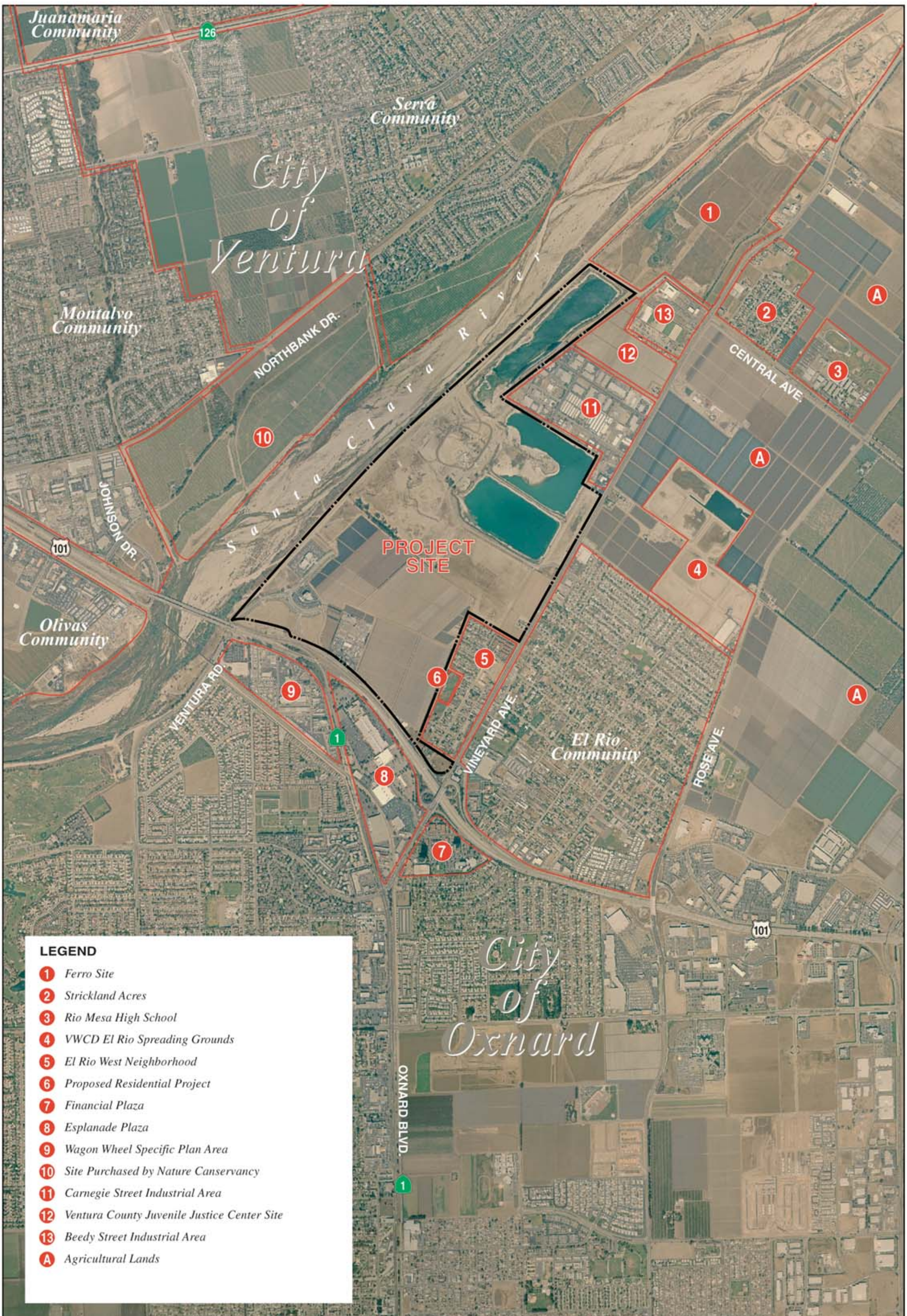

FIGURE 2.0-7

Surrounding Land Uses

to be managed by a joint powers authority made up of the Coastal Conservancy and the Cities of Oxnard and Ventura. The Coastal Conservancy is seeking funding for this project through grants and the state budget for the Conservancy. Bond money from Proposition 12, a statewide measure approved by the voters in March 2000 to preserve open space and wildlife habitat will also be used to fund property acquisition.

The first purchase of land for Santa Clara River Parkway was recently completed. A 220-acre property located across the Santa Clara River from the proposed Specific Plan Area in the Montalvo area of the City of Ventura was acquired by the Nature Conservancy with a grant from the California Coastal Conservancy. This site currently contains a citrus orchard and a portion of the property will be leased back to the former owner for continued agricultural use.

Located to the west of the Specific Plan site across the Santa Clara River is agricultural land and residential development in the City of Ventura. As mentioned above, acquisition of one of the agricultural properties by the Coastal Conservancy is proposed. Across from the Large Woolsey Pit is a residential neighborhood located in the Serra Community as defined in the City of Buenaventura Comprehensive Plan. The City's Comprehensive Plan calls for the preservation of the agricultural land and stable residential neighborhoods in this community. Further to the south, near the Ventura Freeway, are residential neighborhoods in the Montalvo Community as defined in the San Buenaventura Comprehensive Plan. The City's Comprehensive Plan allows for some development in this community, provided it is compatible with the existing development. Access to the eastern part of Ventura is provided from the Johnson Drive interchange with the Ventura Freeway, located just west of the Santa Clara River. Northbank Drive in Ventura runs along the north bank of the river and provides access to the neighborhoods along the river from Johnson Drive.

The Ventura Freeway is located immediately south of the proposed Specific Plan Area. Caltrans is currently planning major improvements to this section of the freeway through the State Route 101 Improvement and Santa Clara River Bridge Replacement Project. This project will include the replacement of the existing bridges across the Santa Clara River and the widening of the freeway from three to six lanes in each direction from Vineyard Avenue in Oxnard to the Montalvo Spur Overhead, located just north of Johnson Drive in Ventura. The existing 7-lane bridges will be replaced with a single 12 lane bridge. In Oxnard, this project will include the reconstruction of the existing Oxnard Boulevard Interchange and the Ventura Road undercrossing of the freeway, which will be widened from two to five lanes. The new Oxnard Boulevard Interchange will be a tight diamond interchange design providing access from Oxnard Boulevard to the proposed RiverPark Specific Plan Area and existing commercial areas to the south of the freeway. Minor reconfiguration of the existing freeway ramps at Johnson Drive in Ventura is also planned. Caltrans has prepared a Supplemental EIR/EIS for this proposed project. The Draft of this Supplemental EIR/EIS was circulated for public review in May 2000 and the record of decision of approval of the Final Supplemental EIR/EIS was issued in June 2001. The current schedule calls for construction to begin in early 2002 with completion in mid-2006.

Existing commercial areas are located south of the freeway in the Wagon Wheel, Esplanade, and Financial Plaza Areas. Redevelopment of the 44-acre Esplanade Shopping Center site, located between Oxnard Boulevard and Vineyard Avenue, was approved by the City of Oxnard in November 2000. Construction is presently underway on a new 506,000 square foot shopping center on this site, which was formerly developed with the Esplanade Mall, an enclosed regional shopping center. The new Esplanade Plaza will include a variety of retail commercial stores, including a home improvement warehouse store and a variety of other retail stores.

The Wagon Wheel Area consists of approximately 60 acres of land located between Oxnard Boulevard, the Union Pacific Rail tracks, and Ventura Road. Existing land uses include a mixture of low-scale industrial and commercial facilities in the eastern half of the site, the Wagon Wheel Mobile Home Park in the west/central portion, and a neighborhood scale retail center in the western portion of the site. A specific plan has been proposed for this site which would allow development of approximately 1.6 million square feet of office, general commercial, and restaurant uses along with 250 multi-family dwelling units. The City certified an Environmental Impact Report in 2000 that evaluated the conceptual land use plan for this area. Completion and approval of a Specific Plan for this area is required before any redevelopment of this area begins.

The Financial Plaza is located east of Vineyard Avenue and south of the Ventura Freeway. The Financial Plaza currently includes the six-story Radisson Hotel, surface parking, and the thirteen-story City National Bank office tower in the eastern portion of the site. In the north are one- and two-story offices and surface parking. The 21-story Dean Witter office tower, a three-story parking structure, and surface parking are located on the western portion of the site. An office tower and a parking structure have been previously approved and are currently proposed for the southern portion of the site.

Located south of the Ventura Freeway and west of the Santa Clara River is the Ventura Auto Center located in the Olivas Community as defined in the city of San Buenaventura Comprehensive Plan. To the west and south of the auto center is an existing light industrial area and agricultural land. Access to the auto center area is provided from the Johnson Drive Interchange.

Uses located between Vineyard Avenue and the proposed RiverPark Specific Plan Area include existing residential areas, industrial uses and agricultural land. The existing residential neighborhood located immediately north of Myrtle Street, and west of Vineyard Avenue, is referred to as the El Rio West neighborhood in the City of Oxnard's 2020 General Plan. The part of this neighborhood located north of Stroube Street is within the City of Oxnard along with some parcels on Vineyard Avenue. This part of the neighborhood contains 75 single family homes, two apartment complexes with 174 units, and a vacant parcel on Vineyard Avenue.

The older part of this neighborhood, located between Stroube and Myrtle Streets, is currently unincorporated and under the jurisdiction of the County of Ventura. This portion of the neighborhood was primarily developed between 1900 and 1945. Access to the neighborhood is provided by several east-west streets that extend from Vineyard Avenue. Colonia Avenue, the main north–south street in the neighborhood, connects to El Rio Road at Myrtle Street. This part of the neighborhood contains 81 single-family homes and various commercial uses on Vineyard Avenue.

Some vacant land is also located in this neighborhood, including 4 acres found immediately east of the RiverPark site between Stroube Street and Olive Avenue. A pre-application for consideration of annexation of this site to the City of Oxnard and development of single family homes has recently been submitted to the City for review. The proposal is to develop 37 homes containing two and three bedrooms and ranging in size from 1,100 to 1,400 square feet.

To the north of the proposed specific plan area between the Santa Clara River and Vineyard Avenue are industrial areas, agricultural land, and other aggregate mining and production sites. Two existing industrial areas are located to the north of the RiverPark site along Vineyard Avenue. An approximate 95-acre industrial area is located along Carnegie Street, Montgomery Avenue and Lambert Street immediately east of the Large Woolsey Pit and north of the Small Woolsey Pit. A second smaller industrial area is located further to the north along Beedy Avenue.

Located between these two existing industrial subdivisions is a 45-acre agricultural parcel acquired by the County of Ventura in August 2000 for the development of the County's Juvenile Justice Center (JJC) The JJC is intended to meet the needs for Ventura County youth criminal offenders to the year 2020. The County certified an Environmental Impact Report for this project in March 2000 and approved a Conditional Use Permit for the project in December 2000. The JJC will provide for the detention of 420 minors, and construction of this 362,000 square foot complex is planned in three phases. Construction of the first phase started in June 2001. This phase will include a 420-bed detention facility and related facilities. The second phase is planned to include courts and related facilities and the third phase will include additional detention facilities. No schedule has been established at this time for the second and third phases.

Located immediately north of the Large Woolsey Pit is another reclaimed mining site known as the Ferro property. The County of Ventura issued a Conditional Use Permit to allow mining on this site in 1986 on this 245-acre site. Excavation was limited to the height of the recorded historic or predicted high groundwater level, whichever was higher. As a result, this site was excavated to a depth of approximately 25 feet. Reclamation consisted of filling in the site with approximately 3.5 feet of unusable material mined on the site and 1.5 feet of topsoil.

Located to the north of the Ferro property and south of Los Angeles Avenue is a 58-acre sand and gravel processing and concrete batch plant owned and operated by Vulcan Materials Company, and asphalt batch plant owned and operated by Industrial Asphalt. The processing and concrete batch plants were originally established to process material mined from the adjacent Santa Clara River under permits issued by the County of Ventura. Mining activity ceased in the river in 1979. A small parcel of agricultural land is located between the Vulcan Materials plant site and the Ferro Property.

Existing uses to the east of Vineyard Avenue include the existing El Rio Community to the south and agricultural land to the north. The El Rio Community includes the residential and commercial uses located north of the Ventura Freeway between Vineyard Avenue and Rose Avenue to the east. While portions of the commercial uses along Ventura Boulevard north of the freeway and on Vineyard Avenue have been annexed to the City of Oxnard, the majority of this residential community remains unincorporated. However, the entire El Rio Community is located within the City of Oxnard's Sphere of Influence. A majority of the El Rio Community is presently using individual septic systems for the treatment of sewage, which has resulted in high levels of nitrates in local groundwater. Orders issued by the State Water Resources Control Board and the Regional Water Quality Control Board, Los Angeles Region, require that existing septic systems be abandoned and that El Rio be connected to a municipal or regional wastewater collection and treatment system by January 2008.

The agricultural areas across Vineyard Avenue are included within the Oxnard-Camarillo–Del Norte Greenbelt Area. This greenbelt was established in 1982 by joint resolution with the Cities of Oxnard and Camarillo and included approximately 27,000 acres of agricultural land located between the two cities. The County of Ventura became a party to this agreement in 1983 when the agreement was amended to include 2,200 acres in the Del Norte area, including the agricultural land to the north and east of the El Rio Community. Farming is a major component of the local economy, as the coastal plain of Ventura County is perfectly suited for agricultural activity. The mild, almost frost-free

Mediterranean climate combined with fertile soils allows the year-round production of numerous crops. Farming in Ventura County is a major contributor to the nation's food supply as well as a vital component of the local economy and way of life. The Oxnard–Camarillo-Del Norte Greenbelt was created in recognition of the importance of agriculture in Ventura County to preserve farmland.

To the east of Vineyard Avenue between Central and Los Angeles Avenues are the residential community of Strickland Acres, agricultural land, and two reclaimed aggregate mining pits. One of these pits, located east of Vineyard Avenue and south of Los Angeles Avenue is known as the Noble Pit. Immediately east of the Noble Pit and south of Los Angeles Avenue is the Rose Pit.

The United Water Conservation District (UWCD) owns and operates a network of facilities to the north and east of the proposed Specific Plan Area to divert water from the Santa Clara River for groundwater recharge and agricultural irrigation. This system includes the Freeman Diversion Dam across the Santa Clara River, located approximately six miles north of the proposed Specific Plan Area. Water diverted from the river is carried by a concrete channel from the Freeman Diversion Dam to spreading grounds in Saticoy and El Rio. The Saticoy Spreading Grounds, located east of the Santa Clara River and north of Los Angeles Avenue cover approximately 133 acres. In 1995, UWCD acquired the 140-acre Noble Mine Pit, located northeast of the site, and uses this pit as a water storage recharge basin during and after heavy storms when the spreading grounds are filled to capacity. A pipeline connects the Saticoy Spreading Grounds to the El Rio Spreading Grounds, located west of Rose Avenue and north of El Rio. The El Rio Spreading Grounds cover approximately 100 acres, and its facilities include a dozen high capacity wells that supply water through pipelines to the Cities of Oxnard and Port Hueneme, mutual and municipal water companies and the two naval bases. Water from the Freeman Diversion Dam is also provided by a separate pipeline to the Pleasant Valley Reservoir, which supplies water to over 12,000 acres of farmland. The Pumping-Trough-Pipeline, completed in 1986, supplies water to another 4,000 acres of farmland in the northeast Oxnard area, thereby reducing the demand for groundwater and assisting in the abatement of the historic seawater intrusion problem in the Oxnard Aquifer system.

LAND USE PLANNING

The proposed RiverPark Specific Plan Area is located within the planning area of the City of Oxnard. This planning area, established by the city for the purposes of land use planning, includes the existing City and surrounding areas which bear a relation to the land use planning of the City. In this area the City's planning area extends to the Santa Clara River on the north, Los Angeles Avenue and the Beardsley Wash on the east.

The City of Oxnard 2020 General Plan provides for comprehensive planning within the City's Planning Area. The Land Use Element of the General Plan defines the allowed intensities and locations of land uses within the City's planning area. The General Plan Land Use Map designations for the site and surrounding areas are shown on Figure 2.0-8. As shown, RiverPark Area 'A' is currently designated for Regional Commercial, Office and Limited Industrial Uses. In 1986, the City of Oxnard adopted a specific plan for the majority of the RiverPark Area 'A' known as the Oxnard Town Center Specific Plan and annexed this area to the City.

The small portion of RiverPark Area 'A' not covered by the Oxnard Town Center Specific Plan was already within City limits. That existing specific plan, titled the "Oxnard Town Center Specific Plan," allows development of up to 4.4 million square feet of commercial and industrial space in this specific plan area.

The Oxnard Town Center Specific Plan permits development of up to 1.5 million square feet of office space, 1.2 million square feet of office or research and development space, approximately 1,000 hotel rooms, 50,000 square feet of freestanding restaurant space, a 1.0 million square foot regional shopping mall, and related public facilities. This specific plan allowed the office and hotel buildings to be up to 24 stories in height. The existing development in the southwest corner of the site, consisting of the two office buildings and a portions of Ventura Road and Town Center Drive, were built under the design and development standards in the Oxnard Town Center Specific Plan.

The 2020 General Plan Land Use Map designations for the RiverPark 'B' area are consistent with the historical sand and gravel mine uses on the site. The designations include Open Space-Mineral Resources protection on most of the RiverPark site and Open Space-Buffer along Vineyard Avenue.

The Growth Management Element of the 2020 General Plan includes policies intended to manage the growth allowed by the General Plan. One of the key implementation measures is the establishment of the City Urban Restriction Boundary (CURB). The City Council of Oxnard placed an ordinance creating the CURB on the ballot in November 1998 and it was approved by the voters. The purpose of the CURB is to protect agricultural and open space land within the City's Planning Area by limiting the provision of urban services and urbanized land uses within the CURB. In this portion of the City's Planning Area, the CURB is coterminous with the LAFCO Sphere of Influence Line for the City. The entire RiverPark Specific Plan Area is located within the CURB.

RiverPark Area 'A' is also located in the Historic Enhancement and Revitalization of Oxnard (HERO) Redevelopment Project area (see Figure 2.0-9), which includes 2,264 acres in 20 defined subareas. The

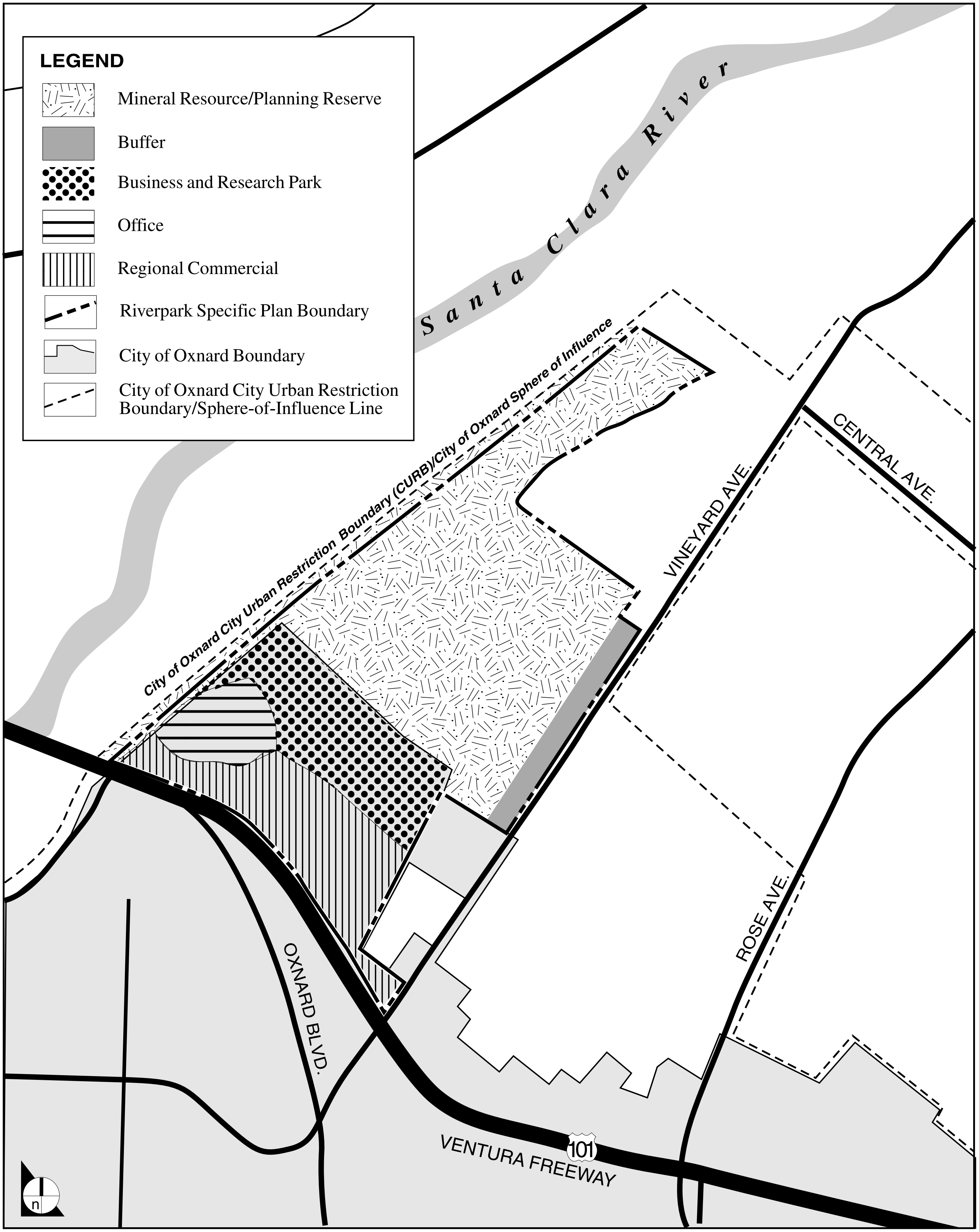

FIGURE **2.0-8**

Existing General Plan Land Use

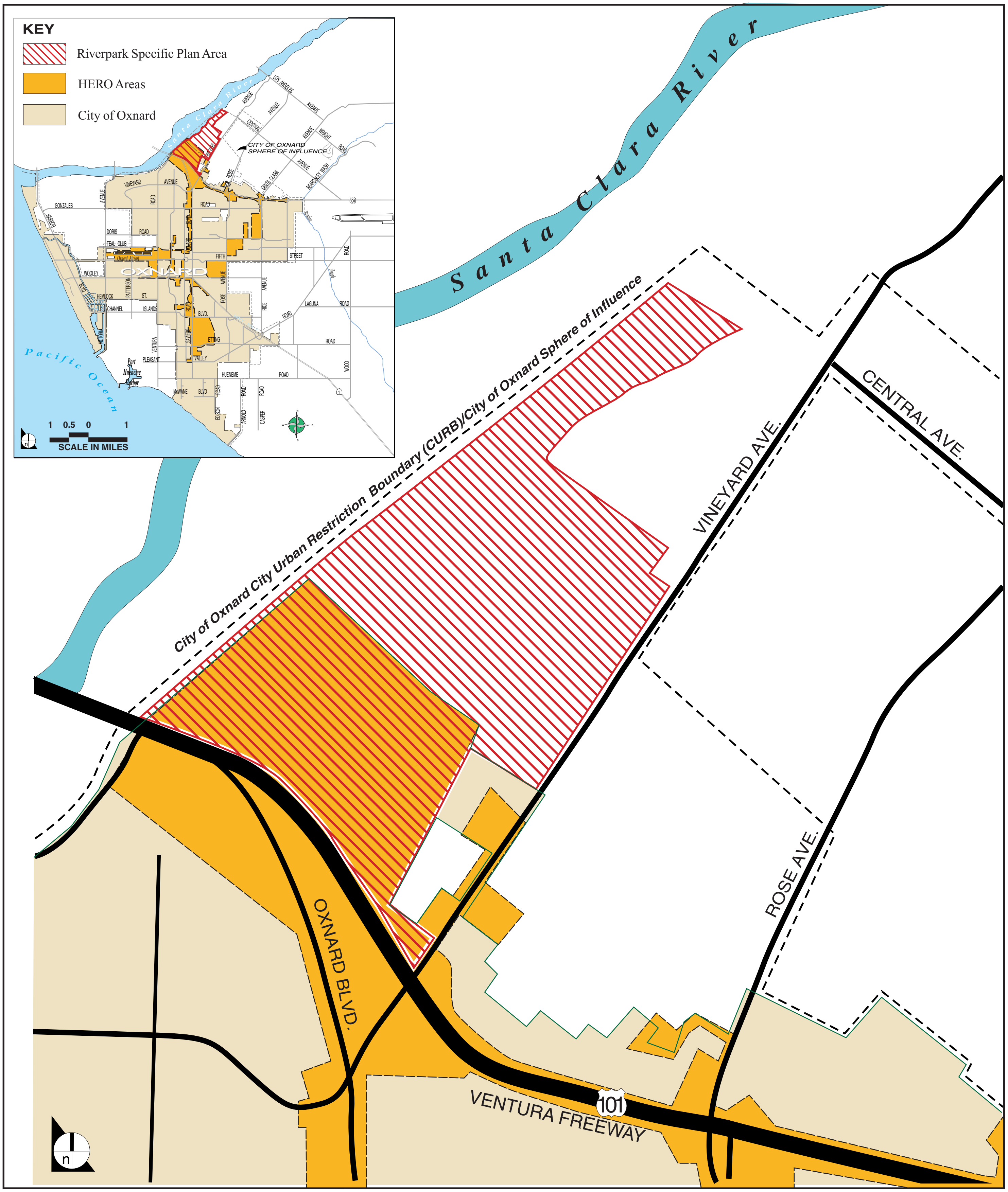

FIGURE 2.0-9

HERO Area within Project Site

HERO Redevelopment Project provides a framework for the redevelopment of the 20 subareas located throughout the City of Oxnard. The objectives of the HERO Redevelopment Project include elimination of blight, economic revitalization, infrastructure improvement, structural rehabilitation, possible hazardous waste cleanup assistance, and other types of assistance for each specific subarea. It is anticipated that these actions, together with private investment, will facilitate economic revitalization and diminish or eliminate blight in the 20 subareas. RiverPark Area 'A' is located within Subarea 1, referred to as the Oxnard Town Center Subarea, of the HERO Redevelopment Project area.

LOCAL PUBLIC AGENCY CONSULTATION

A Memorandum of Understanding (MOU) was entered into in June 2001 between the City of Oxnard, the County of Ventura, the Ventura County Flood Control District and the applicant for this project to address certain issues associated with land use planning for the proposed RiverPark Specific Plan Area and surrounding areas. This MOU addresses the sale of the County property containing the El Rio Maintenance Yard and relocation of these facilities, as well as the exchange of the El Rio Retention Basin No. 2 and a portion of El Rio Retention Basin No. 1 for replacement drainage facilities serving the same functions. In addition, the MOU addresses several aspects of wastewater collection and treatment in the area, including the provision of sewer service by the City of Oxnard to the County's Juvenile Justice Center and the provision of capacity in the City's collection and treatment facilities for the connection of the El Rio Community at a later date.

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3.0 PROJECT DESCRIPTION

INTRODUCTION

The purpose of the Project Description is to describe the project in a meaningful way to the public, reviewing agencies, and decision-makers. The CEQA Guidelines *require that a* Project Description *include the following items: (1) a statement of project objectives; (2) a general description of the project's characteristics; and (3) a statement describing the intended uses of the EIR. The CEQA* Guidelines *state that the Project Description need not be exhaustive, but should provide the level of detail needed for the evaluation and review of potential environmental impacts.*

The Project Description is the starting point for all environmental analysis required by CEQA. Section 15146 of the CEQA Guidelines *requires that the level of detail in an EIR should correspond to the level of detail known about the project being evaluated. The following Project Description serves as the basis for the technical analysis contained in this Draft EIR.*

PROJECT OBJECTIVES

The City of Oxnard and the project applicant, RiverPark Development, LLC, have identified the following objectives for the RiverPark Specific Plan in response to existing physical, environmental, demographic and market conditions:

- Create a distinctive community with a strong and inherent "sense of place";
- Provide for development of a balanced community with a diverse mix of land uses within the City's City Urban Restriction Boundary (CURB);
- Provide a character and quality of housing consistent with the existing character of the area and complementary with the overall range of housing opportunities provided by the City's 2020 General Plan;
- Promote the redevelopment of the RiverPark Area 'A' consistent with the goals of the Oxnard Community Development Commission's (CDC) Historic Enhancement and Revitalization of Oxnard (HERO) Redevelopment Project;
- Reclaim the existing sand and gravel mine site in RiverPark Area 'B' to provide additional housing opportunities in the City;

- Reclaim the existing mine pits in RiverPark Area 'B' in a manner that protects surface and groundwater quality and creates compatibility with existing and planned surrounding land uses;

- Enhance groundwater quantity and quality in the Oxnard Aquifer System by making the reclaimed mine pits available for incorporation into United Water Conservation District's groundwater recharge system.

- Provide a planning vision and guidelines for development of the RiverPark community;

- Encourage the development of a compact, cohesive community consisting of residential, commercial, open space, and public facilities connected by a coherent network of interconnected streets;

- Create a community that is compatible with the Santa Clara River by providing additional native vegetation within the Specific Plan Area to complement the natural habitat in the river and providing for connections to the regional trail planned along the river;

- Integrate public transit into neighborhoods and surrounding community;

- Provide strong pedestrian connections between land uses and provide a harmonious variety of housing choices and institutional activities.

PROJECT TECHNICAL, ENVIRONMENTAL AND ECONOMIC CHARACTERISTICS

The applicant, RiverPark Development, LLC, is requesting adoption of the proposed RiverPark Specific Plan by the City of Oxnard. The applicant is also requesting that the City approve several other related actions and enter into certain agreements necessary to implement the proposed Specific Plan. These related actions include: 1) Approval of a new Mining Reclamation Plan for the existing sand and gravel mine located within the proposed Specific Plan Area; 2) Approval of a General Plan Amendment consisting of changes to the 2020 General Plan Land Use Map designations for the project area and changes to the text of the Land Use and Open Space and Conservation Elements of the General Plan; 3) Pre-zoning of the portion of the proposed Specific Plan Area not currently located within the City of Oxnard and a Zone Change for the portion currently within the City; 4) Approval of a change to the City's existing zoning ordinance concerning the location of multiplex theater complexes; 5) Approval of a Master Tentative Tract Map for the Specific Plan Area; 6) Approval of a Development Agreement and 7) Initiation of annexation of RiverPark Area 'B' to the City of Oxnard. The City of Oxnard has the principal responsibility for approving this proposed project and, for this reason, is serving as the "Lead Agency" as defined by CEQA, and is responsible for the preparation of this EIR.

Other public agencies are responsible for approving various actions necessary to implement this project. These agencies are referred to as “Responsible Agencies” by CEQA. The City of Oxnard Community Development Commission (CDC) would be responsible for approving an amendment to an existing Owner Participation Agreement (OPA) for RiverPark Area ‘A’, which is located within the CDC’s HERO Redevelopment Area. The Ventura County Local Agency Formation Commission (LAFCO) is responsible for approving the annexation of RiverPark Area ‘B’ to the City of Oxnard. As part of the annexation process, the Metropolitan Water District of California and the Calleguas Municipal Water District would also need to approve the annexation of RiverPark Area ‘B’ into their service districts. A description of the proposed Specific Plan and these related actions is presented below. In this EIR, the term “RiverPark Project” is used to refer to all of these actions together, which constitute the “Project” as defined by CEQA and as assessed in this Draft EIR.

RiverPark Specific Plan

The RiverPark Specific Plan is proposed to provide the City of Oxnard with a comprehensive planning program to govern the orderly development of a new mixed-use community within the 701-acre Specific Plan Area. The adoption of specific plans is authorized by Section 65450 of the State Government Code, which states that specific plans may be prepared to provide for the systematic implementation of the general plan for all or part of the area covered by the general plan. Once adopted, the RiverPark Specific Plan would supersede and replace the existing Oxnard Town Center Specific Plan.

Section 65451 of the Government Code requires that a specific plan include a text and a diagram or diagrams that specify all of the following in detail:

(1) The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.

(2) The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.

(3) Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.

(4) A program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out paragraphs (1), (2), and (3).

The Government Code also permits a specific plan to address any other subjects as determined to be necessary or desirable for implementation of a jurisdiction’s general plan.

The proposed RiverPark Specific Plan is organized into the following eight sections addressing the requirements set by the Government Code:

1. Introduction
2. Land Use Master Plan
3. Commercial Land Use Master Plan
4. Residential Land Use Master Plan
5. Landscape Master Plan
6. Infrastructure Master Plan
7. Specific Plan Implementation
8. Glossary

The RiverPark Specific Plan is proposed to guide the development and use of the land within the Specific Plan Area. The RiverPark Specific Plan would permit the development of an integrated mixed-use community consisting of open space, residential, commercial, and public facilities uses. The community design of RiverPark follows the design principles of the 'New Urbanism' and 'Smart Growth' movements, which emphasize the importance of mixed land uses, communities scaled for pedestrian movement, limiting automobile usage and the importance of physical design in creating communities that people want to live, work, and shop in. Accordingly, the RiverPark community is designed as a diverse, environmentally-conscious mixed-use and pedestrian-oriented community with a complete range of facilities for living, learning, working, entertainment, and recreation. It is intended to create a strong sense of community and place.

Land Use Concept

Figure 3.0-1 presents a conceptual diagram showing the general location of the proposed land uses and the major open space and circulation corridors that organize and link these land uses. The RiverPark community would be made up of four basic land uses: (1) the commercial area proposed within the southern portion of the Specific Plan Area; (2) the residential neighborhoods proposed to the north and east of the commercial areas; (3) the open space area proposed in the northern portion of the Specific Plan Area; and (4) public facilities. These land use areas would be linked and unified by a landscaped pedestrian, bicycle, and vehicular circulation system.

As shown in this diagram, connections are proposed to the existing major arterial road network in Oxnard at five points. These connections will provide direct access from the Ventura Freeway, from Ventura Road, and from Vineyard Avenue. Primary access to the commercial areas of the project will be provided by extending Oxnard Boulevard north from the Oxnard Boulevard Interchange with the Ventura Freeway. Secondary access to the commercial areas will be provided by Ventura Road and Myrtle Street. As discussed in Section 2.0, Environmental Setting, this new interchange will be

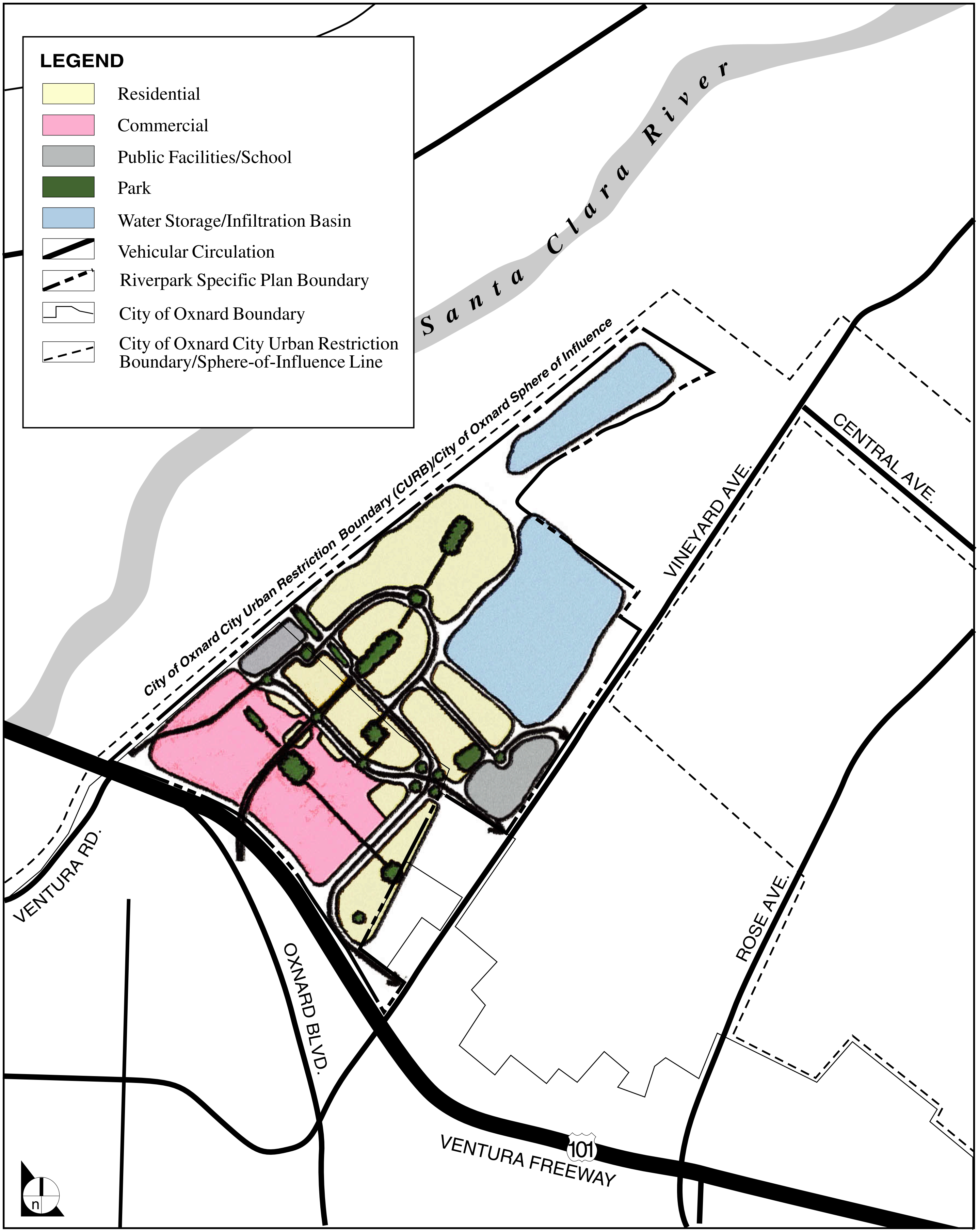

FIGURE 3.0-1

Conceptual Land Use Diagram

constructed as part of the Caltrans State Route 101 Improvement Project. Access from south of the freeway to the Specific Plan Area is currently provided by Ventura Road. A new street, to be named Santa Clara River Boulevard, would extend east from Ventura Road to Vineyard Avenue. Access from Vineyard Avenue would also be provided by the proposed extension of Myrtle Street into the Specific Plan Area. Myrtle Avenue would extend west and then north to Santa Clara River Boulevard. Access to the residential neighborhoods would also be provided from Vineyard Avenue at Northpark Drive. One existing street in the proposed Specific Plan Area, El Rio Drive, which currently connects Colonia Avenue to Town Center Drive, would be abandoned at the time the facilities in the existing Ventura County El Rio Maintenance Yard are relocated.

Figures 3.0-2 presents an illustrative plan of the RiverPark Community as planned and Figures 3.0-3 and 3.0-4 present three dimensional aerial perspective views of the community. Figure 3.0-3 presents a view of the project from the south showing the commercial uses north of the Ventura Freeway and the residential uses to the north and east of the commercial areas. Figure 3.0-4 presents a view from the north of the planned residential neighborhoods with the commercial areas to the south.

The RiverPark Community would include several residential neighborhoods, served by parks, neighborhood-oriented commercial uses, and a system of sidewalks and trails designed to reinforce and encourage pedestrian movement while also accommodating automobiles. The design intent is to create a series of distinctive residential neighborhoods focused on parks, schools and open space features. Each residential neighborhood will have its own character made up of varying densities, housing types, styles, and character. The Specific Plan would create three residential density categories allowing development of a variety of residential uses unit types including Single-Family Detached Homes, Townhouses, Apartments, and Live-Work units in selected locations in residential neighborhoods and commercial areas.

As proposed, RiverPark Area 'A' includes a diverse range of commercial uses that would meet the local needs of RiverPark residents as well as serve regional patrons. The major retail and entertainment facilities are located adjacent to the Ventura Freeway to appeal to regional as well as local markets. A central community plaza, the Town Square, is planned as the focus of this area, which would support a diverse mix of lifestyle and neighborhood-serving retail and restaurants. An adjacent retail area, the Food and Wine Marketplace, is planned as a themed retail/exposition area highlighting agricultural products from the Oxnard and Ventura areas. Anchoring the Town Square on the west will be an adjacent 600-room hotel and convention center, and office uses. Retail commercial and office uses are also proposed at the southeast and southwest corners of the Specific Plan Area.

Open Space and Landscape Design

The open space network, including streets and parks, is given equal importance to the commercial and residential uses. The internal street system would contain extensively landscaped parkways, medians, entry monuments, and landscaped open spaces designed to create a comfortable microclimate and an attractive and comfortable environment encouraging people to walk, play and recreate outdoors. Landscaped parks and other open spaces are the focal points of each residential neighborhood. Landscaped trails would also border the reclaimed mine pits.

The Community Landscape Master Plan included in the proposed Specific Plan is intended to establish identities of place, provide a unified appearance along street frontages, reinforce the street hierarchy, and provide additional native habitat that complements and enhances the Santa Clara River Corridor. Figure 3.0-5 presents the Community Landscape Master Plan from the proposed Specific Plan. Open space within the Specific Plan Area has been designed to buffer neighboring land uses and communities, provide active and passive open space within the community, and enhance natural habitat values by replanting disturbed areas with native vegetation.

The Landscape Master Plan provides designs for streets, parks and buffer areas and provides site landscape guidelines and standards for individual building sites, surface parking areas, service and loading areas design guidelines, wall and fences, paving design, plant material, landscape maintenance, and exterior lighting. A visually unique character will be created along Santa Clara River Boulevard and Oxnard Boulevard to the north of Santa Clara River Boulevard by having landscaped traffic circles and parks located within the streets. As shown in Figure 3.0-5, Santa Clara River Boulevard will contain traffic circles at its intersections with Ventura Road, Oxnard Boulevard and RiverPark Avenue. Between Myrtle Street and Ventura Road, Santa Clara River Boulevard will also contain a grass drainage swale in its median. In addition, all four corners of the intersection of Santa Clara River Boulevard with Myrtle Street/Southpark Avenue will consist of landscaped areas. Travelling north from Santa Clara River Boulevard, Oxnard Boulevard will split around a large central park space located between Southpark and Northpark Drives, contain a landscaped traffic circle at the intersection with Riverpark Avenue and split around a neighborhood park at its north end.

As shown, the Community Landscape Master Plan defines a landscaped edge along the Ventura Freeway. In addition, a landscaped buffer is proposed along the boundary of the Specific Plan Area between the existing El Rio West Neighborhood and Santa Clara River Boulevard. This proposed buffer is fifty feet in width and would contain an eight-foot parkway along Ventura Road and a six-foot sidewalk and thirty-six feet of landscaping along the existing neighborhood. This landscape edge will be bermed and landscaped with a dense planting of evergreen trees and shrubs. A landscape buffer is also planned along the western edge of the El Rio West neighborhood. This buffer would include a

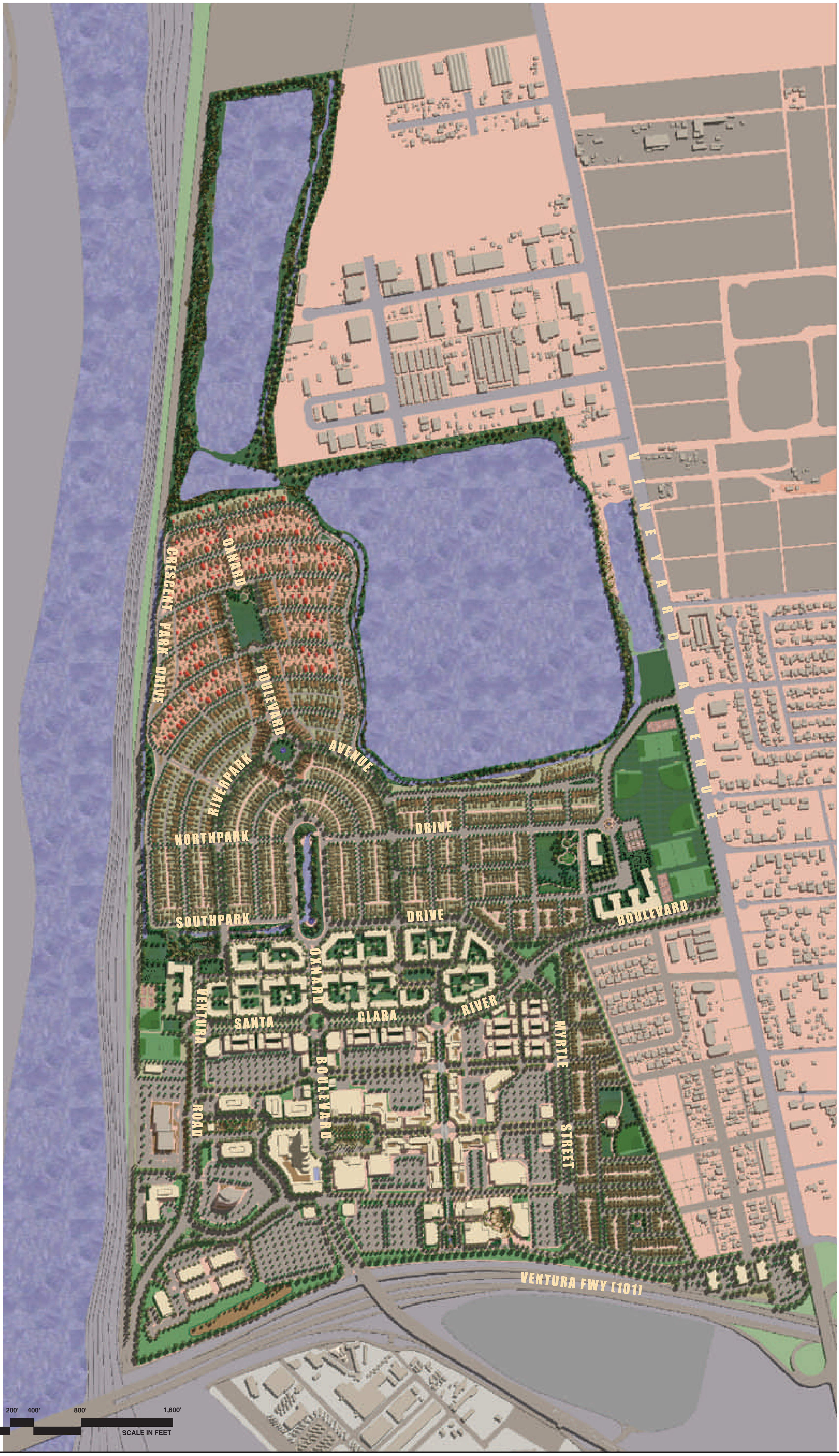

FIGURE 3.0-2

Illustrative Plan

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FIGURE 3.0-3

Conceptual Oblique View Looking North

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FIGURE 3.0-4

Conceptual Oblique View Looking South

FIGURE 3.0-5

Community Landscape Master Plan

five-foot wide landscaped area and a twenty-five foot wide parkway landscaped with evergreen and flowering canopy trees.

Open space areas within the community are planned in the residential and commercial portions of the project. As shown in Figure 3.0-5, three neighborhood parks are distributed throughout the residential neighborhoods. These neighborhood parks have been planned to serve the residents of the planned new neighborhoods. The southernmost park is also planned to serve the residents of the existing El Rio West neighborhood.

Playfields for organized sports league activities, such as baseball and soccer, will be provided as part of the planned school complex proposed immediately west of Vineyard Avenue and north of Santa Clara River Boulevard. These fields will be made available for use by the City of Oxnard Parks and Recreation Department through a joint use agreement with the Rio School District. The open space areas in the commercial portion of the project will be more formal in design and are not planned for active recreation use. Landscaped open spaces are also planned at key intersections throughout the community.

A trail system is also planned around the reclaimed mine pits and through the residential community as shown in Figure 3.0-6. This trail system is designed to allow for connection to a future regional trail planned outside of the Specific Plan Area along the existing Santa Clara River levee. In addition, this system of trails has been designed to complement the full system of sidewalks planned throughout RiverPark. This system of sidewalks is also shown on Figure 3.0-6. The trail and sidewalk system has been planned to support pedestrian travel throughout the community. Figure 3.0-7 illustrates typical walking distances within the RiverPark community. As shown, the compact nature of the land use plan and the integrated pedestrian system will result in 1/4 to 1/2 mile walking distances from the residential neighborhoods to most of the retail commercial, service and entertainment areas. Providing this mix of land uses within a 4 to12 minute walking distance is a feature of the proposed project that is intended to reduce vehicle trips.

The Landscape Master Plan includes native revegetation along the western edge of the Specific Plan Area and around the edges of the reclaimed mine pits. A linear landscaped riparian edge, composed of native vegetation communities, is proposed along the western edge of the Specific Plan Area in RiverPark Area 'B'. The goal of this native landscape edge is to create a multi-layered habitat that utilizes native vegetation communities to attract and support a wide range of wildlife species, especially birds. Selected tree species, including Fremont Cottonwoods (*Populus fremontii*), black cottonwoods (*Populus balsamifera* ssp. *trichocarpa*), red willow (*Salix laevigata*) and native sycamores (*Platanus* spp.), are proposed to provide cavities and foraging habitat for the many species associated with cottonwood-willow woodlands. These woodlands will add a type of native habitat not presently found along this part of the Santa Clara River. After the slopes of the mine pits are reconfigured and stabilized they will be planted with native species after the slopes are stabilized as called for in the proposed Mine Reclamation Plan discussed below.

Permitted Land Uses

A summary of the maximum amount of the different land uses that would be permitted by the proposed RiverPark Specific Plan is presented in Table 3.0-1. As shown in Table 3.0-1, approximately 38 percent (266 acres) of the 701-acre Specific Plan Area would remain in open space uses, 35 percent (244 acres) would contain residential uses, 21 percent (147 acres) would contain commercial uses, and 6 percent (44 acres) would contain public facilities. A description of the permitted uses is provided following this table.

Table 3.0-1
RiverPark Specific Plan Summary of Proposed Land Uses

Land Use	Acres	Percent of Total Acres	Amount of Proposed Development
Open Space			
Water Storage & Recharge Basins	163		
Parks and Landscape Areas	86		
Water Quality Control Basins/Trails	17		
Subtotal	266	38%	
Residential			
Low Medium Density (6-9 D.U./Acre)	75		463 Units
Medium Density (9-15 D.U./Acre)	99		1,014 Units
High Density (15-20 D.U./Acre)	70		1,328 Units
Subtotal	244	35%	2,805 Units
Commercial			
Retail & Entertainment	69		935,000 sq. ft.
Commercial Office	40		580,000 sq. ft.
Convention Center & Hotel	16		510,000 sq. ft.
Regional Retail Commercial	22		390,000 sq. ft.
Ground Floor Commercial and/or Live-Work Space in Residential Bldgs.	N/A		70,000 sq. ft.
Subtotal	147	21%	2,485,000 sq. ft.
Public Facilities			
Schools and Community Playfields	41		
Public Facilities (Fire Stations)	3		
Subtotal	44	6%	
TOTAL	701	100%	

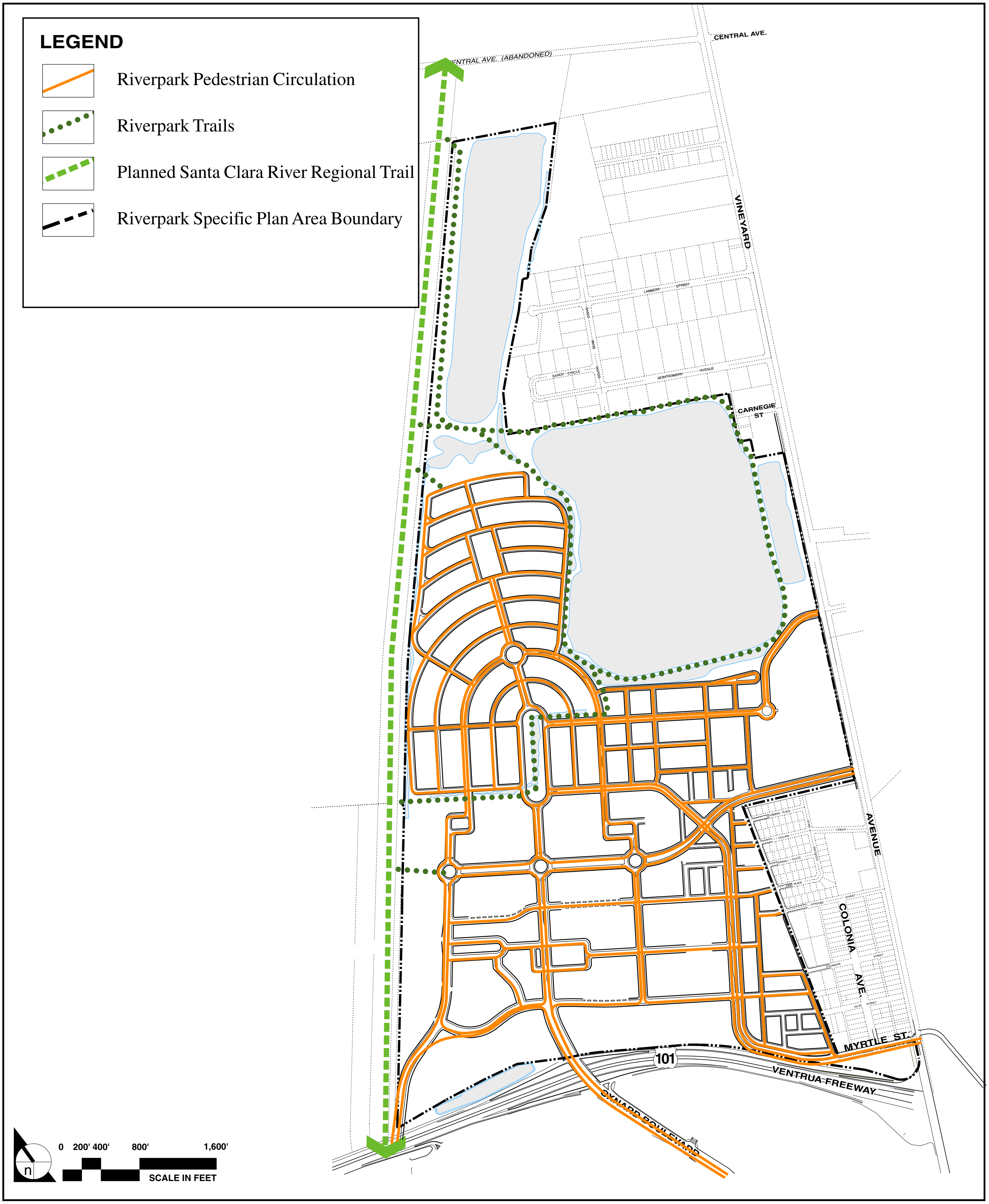

FIGURE 3.0-6

Trail and Sidewalk System

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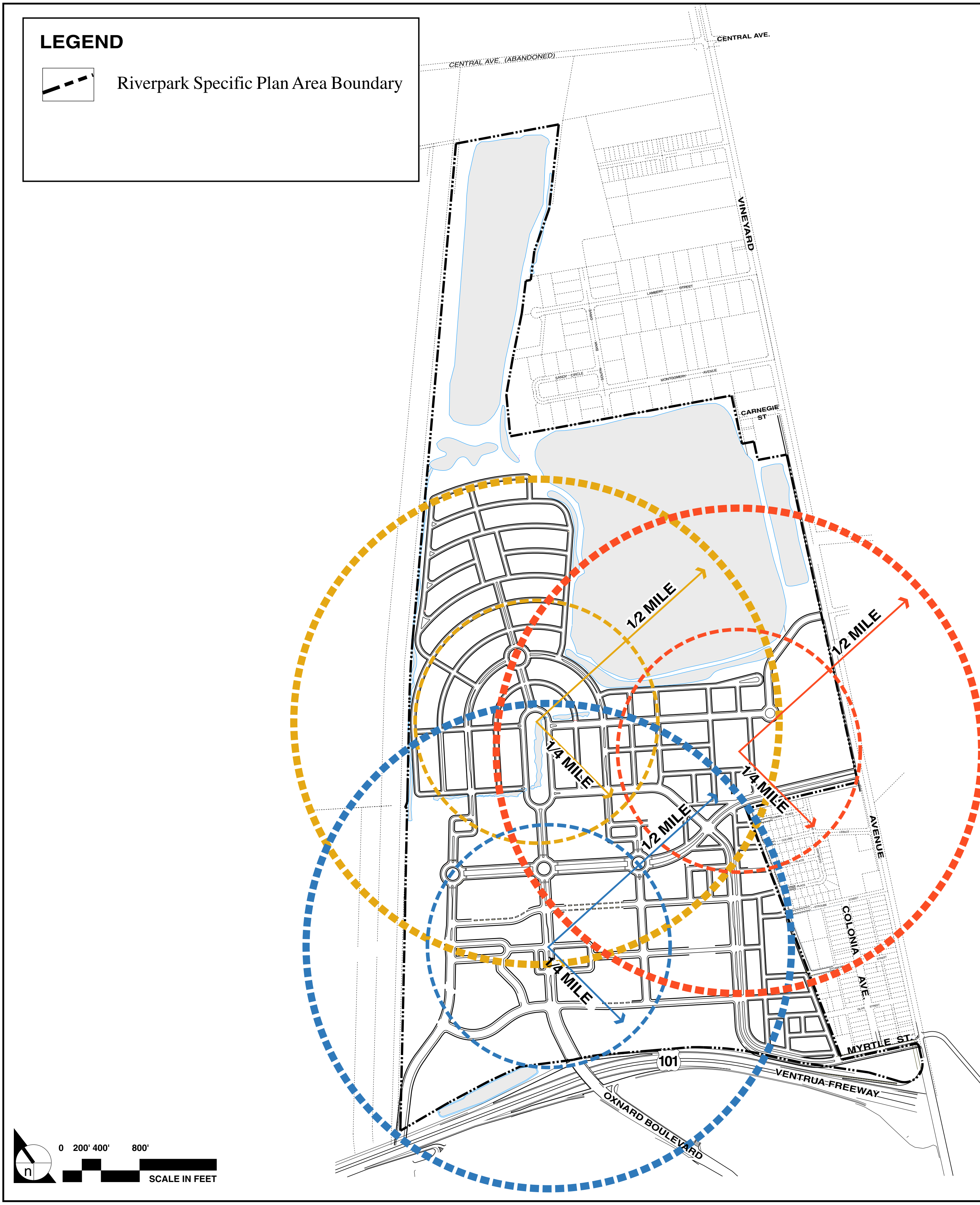

FIGURE 3.0-7

Pedestrian Travel Distance

Open Space Uses

Permitted open space uses include the neighborhood park space, landscape buffers, and trails discussed above. The water quality system included in the Specific Plan, and described further below, is planned as part of the network of open spaces. This system consists of water quality control detention basins and dry swales designed to clean storm runoff.

The reclaimed mine pits would remain as open space. The proposed Specific Plan designates the reclaimed mine pits for use as water storage and recharge basins and allows the pits to be used by the United Water Conservation District (UWCD) as water storage and recharge basins at some future date. As discussed in Section, 2.0 Environmental Setting, UWCD manages groundwater and delivers water to cities and agricultural uses within a large part of Ventura County. The Freeman Diversion project was constructed in 1991 by UWCD to divert water from the Santa Clara River for groundwater recharge and agricultural use. UWCD currently operates spreading grounds to the north of this project site in Saticoy and to the east of the site in El Rio. Since completion of the Freeman Diversion project, UWCD has purchased one existing mine pit, the Noble Pit, located to the northeast of the site, and incorporated this pit into its system of recharge facilities.

The District's current ability to recharge the local aquifer system is limited after about four weeks of precipitation in wet years due to the limited capacity of the existing spreading grounds. In addition, UWCD does not divert water from the river immediately after a storm due to the high level of silt. As a result, UWCD is not able to divert the full amount of water from Santa Clara River to which it is currently entitled. UWCD has expressed interest in using the existing mine pits within the Specific Plan Area, after implementation of the proposed reclamation plan, for the storage of water diverted from the Santa Clara River at the Freeman Diversion structure. Water stored in the pits would be allowed to infiltrate in the basins to recharge the aquifer or transferred to other UWCD facilities for recharge or delivery to customers for use. UWCD will need to prepare engineering and environmental studies and secure funding before the mine pits could be used for this purpose. At this time, UWCD has not secured funding for design, construction or operation of the mine pits for this purpose and no schedule has been determined for these future actions by UWCD.

Residential Uses

The proposed Specific Plan would create three residential land use categories and allow development of up to a maximum of 2,805 residential units. As shown in Table 3.0-1, the Low-Medium Density residential designation would allow development of up to 463 units on 75 acres at densities of 6 to 9 dwelling units per acre. The Medium Density residential designation would allow development of up to 1,014 units on 99 acres at densities of 9 to 15 dwelling units per acre. The High Density category would allow development of up to 1,328 units on 70 acres at densities of 15 to 20 units to the acre. The different densities of residential uses proposed are distributed throughout the community. Generally, the higher densities are located closer to the planned commercial uses.

The RiverPark Specific Plan includes an Affordable Housing Program that responds to existing requirements for affordable housing. State redevelopment law requires that 15 percent of new and rehabilitated dwelling units in the HERO Redevelopment Project Area developed by private parties and public entities other than the Oxnard's Community Development Commission be affordable to households of low and moderate income. In addition, the City of Oxnard has an adopted affordable housing ordinance. This requires that 10 percent of all dwellings built within a project be affordable or, if applicable, that in-lieu fee be paid. The City's ordinance further requires that 33 percent of these affordable units be made available to very low-income households with the balance affordable to low-income households.

In response to these requirements, the RiverPark Specific Plan would require 15 percent of the total number of housing units built under the Specific Plan to be affordable to low and very low-income households. More specifically, 5 percent of the total number of housing units built will be affordable to very low-income households and 10 percent will be affordable to low-income households. If all 2,805 residential units allowed by the proposed Specific Plan are built, 421 affordable housing units would be required. The affordable program in the RiverPark Specific Plan also includes standards for the location of affordable housing to ensure distribution of affordable housing units throughout the community.

Based upon average household sizes for the type of units that would be allowed by the Specific Plan and the and anticipated sales prices of these units,[1] the additional population associated with the 2,805 units proposed would be approximately 7,220.

Commercial Uses

Commercial uses permitted by the Specific Plan include retail commercial and entertainment uses, commercial office space, a hotel and convention center, regionally oriented retail commercial uses and commercial space in the ground floor of residential buildings in selected locations in the community. The Specific Plan would permit development of up to 2.485 million square feet of these commercial uses. As shown in Table 3.0-1, the proposed Specific Plan would allow development of a maximum of 935,000 square feet of retail and entertainment uses; 580,000 square feet of office development; a 510,000 square foot convention center and associated hotel, 390,000 square feet of regionally oriented commercial space

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1 Urban Futures, Inc.: *RiverPark Specific Plan Proposal Fiscal Impact Analysis*. November 2000.

and 70,000 square feet of commercial space on the ground floor of residential buildings along the major streets in the community. This ground floor space could be used for commercial uses such as retail commercial or office or as live-work space, allowing combined business and residential use.

Public Facilities Uses

The Specific Plan provides two sites for development of school facilities by the Rio School District, including sports fields planned for joint use by the Rio School District and City of Oxnard Parks and Recreation Program. These sites have been planned in cooperation with the Rio School District to accommodate two new elementary and one new intermediate (junior high) school. In addition, a site is provided within the proposed Specific Plan Area for new City of Oxnard and County of Ventura fire stations. The new County station would replace the existing station located in the County El Rio Maintenance Yard. The City and County may establish a joint station on this site in the Specific Plan Area or may build separate stations.

Planning Districts

The RiverPark Specific Plan would create 13 Planning Districts, as shown in Figure 3.0-8, Conceptual Land Use Plan, to regulate the location and configuration of the planned land uses. The Land Use Plan shown in Figure 3.0-8 identifies the general land uses that would be permitted in each Planning District and identifies the major streets serving the Specific Plan Area. Each Planning District has a specific range of permitted and specially permitted land uses, densities, parking requirements, and other development controls. The proposed Planning Districts are defined in the Specific Plan as:

A. Office District
B. West Peripheral Commercial District
C. Convention/Hotel District
D. Town Square Commercial District
E. East Peripheral Commercial District
F. Vineyards Neighborhood District
G. Village Square Neighborhood District
H. RiverPark Crescent Neighborhood District
I. RiverPark Loop Neighborhood District
J. RiverPark Mews Neighborhood District
K. Lakeside Neighborhood District
L. Public Facility District
M. Water Quality Basin and Storm Water Control District

Table 3.0-2 presents the type and amount of the permitted land uses in each district. A summary of the characteristics of the proposed Planning Districts is provided below.

Table 3.0-2
RiverPark Draft Specific Plan
Land Use Summary by Planning District

Planning District	Land Use		Gross Acres (1)	Maximum Commercial (1,000 sq. ft.)	Maximum Residential Units
A — OFFICE DISTRICT (2)					
	Commercial: Office		39.8	580	
	Residential: High		5.0	10	65
	Open Space: Parks		2.1		
		Subtotals	46.9	590	65
B —WEST PERIPHERAL COMMERCIAL DISTRICT					
	Commercial: Regional		13.9	260	
		Subtotals	13.9	260	
C — CONVENTION/HOTEL DISTRICT					
	Commercial: Regional (Convention/Hotel)		16.1	510	
	Open Space: Parks		0.6		
		Subtotals	16.7	510	
D — TOWN SQUARE COMMERCIAL DISTRICT (2)					
	Commercial: Regional (Retail/Entertainment) (3)		69.3	915	
	Residential: High		15.7	20	296
	Open Space: Parks		3.6		
	Open Space: Landscaped Buffer		1.5		
		Subtotals	90.2	935	296
E — EAST PERIPHERAL COMMERCIAL DISTRICT					
	Commercial: Regional		7.5	130	
		Subtotals	7.5	130	
F — VINEYARDS NEIGHBORHOOD DISTRICT					
	Residential: Medium		16.1		200
	Residential: High		12.4		220
	Open Space: Parks		11.1		
		Subtotals	39.6		420
G — VILLAGE SQUARE NEIGHBORHOOD DISTRICT (2)					
	Residential: High		37.4	20	747
	Open Space: Parks		3.0		
	Schools/Community Park (3)		10.2		
		Subtotals	50.6	20	747
H — RIVERPARK CRESCENT NEIGHBORHOOD DISTRICT					
	Residential: Low Medium		75.0		463
	Open Space: Parks		3.3		
		Subtotals	78.3		463
I — RIVERPARK LOOP NEIGHBORHOOD DISTRICT (2)					
	Residential: Medium		50.1	10	480
	Open Space: Parks		10.0		
		Subtotals	60.1	10	480
J — RIVERPARK MEWS NEIGHBORHOOD DISTRICT (2)					
	Residential: Medium		19.4	20	208
	Open Space: Parks		6.4		
	Schools/Community Park (3)		23.1		
		Subtotals	49.0	20	208
K — LAKESIDE NEIGHBORHOOD DISTRICT (2)					
	Residential: Medium		12.9	10	126
	Schools/Community Park (3)		7.5		
	Open Space: Miscellaneous Detention Basin/Jogging Trails		8.3		
		Subtotals	28.7	10	126
L — PUBLIC FACILITY DISTRICT					
	Open Space: Miscellaneous Detention Basin		9.5		
	Public Facilities		3.4		
		Subtotals	12.8		
M — WATER QUALITY BASINS & STORM WATER CONTROL DISTRICT					
	Open Space: Parks		43.5		
	Open Space: Miscellaneous: Water Storage/Infiltration Basin		163.7		
		Subtotals	207.2		
		TOTALS	701.3	2,485	2,805

NOTES:
(1) "Acres" is measured to center line of bounding streets or project boundary. (2) "Vertical Mixed" uses are permitted in portions of this District.
(3) "Specially Permitted Uses" are allowed in portions of this area.

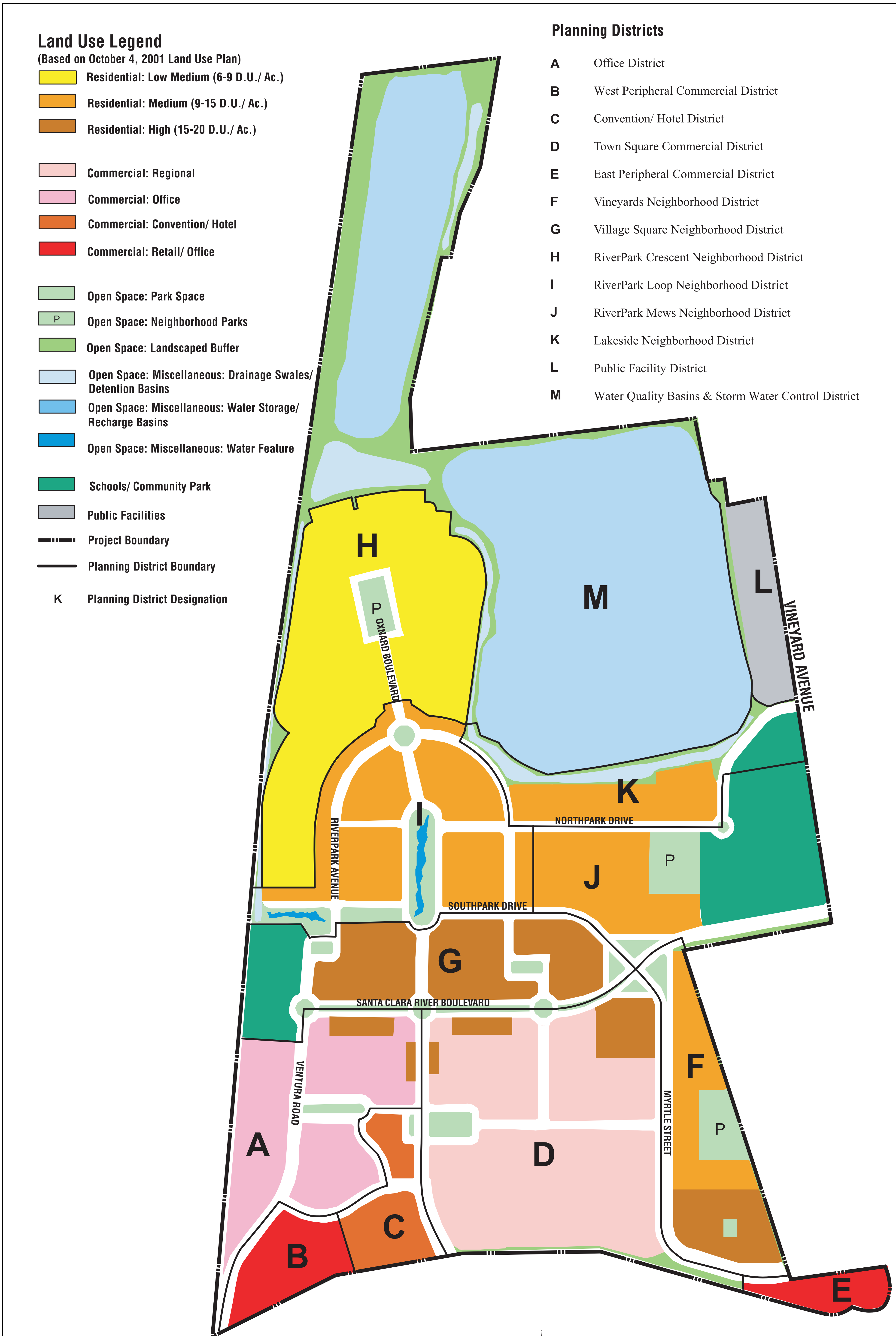

FIGURE 3.0-8

Conceptual Land Use Plan

As shown on Figure 3.0-8, the primary streets providing north/south access within the RiverPark Community would consist of Ventura Road, Oxnard Boulevard and Myrtle Street. The primary streets providing east-west access would consist of Santa Clara River Boulevard, Southpark Drive, Northpark Drive and Town Center Drive. Primary access to the residential neighborhoods located to the north of Southpark Drive will be provided by two proposed loop roads, Riverpark Avenue and Crescent Park Drive. Riverpark Avenue, would loop from Ventura Road to Santa Clara River Boulevard, intersecting Oxnard Boulevard, Southpark Drive, and Northpark Drive. Crescent Park Drive would loop from the western to eastern portions of Riverpark Avenue.

As shown in Figure 3.0-8, the majority of the proposed commercial uses would be located in Planning Districts A through E along the Ventura Freeway Ventura Road, Oxnard Boulevard, Myrtle Street, Santa Clara River Boulevard and Town Center Drive. Commercial buildings up to five stories in height would be permitted in Planning District A, the Commercial Office District, and Planning District B, the West Peripheral Commercial District. The maximum permitted height in Planning District A would be 70 feet and the maximum height in Planning District B would be 75 feet. In Planning District C, the Convention/Hotel District, a hotel up to 210 feet in height would be allowed. In Planning District D, the Town Square Commercial District, the maximum permitted height is 70 feet. The new residential neighborhoods would be located in Planning Districts F through K. An elementary school site is provided in District G immediately west of Ventura Road. A larger site for a new elementary and intermediate schools is provided in Districts J and K between Santa Clara River Boulevard, Northpark Drive and Vineyard Avenue. Neighborhood parks are provided in Districts F, J and H. A variety of other landscaped open space areas would be distributed throughout the community.

Residential uses are proposed on both sides of Santa Clara River Boulevard to create a residential character for this street located at the transition between the residential uses to the north and the commercial uses to the south. The Specific Plan allows commercial uses or live-work space in the ground floor of residential buildings in select locations in Planning Districts A, D, G, I, J and K. As discussed above, up to 70,000 square feet of this mixed-use space would be allowed. In addition, the Specific Plan would allow certain defined specially permitted uses in Planning Districts D, F, G and J. Additional description is provided below of the type of development allowed in the proposed planning districts.

Planning Districts A through G

Planning Districts A through G, proposed in RiverPark Area 'A', would replace the Oxnard Town Center Specific Plan. As proposed, the Specific Plan would create a planned commercial and entertainment area bordered by residential development in these Planning Districts.

Planning District A, the Office District, located on the western edge of the Specific Plan Area, includes the existing office buildings located on this part of the site and permits the development of additional office buildings. Some mixed-use buildings containing high density residential development and commercial and/or live-work space on the ground floor would be permitted along Santa Clara River Boulevard and Oxnard Boulevard in this district. Planning District C, the Convention/Hotel District, located immediately west of Oxnard Boulevard, would permit development of a hotel and convention center. Planning Districts B and E, located in the southwest and southeast corners of the Specific Plan Area permit the development of additional office space and retail commercial uses.

Planning District D, the Town Square Commercial District, is planned to contain a variety of retail commercial and entertainment uses, including a food and wine marketplace. This district would have the widest variety of commercial uses in buildings organized around public open spaces and streets designed to create a pedestrian oriented main street atmosphere. Mixed-use buildings containing high density residential development and commercial space on the ground floor would be permitted along Santa Clara River Boulevard, Oxnard Boulevard, and Myrtle Street in this district.

The Specific Plan also permits development of a 5,000 seat multi-use ballpark in this district, subject to the approval of a Special Use Permit (SUP) by the City. If the ballpark is developed in this district, the amount of the other permitted commercial uses in this district would be reduced by 80,000 square feet. While development of the ballpark is subject to the approval of a SUP, which would define the specific design and operational characteristics of this facility, the proposed Specific Plan would permit the ballpark facility to be used by a minor league baseball team and be available for other public and entertainment events, such as festivals, fairs, and concerts. The ballpark would also be made available for use by high school and college baseball teams.

As shown in Figure 3.0-8, residential uses are proposed in Planning Districts F and G. District F, the Vineyards Neighborhood District, located east of the planned extension of Myrtle Street and west of the existing El Rio West Neighborhood, would contain medium residential development and include a neighborhood park. This park has been planned to serve the residents of the existing and new neighborhoods. Higher density residential development would be permitted in the southern portion of District. The proposed Specific Plan would also permit the development of commercial office space on the portion of District F designated for high density residential development subject to the issuance of a SUP by the City. Planning District G, the Village Square Commercial District, located between Santa Clara River Boulevard and Southpark Drive, permits the development of high density residential uses and includes a site for a new elementary school. If the Rio Elementary School District determines the school site is not needed at some future date, the Specific Plan would allow this site to be developed with residential uses subject to the approval of a SUP by the City. Ground floor commercial and/or live-work space would be allowed in this Planning District along Santa Clara River Boulevard.

Planning Districts H through K

The Specific Plan provides for development of residential neighborhoods in the RiverPark Area 'B' area. Districts H through K would contain lower density neighborhoods, consisting of low medium and medium density residential development. The design intent is to create a series of distinctive neighborhoods, each focused on neighborhood parks or other open space features. The density of residential development in these neighborhoods as proposed is lowest in the north. As shown in Figure 3.0-8, Planning District H, the RiverPark Crescent Neighborhood District, would be bordered by open space and include a neighborhood park in the center of the neighborhood. Planning Districts J, the Riverpark Mews Neighborhood District, and K, the Lakeside Neighborhood District, would contain medium density residential development, a neighborhood park, and a site for new elementary and junior high schools. The playfields associated with these school sites would also serve as community playfields, available for use after school hours. If the Rio Elementary School District determines the school site is not needed at some future date, the Specific Plan would allow this site to be developed with residential uses subject to the approval of a SUP by the City. A small amount of first floor commercial and/or live/work space is permitted in selected areas in Planning Districts I, J and K to provide neighborhood serving commercial uses within walking distance of residences in these neighborhoods.

Planning District L: Public Facility District

Planning District L would include the existing detention basin located in this part of the Specific Plan Area and sites for new City of Oxnard and County of Ventura Fire Stations. The new county station would replace the existing fire station currently located in the southern portion of the Specific Plan Area in the County's El Rio Maintenance Yard. The City and County may build a new joint fire station for use by both departments or separate stations within this Planning District. The existing detention basin will be modified and incorporated into the storm drain system designed for the Specific Plan Area as a water control basin.

Planning District M: Water Quality Basin and Storm Water Control District.

This Planning District would contain the reclaimed mine pits and a system of water quality control basins and swales designed to collect and clean up storm runoff. The proposed water quality treatment system includes water quality control basins and a system of swales designed to collect runoff from northern portion of the Specific Plan Area and adjacent areas immediately to the north and east that currently drain into the Specific Plan Area. As previously discussed, after the mine pits have been reclaimed in accordance with the proposed Mine Reclamation Plan, the proposed Specific Plan would allow the pits to be used for the storage of water by the United Water Conservation District as discussed above.

Infrastructure Master Plans

A brief description of the infrastructure master plans included in the proposed Specific Plan is provided on the following pages.

Circulation Master Plan

The objective of the Circulation Master Plan is to create a safe and efficient circulation system that provides access to all uses within the RiverPark Specific Plan and links appropriately with the surrounding community. Figure 3.0-9 presents the Roadway Circulation Master Plan. The proposed roadway network is made up of a hierarchy of components, including arterial, collector, and local streets.

As shown in Figure 3.0-9, Oxnard Boulevard is designated as a 6-lane primary arterial street between the Oxnard Boulevard/U.S. 101 Interchange and Town Center Drive. Santa Clara River Boulevard, Ventura Road south of Santa Clara River Boulevard, Town Center Drive, and Oxnard Boulevard between Town Center Drive and Santa Clara River Boulevard are designated as 4- lane secondary arterial streets. Myrtle Street, Southpark Drive, Oxnard Boulevard between Santa Clara River Boulevard and Riverpark Avenue, and Riverpark Avenue between Southpark Drive and Santa Clara River Boulevard are designated as 4-lane collector streets. The remaining streets in the community will be 2-lane collector streets.

Provisions for bicycle travel have also been incorporated into the RiverPark Specific Plan on arterial and collector roadways as well as bordering the reclaimed mine pits. The proposed bicycle facilities are shown in Figure 3.0-10. On roadways, a 6-foot wide bicycle lane is integrated into the roadway surface area adjacent both curbs. Connections to all existing and proposed adjacent and surrounding bicycle paths will be provided, including linkages to the planned regional trail along the Santa Clara River.

Grading Master Plan

Grading is proposed to provide adequate drainage and remediate existing soil conditions within the Specific Plan Area. A balanced mass grading operation is planned that will result in no import or export of earth materials. Over the entire 701-acre site approximately 10 million cubic yards of earth materials will be graded. The majority of this grading would consist of the excavation and replacement

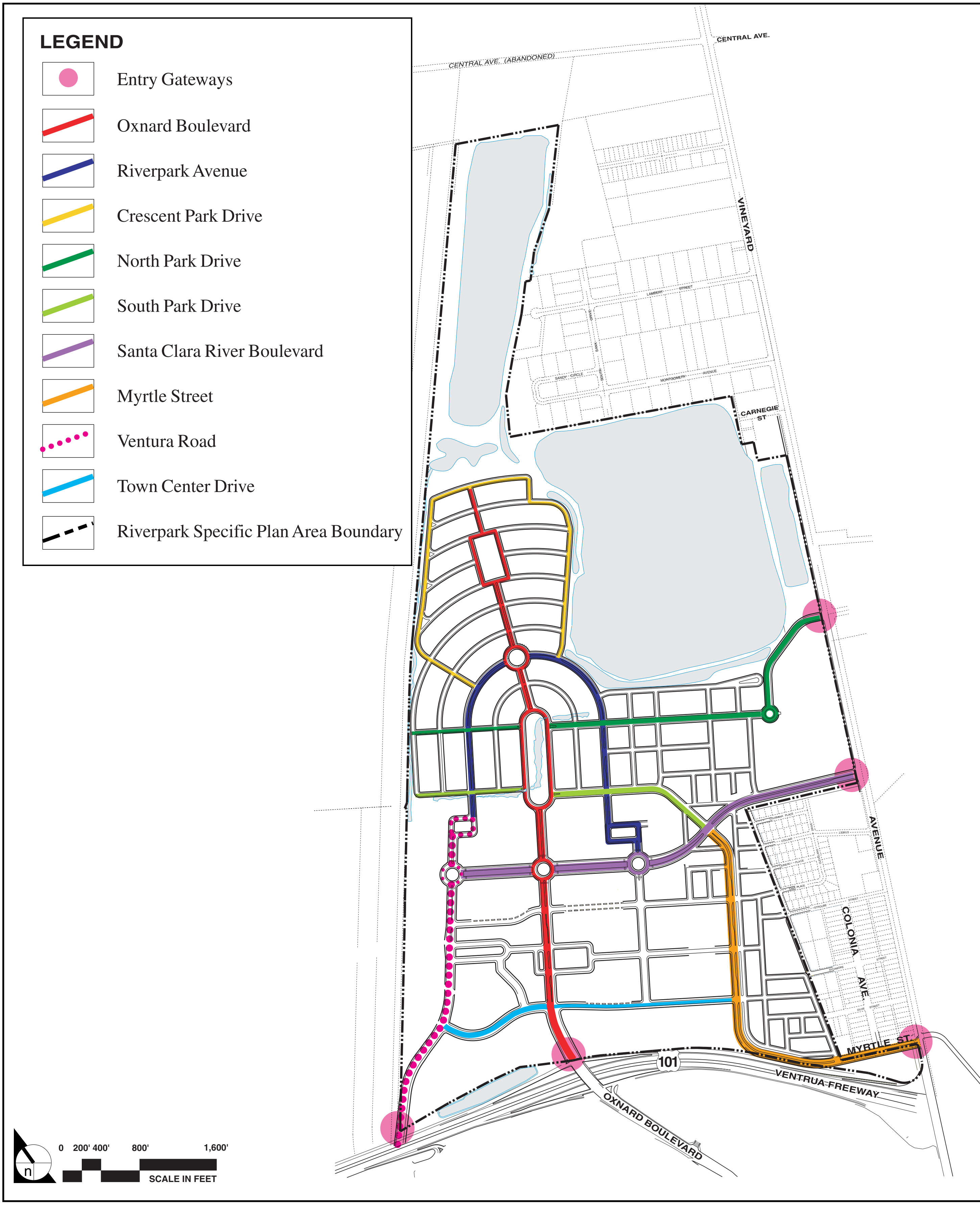

FIGURE 3.0-9

Roadway Circulation

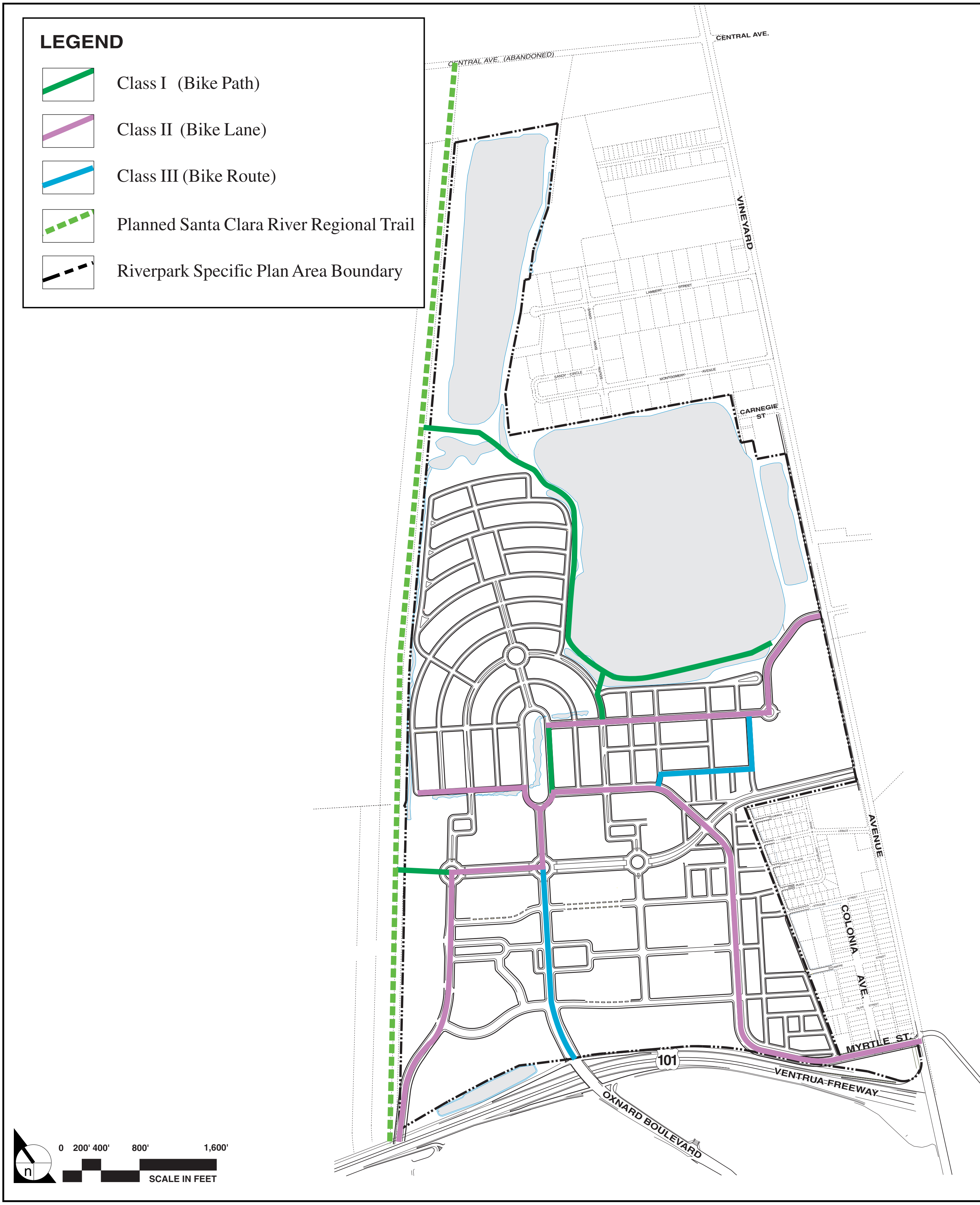

FIGURE 3.0-10

Bicycle Facilities Plan

of earth in RiverPark Area 'B' to stabilize the slopes of the existing mine pits and improve the structural characteristics of the soils in the plant and stockpile areas of the mine site.

The existing topography is generally flat in RiverPark Area 'A'. RiverPark Area 'B' is comprised of the existing sand and gravel mine site, including the three existing mine pits. The land topography in this portion of the site is varied due to the historic mining operations of cutting, filling, and disposal of tailings. RiverPark Area 'B' also contains the existing El Rio Retention Basins 1 and 2. The proposed grading responds to the existing topography by holding street grades to a minimum slope in RiverPark Area 'A' with gravity drainage directed towards the proposed extension of the Stroube Street drain and to the planned drainage detention basins and swales in RiverPark Area 'B'. Existing grades will be maintained where the project joins existing improvements such as the Vineyard Avenue, Ventura Road, Myrtle Street, and Town Center Drive. The planned grade for Oxnard Boulevard has been designed to match the plans for the Oxnard Boulevard Interchange.

In RiverPark Area 'A,' the existing elevations range from approximately 70 to 90 feet. The maximum cut or fill in RiverPark Area 'A' will be about 7 feet with an average of 5 feet of material that will need to be removed and recompacted. Overall, approximately 1.9 million cubic yards of earth materials will be excavated in RiverPark Area 'A'. The resulting grades will be 75 to 90 feet.

In RiverPark Area 'B', approximately 7.8 million cubic yards of earth will be excavated. The majority of this material, approximately 5.95 million yards, will be excavated in the stockpile area of the mine site. Approximately 1.5 million cubic yards will be excavated in the plant area of the mine site. The majority of the material excavated from the stockpile and plant areas will be replaced where excavated to improve the structural characteristics of the soils. The existing land bridge separating the Brigham and Small Woolsey Pits and the peninsula of fill material that presently extends into the Small Woolsey Pit from the east, consisting of approximately 0.35 million cubic yards of material, would also be excavated. Excavation of the existing slopes of the pits would involve 0.6 million cubic yards, some of which would be used as fill for slope remediation. The majority of this material will be replaced where excavated to improve the structural characteristics of the soils. El Rio Retention Basin No. 2 will also be filled. The existing elevations vary from approximately 70 to 115 feet in RiverPark Area 'B'. After grading, the elevations will vary from 80 to 100 feet. In order to create the planned grades some material will be relocated between areas in RiverPark Areas 'A' and 'B'.

Water Master Plan

A series of 12-inch water transmission lines is planned in major streets to provide water service throughout the Specific Plan Area. These new water mains would connect to existing 12-inch water transmission lines in Vineyard Avenue and Myrtle Street and to an existing 18-inch water transmission line in Ventura Road and Town Center Drive.

Sewer Master Plan

The proposed sewer master plan improvements consist of a series of 8-inch to 18-inch sewer main lines in major streets within the Specific Plan Area connecting to an existing 21-inch sewer line located just north of the Ventura Freeway. An existing sewer pump station located near Town Center Drive will be relocated to accommodate planned street realignments and improvements while a new lift station is planned in RiverPark Area 'B'.

Drainage and Storm Water Quality Treatment Master Plan

Stormwater flows generated within the RiverPark Specific Plan Area and those generated from off-site areas that drain to the Specific Plan Area will be treated by passing through a system of water quality basins and/or dry grassy swales, before being discharged to the Santa Clara River through existing drain outlets, or the mine pits, depending upon the magnitude of the rainfall event and location of the individual drainage area.

There are four drainage areas that will be served by this system, consisting of the proposed residential and commercial areas within the Specific Plan Area, the off-site industrial areas to the north of the proposed Specific Plan Area that presently drain to the mine pits, and the off-site agricultural area to the east of Specific Plan Area that presently drains to El Rio Retention Basins 1 and 2. These areas are illustrated in Figure 3.0-11 and described below.

Drainage Area 1:	The portion of RiverPark Area 'A' located south of Santa Clara River Boulevard;
Drainage Area 2a:	The western portion of RiverPark Area 'B' and the northwestern portion of RiverPark Area 'A';
Drainage Area 2b:	The eastern portion of RiverPark Area 'B';
Drainage Area 3a:	The Beedy Street Industrial area:
Drainage Area 3b:	The Montgomery/Lambert Industrial Area
Drainage Area 4:	The agricultural area to the east of Vineyard Ave and north of the El Rio Community and the small industrial area on Carnegie Street.

Individual systems are proposed to convey and treat runoff from each of these four drainage areas. This system includes dry swales, water quality detention basins, and "Best Management Practices" mechanical treatment features designed into the storm drain system. The dry swales will be grass lined channels overlying a permeable soil layer. The detention basins will be lined with a low permeability

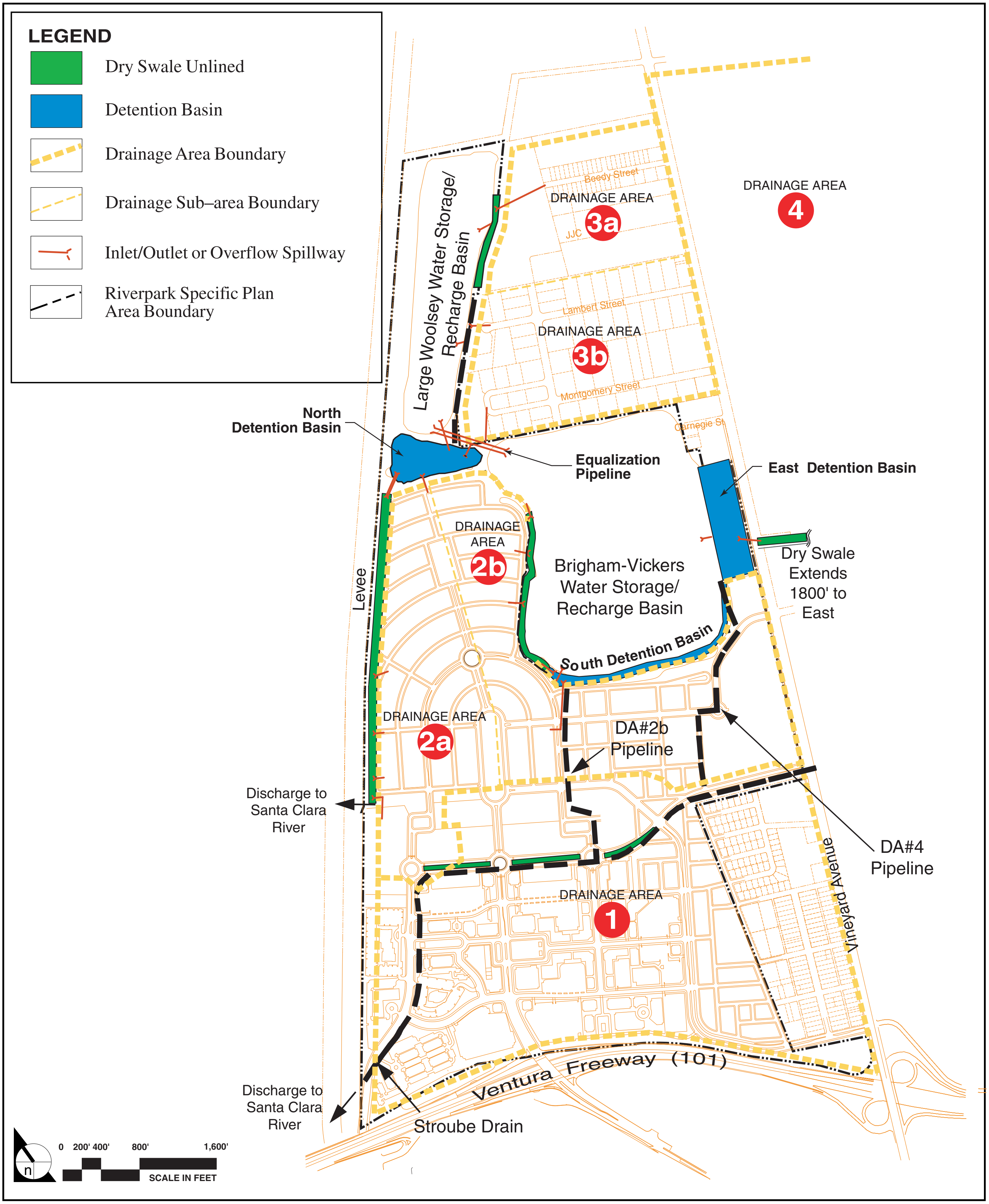

FIGURE 3.0-11

Proposed Stormwater Quality Treatment System

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or impermeable material. This system has been designed to provide greater treatment of runoff from smaller storm events that will contain the greatest concentration of pollutants.

As shown on Figure 3.0-11, three water quality detention basins are proposed to treat runoff. The North Detention Basin will collect runoff from the off-site industrial areas. Runoff from Drainage Area 3a will be collected in a dry swale and then conveyed to the North Detention Basin through a storm drain. Drainage Area 3b will be collected in storm drains and conveyed to the North Detention Basin. The East Detention Basin will collect flows from the off-site agricultural area. A dry swale located to the east in Vineyard Avenue in an existing Ventura Flood Control District easement will provide pre-treatment of runoff from the off-site agricultural area before this runoff enters the East Detention Basin. The South Detention Basin will collect runoff from the proposed residential area located east of Oxnard Boulevard. A dry swale will also be used to convey and treat runoff from the residential area before this runoff enters the South Detention Basin. These water quality detention basins have the capacity to hold and treat runoff from a 10-year storm event. Runoff from storms greater than a 10-year frequency storm will overflow into the existing mine pits. The North Detention Basin will overflow into the Large Woolsey Water Storage/Recharge Basin and the East and South Detention Basins will overflow into the Brigham-Vickers Water Storage/Recharge Basin.

Runoff from the other portions of the Specific Plan Area will be collected in new storm drains proposed in RiverPark Area 'A' connecting to the existing Stroube Street Drain. A new storm drain in Santa Clara River Boulevard will extend from Vineyard Avenue to the existing drain in Ventura Road. The existing drain in Ventura Road connects to the Stroube Street Drain. The Santa Clara River Boulevard drain has been aligned and sized to collect runoff from the northern portion of the El Rio Residential Community to the east of Vineyard Avenue. A dry swale in the median of Santa Clara River Boulevard between Myrtle Street and Ventura Road will treat runoff before it enters the storm drain.

A second storm drain in RiverPark Area 'A' will extend from the current end of the Stroube Street Drain to Stroube Street. Catch basin inserts and manhole-accessible centrifugal separator units are planned in this and other storm drains to clean runoff.

The proposed facilities comply with the Ventura County Municipal Storm Water NPDES permit. Attachment A to the Ventura Countywide Stormwater Quality Urban Impact Mitigation Plan ("SQUIMP") includes a list of Best Management Practices (BMP's) that are considered effective to minimize pollutants of concern. The water quality detention basins and dry swales, as included in this design, are listed as appropriate BMP's. The 10-year storm event capacity of the proposed storm water quality treatment system is substantially greater than the 0.75 inch rain event identified as the design standard in the Ventura County SQUIMP.

Electrical Service Master Plan

The proposed onsite electrical infrastructure will be connected to the existing 16 kV Saticoy line, which runs above ground along the Ventura Freeway, and the existing 16 kV Buckaroo line that runs above ground along the northeastern border of the Specific Plan site parallel to Montgomery Avenue. From the points of connection, two 16 kV underground electrical lines will be routed through the site, dividing the site in two separate services. Switchyards will be located throughout the site to transform the 16 kV distribution voltage to the utilization voltage.

Natural Gas Service Master Plan

The proposed onsite gas infrastructure will be connected at four points to three existing gas lines in the area: a 4-inch high pressure natural gas line running along Vineyard Avenue, a 4-inch line along the Ventura Freeway and 4-inch line along Carnegie Street and along the northeastern border of the Specific Plan site parallel to Montgomery Avenue. From the four points of connection, high pressure mains with diameters of two or three inches will route gas underneath the internal streets. Connecting to the mains will be medium pressure gas runouts with two-inch diameter lines that would deliver gas to individual buildings.

Phasing

The RiverPark Specific Plan includes an infrastructure phasing plan designed to support the development of the permitted land uses. This plan, shown in Figure 3.0-12, defines two phases of the primary infrastructure that would be built.

Phase One, would provide the basic infrastructure needed to link the RiverPark Specific Plan Area to the City of Oxnard and to support anticipated residential, commercial and office development within RiverPark Area A during the initial years of development. Phase One infrastructure would provide the major roads and utilities. Oxnard Boulevard, Myrtle Street and Santa Clara River Boulevard would be built in Phase One to connect the Specific Plan Area to Ventura Road, Oxnard Boulevard, and Vineyard Avenue. In addition, the grading necessary to implement the proposed Reclamation Plan for the mine site RiverPark Area ‘B’ would be completed as part of Phase One along with the filling of the existing El Rio Detention Basin No. 2. All other grading as needed to install the planned roadways and associated utilities in RiverPark Area ‘A’ would also be completed. All of the proposed water quality treatment system, consisting of water quality control basins, dry swales and related facilities would also be built as part of Phase One.

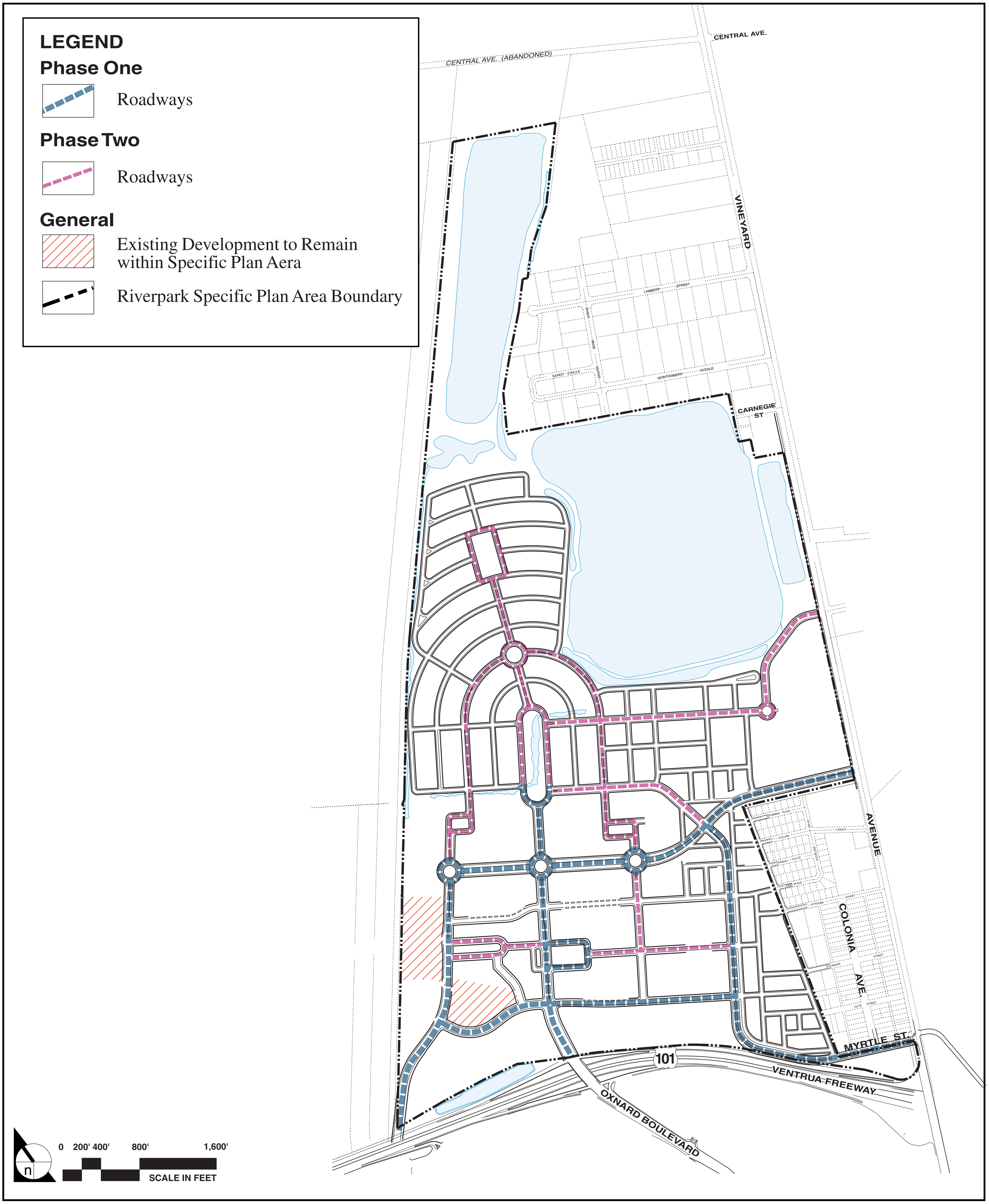

FIGURE 3.0-12

Development Phasing Plan

Phase Two would complete the infrastructure needed to support development in the remainder of the Specific Plan Area. Oxnard Boulevard would be extended north. RiverPark Avenue would be built, Northpark Avenue would be built between Vineyard Avenue and Oxnard Boulevard and Southpark Avenue would be built between Santa Clara River Boulevard and Oxnard Boulevard. Other streets would also be built in RiverPark Area 'A'.

Roads, sidewalks, utilities, and landscaping not incorporated in Phases One and Two would be constructed with individual development projects built under the Specific Plan.

Construction of the Phase One site improvements and the mass grading of the Specific Plan Area will take approximately one year. Once the primary infrastructure systems are built, the Specific Plan would allow development of any of the permitted land uses. The applicant's current objective is to complete the construction of the Phase One site improvements by the third quarter of 2002 with the first occupancy of residences or commercial buildings in 2003. The Phase Two site improvements would be built when there is market demand for the property served by these improvements. It is anticipated that the community would take between 12 and 15 years to be fully built, depending on economic conditions. For purposes of analysis in this EIR, it is assumed that the Specific Plan Area would be fully developed by the year 2020.

The street system has been designed to allow the major streets shown on Figure 3.0-12, including Oxnard Boulevard within the Specific Plan Area, to be built prior to the relocation of the uses in the County of Ventura El Rio Maintenance Yard. The uses in the County El Rio Maintenance Yard will be relocated to new facilities to be built by the project applicant on a replacement site in Oxnard, pursuant to a Memorandum of Understanding executed between the City and the County. A replacement site has not been selected at this time and no schedule for the relocation of these facilities has been established. El Rio Road, which currently provides access to the County Yard would remain between Myrtle Street and the County Yard until all uses in the yard have relocated and access is no longer needed.

The overall phasing schedule established in the Specific Plan has been coordinated with the Caltrans construction schedule for the State Route 101 and Santa Clara River Bridge Improvement Project, which calls for the four northbound lanes of the Ventura Freeway, including the new replacement bridge over the Santa Clara River, to be completed in the second quarter of 2003 with the new Oxnard Boulevard Interchange with the freeway completed in the third quarter of 2003. As discussed above, the first occupancy of residences or commercial buildings in the Specific Plan Area would be in 2003.

Reclamation Plan

A new Reclamation Plan for the existing sand and gravel mine site located in RiverPark Area 'B' is proposed for approval by the City of Oxnard. The proposed Reclamation Plan addresses all topics required by the State Surface Mining And Reclamation Act (SMARA) and the City of Oxnard's Mining Ordinance. The Reclamation Plan focuses on definition of the final configuration of the slopes of the mine pits to ensure that these slopes are stable and compatible with existing and proposed land uses on and surrounding the mine site. The proposed slope configurations are described in detail in Section 4.3, Earth Resources, of this EIR. The Reclamation Plan also addresses removal of mining and processing equipment and related structures and facilities, construction of drainage facilities and revegetation of the slopes of the existing mine pits. The proposed Reclamation Plan states the site will be reclaimed in conformance with the existing Hanson Aggregates reclamation plan previously approved by the County of Ventura if RiverPark Area 'B' is not approved for the uses included in the proposed RiverPark Specific Plan.

General Plan Amendment

An amendment to the City of Oxnard 2020 General Plan Land Use Map is also proposed to create consistency between the General Plan and proposed Specific Plan. The proposed General Plan designations are shown in Figure 3.0-13. In addition to changes to the designations for the proposed Specific Plan Area, this map amendment would also change the existing land use designation for the portion of the existing El Rio West Neighborhood located between Stroube and Myrtle Streets to Low Density Residential from Regional Commercial to reflect the residential character of this neighborhood.

Minor amendments to the definitions of the Regional Commercial, High Density Residential, and Public/Semi Public land use categories as defined in the Oxnard 2020 General Plan Land Use Element are also proposed to provide additional flexibility for master planned projects subject to an adopted specific plan. The proposed changes are shown below. Text to be removed is shown in ~~strikeout~~ and text to be added is in *italics*.

E. Standards for Land Use Density/Intensity

The various land use categories within the five major land use types and their associated density intensity standards are described below. (Page V-58 Land Use Element)

1. Residential Land Uses

f. High Density

This category applies to older developed areas where high density apartments were permitted. Residential development of this density may also be permitted in the Central Business *District and in a master planned project subject to an adopted specific plan*. Density ranges from 18 to 30 dwelling units per acre and household size averages 1.9 persons per household

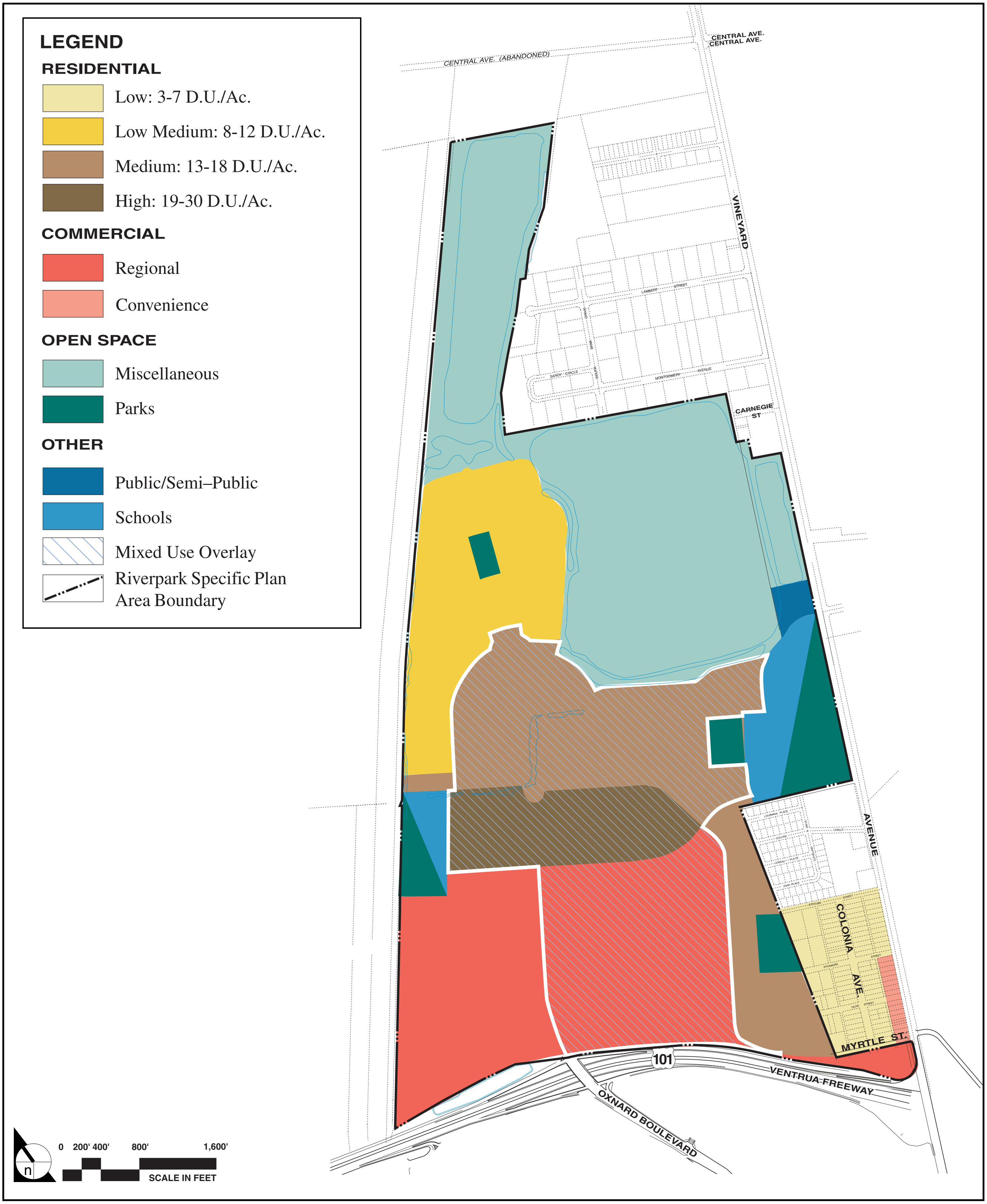

FIGURE 3.0-13

General Plan Land Use Amendment

2. Commercial Land Uses

e. *Regional*

Shopping centers in these areas can be multi-story and range up to 3 million square feet in size on as much as 100 acres. Maximum FAR is 0.30:1. Maximum FAR for the commercial portions of Wagon Wheel, ~~Town Center~~ *RiverPark*_and Financial Plaza areas is 0.60:1 and can include offices, hotels, *entertainment*, and other service uses. *Multi-family residential uses are also allowed as a part of a master planned project subject to an adopted specific plan to encourage appropriate mixed-use development in areas close to transit routes and adjacent to commercial areas providing support services.*

Amendment of one objective and two policies in the General Plan Open Space and Conservation Element are also proposed to reflect the City's recently adopted mining ordinance. The proposed changes are shown below. Text to be removed is shown in ~~strikeout~~ and text to be added is in *italics*.

B. Objectives

4. Provide for the continued timely extraction *of minerals where continued extraction is feasible and economical*, while minimizing land use conflicts.

C. Policies

31. The management of mineral resource extraction or reclamation activities that are currently outside the City limits but within the City's Sphere of Influence ~~should remain under the jurisdiction of the County of Ventura~~ *may come under the jurisdiction of the City where the City determines that annexation best serves the community's interests.*_ Consideration of urban land uses in these areas ~~shall be made~~ *may be made if such uses will occur* only after *or in conjunction with* completion of reclamation requirements.

32. In MRZ-2 Areas designated for land uses other than low density residential, industrial, open space and agriculture, the extraction of mineral resources prior to permitting development should be encouraged *where such extraction is feasible and economical.*

Zoning Actions

In RiverPark Area 'A' a zone change from Oxnard Town Center Specific Plan, C-2-PD, R-1, and C-R to RiverPark Specific Plan is proposed. Pre-zoning of RiverPark Area 'B' to RiverPark Specific Plan is also proposed.

A zone text amendment to Section 34-35.1 of the Oxnard City Code regulating the location of multiplex theaters is also proposed to provide flexibility for master planned projects subject to an adopted specific plan. The proposed amendment to this ordinance is presented below with text to be added in *italics*.

Sec. 34-35.1 Multiplex theaters prohibited in all zones except CBD zone.

Multiplex motion picture theaters shall be prohibited except in the Central Business District zone, as provided in subsection (q) of Section 34-10.3, *and in master planned projects subject to an adopted specific plan.* No zone clearance, special use permit or other entitlement for use pertaining to a multiplex motion picture theater shall be issued in any zone other than the Central Business District zone.

Development Agreement

Development agreements are authorized under the provisions of state law to provide developers with vested rights to develop a project in exchange for commitments by the developer to construct needed public improvements and amenities. The proposed Development Agreement would provide the project applicant with a vested right to develop the project pursuant to the provisions of the Specific Plan. In turn, the project applicant would be required to: construct public improvements that would benefit the Project, the City and the region; construct a combined City and County fire station; and provide for infrastructure appropriate to development of the Project. In addition, affordable housing would be required to be constructed in conjunction with the development of the Project, with an amount equal to five percent of the dwelling units constructed on the Project affordable to very low-income households and an amount equal to ten percent of the dwelling units constructed on the Project affordable to low-income households.

Amendment to Owner Participation Agreement

The CDC and the project applicant previously entered into an Owner Participation Agreement over the portion of the Project that is located within the HERO Redevelopment Project Area. The proposed amendment to the Owner Participation Agreement would provide certain incentives to the project applicant to assist with the development of the Project, including the construction of a portion of the affordable housing units.

Master Tentative Tract Map

In conjunction with the Project approvals, the City Council will consider approval of a master tentative tract map over portions of the Specific Plan area. The master tentative tract map will allow the project applicant to subdivide the area covered by the map in a manner consistent with the provisions of the Specific Plan. The tentative tract map will also specify the public infrastructure and improvements to be constructed in conjunction with the subdivision.

Annexation

RiverPark Area 'B' is currently located outside of the City of Oxnard but within the City's Sphere of Influence and CURB lines. The City will request approval of annexation of this area from the Ventura County Local Agency Formation Commission (LAFCO).

INTENDED USES OF THIS EIR

The *City of Oxnard*, as the public agency with the principal responsibility for approving the project, serves as the Lead Agency, for the preparation of this EIR, as defined by CEQA. The City of Oxnard will review the information in this EIR prior to considering the following proposed actions:

- Amendment to the text and Land Use Map in the City of Oxnard 2020 General Plan.
- Adoption of pre-zoning designations for RiverPark Area 'B' and a change of zoning designations in RiverPark Area 'A'.
- Adoption of the RiverPark Specific Plan.
- Initiation of annexation of RiverPark Area 'B' to the City of Oxnard.
- Approval of a Tentative Tract Map for the Specific Plan Area.
- Approval of a Development Agreement with the Applicant.
- Approval of a new reclamation plan for the sand and gravel mine site in RiverPark Area 'B'.

This EIR is intended to serve as a Project EIR, as defined in Section 15161 of the CEQA *Guidelines*, for the use by the City of Oxnard related to these proposed actions.

Responsible Agencies

As defined by the CEQA, "Responsible Agencies" are public agencies other than the lead agency which have discretionary approval over the project. The City of Oxnard has prepared this EIR to serve as the primary source of environmental information for each Responsible Agency. These agencies, and the nature of their approval authority over the project, are described below:

The *City of Oxnard Community Development Commission* would be responsible for the following action related to the project:

- Approval of a proposed amendment to the Owner Participation Agreement between the applicant and the Commission for RiverPark Area 'A'.

This EIR is intended to serve as a Supplemental EIR, as defined in Section 15163 of the CEQA *Guidelines*, for use by the Community Development Commission related to this action. This EIR serves to supplement the analysis contained in the certified EIR for the HERO Redevelopment Project.

The *Ventura County Local Agency Formation Commission (LAFCO)* would be responsible for the following action related to the project:

- Approval of annexation of RiverPark Area 'B' to the City of Oxnard

This EIR is intended to serve as a Project EIR, as defined in Section 15161 of the CEQA *Guidelines*, for the use by the Ventura County LAFCO related to this proposed action.

The *Metropolitan Water District* would be responsible for the following action related to the project:

- Approval of annexation of RiverPark Area 'Area 'B' to the District Boundaries of the Metropolitan Water District.

This EIR is intended to serve as a Project EIR, as defined in Section 15161 of the CEQA *Guidelines*, for the use by the Metropolitan Water District related to this proposed action.

The *Calleguas Municipal Water District* would be responsible for the following action related to the project:

- Approval of annexation of RiverPark Area 'B' to the District Boundaries of the Calleguas Municipal Water District.

This EIR is intended to serve as a Project EIR, as defined in Section 15161 of the CEQA *Guidelines*, for the use by the Calleguas Municipal Water District related to this proposed action.

Other Public Agencies

This EIR will also be used as a Program EIR, as defined by Section 15168 of the CEQA *Guidelines*, by the following agencies as a source of environmental information for other projects as described below:

The proposed RiverPark Specific Plan would allow the *United Water Conservation District* to use the existing for the storage of water diverted from the Santa Clara River at the Freeman Diversion structure. This EIR analyzes the use of the mine pits for this purpose. *United Water Conservation District* will serve as the Lead Agency for any required environmental review of other aspects of this proposal at a future date.

The *Rio Elementary School District* will build and operate the elementary and middle schools permitted in District K of the proposed RiverPark Specific Plan. This EIR analyzes these proposed facilities based on the level of detail of information in the proposed Specific Plan. The *Rio Elementary School District* may need to complete additional environmental review when plans are completed for these planned school facilities.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

INTRODUCTION

This section provides information on the existing conditions of the area that may be affected by the proposed project, potential impacts, and suggested mitigation measures. The existing setting component defines the environmental conditions that currently exist, while project impacts are defined as the potential effect of the project on the existing environment. Mitigation measures suggested are designed to reduce potential impacts. The purpose of this section is to provide information on the type and magnitude of the potential environmental impacts and how such impacts could affect the existing environment.

FORMAT

Each of the subsections following this page addresses a single environmental topic and is organized as follows:

- Environmental Setting – describes existing environmental conditions
- Project Impacts – presents analysis of the potential impacts of the project and identifies significant impacts based on defined thresholds of significance.
- Cumulative Impacts – considers the combined effect of the proposed project with other projects and projected growth in the area.
- Mitigation Measures – defines and discusses measures which could mitigate significant impacts
- Unavoidable Significant Impacts – identifies any significant impacts that cannot be fully mitigated

CUMULATIVE IMPACT ANALYSIS

The technical analysis contained in Section 4.0 examines both the direct impacts of the proposed project and cumulative impacts. Section 15355 of the CEQA *Guidelines* define "cumulative impacts" in part as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Each technical section contained in this EIR includes an assessment of the interaction between project-specific impacts and those impacts associated with other past, present, or reasonably foreseeable future projects.

For purposes of this EIR, a comprehensive methodology for assessing cumulative impacts is used. Section 15130 (b) (1) states that cumulative impact analysis should be based on either a list of past, present, and probable future projects; or a summary of projections contained in an adopted general plan or related document.

A comprehensive list of related projects in the City of Oxnard is presented in Appendix 4.0 to this EIR. This list contains 143 separate residential, commercial, and industrial projects that are either proposed, approved, or under construction throughout the City. A map showing the locations of these projects is also provided in this appendix. In addition to these projects in the City, a new public facility currently under construction by the County of Ventura in the vicinity of the project site is also considered. This project, the Ventura County Juvenile Justice Center, is under construction on a site located immediately east of the project site.

Each section of this EIR includes an assessment of cumulative impacts based on this list of projects or projections in a comprehensive planning document. For example, the analysis of air quality emissions, roadway noise, and traffic impacts are based on the City's traffic model, which reflects regional growth and the full development of all uses allowed by the City's *2020 General Plan* while the analysis of aesthetic and visual impacts considers those projects in the immediate vicinity of the project site.

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4.1 LAND USE PLANNING, PROGRAMS & POLICIES

INTRODUCTION

This section addresses the consistency of the proposed RiverPark Specific Plan Project with applicable state, regional and local land use plans, programs, and policies, including demographic forecasts. Land use compatibility is also assessed in this section.

ENVIRONMENTAL SETTING

Approximately 269 acres of the RiverPark Specific Plan area is located within the incorporated boundary of the City of Oxnard. The remaining 432 acres of the Specific Plan Area is currently located outside of the City of Oxnard within unincorporated Ventura County. The entire Specific Plan Area is located within the existing City of Oxnard City Urban Restriction Boundary (CURB)[1] and the Sphere of Influence line for the City of Oxnard.

Local Plans and Policies

City of Oxnard 2020 General Plan

California State planning law requires each city and county to adopt a comprehensive, long-term general plan for the physical development of the area within its jurisdiction and of any land outside its boundaries, which bears relations to its land use planning activities. The Planning Area defined by the City and addressed in the *2020 General Plan* is generally bounded by the Santa Clara River on the north, Los Angeles Avenue and the Beardsley Wash on the east, Mugu Lagoon on the south, and the Pacific Ocean on the west. The City's *General Plan* includes all elements mandated by State law.

Land Use Element

The purpose of the Land Use Element is to guide future development within the City by identifying the types of land uses allowed and specifying their intensity. The existing Oxnard *2020 General Plan* land use map designations for the proposed Specific Plan Area are shown in Figure 4.1-1. As shown, that portion of the Specific Plan area presently located within the City of Oxnard incorporated boundary is

1 An ordinance establishing the CURB was approved by the voters of Oxnard in November 1998. The CURB requires that the City restrict urban services and urbanized uses of lands to within the CURB line through the year 2020. The CURB line is conterminous with the Sphere of Influence line for the City in this area.

designated for development of Regional Commercial, Commercial Office, and Business and Research Park uses. The majority of RiverPark Area 'A' consists of the adopted Oxnard Town Center Specific Plan. The adopted plan allows development of up to 4.4 million square feet of commercial and industrial space in the area addressed by that plan. The remainder of RiverPark Area 'A', consists of a small sliver of land generally located between the Ventura Freeway, Vineyard Avenue and Myrtle Street.

All of RiverPark Area 'A' is located within the Historic Enhancement and Revitalization of Oxnard (HERO) Redevelopment Project Area. The HERO Redevelopment Project Area provides a framework for the redevelopment of the 20 subareas located throughout the City of Oxnard. The objectives of the HERO Redevelopment Project Area include elimination of blight, economic revitalization, infrastructure improvement, structural rehabilitation, possible hazardous waste cleanup assistance, and other types of assistance for each specific subarea.[2] The RiverPark Specific Plan Area is located within Subarea 1, also known as the Town Center Subarea, of the HERO Redevelopment Project area.

RiverPark Area 'B' is located outside the City's boundary and is designated as Open Space-Mineral Resource and Open Space-Buffer on the Oxnard *2020 General Plan* land use map. This area is also designated as a Planning Reserve area as defined by the Oxnard *2020 General Plan*. This Planning Reserve overlay was placed on certain open space areas contiguous to developed portions of the City to indicate that these areas may be considered for urbanization during the term of the *2020 General Plan*.

Growth Management Element

As stated in the introduction to the Growth Management Element of the Oxnard *2020 General Plan*:

> "*Along with the designation and allocation of land uses, a fundamental goal of the* 2020 General Plan *is to establish balanced growth for the City of Oxnard. Key to achieving this goal are policies and programs that provide for the orderly phasing of development in terms of both timing and location.*"

The Development Policies in the Growth Management Element consist of two general categories: (1) Definition of Development and Non-Development Areas; and, (2) A Growth Management and Monitoring Program. The first category basically defines "where" long-term development will occur

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2 *Report to City Council for the Historic Enhancement and Revitalization of Oxnard Redevelopment Project* (HERO Project). Community Development Commission, City of Oxnard, February 1998.

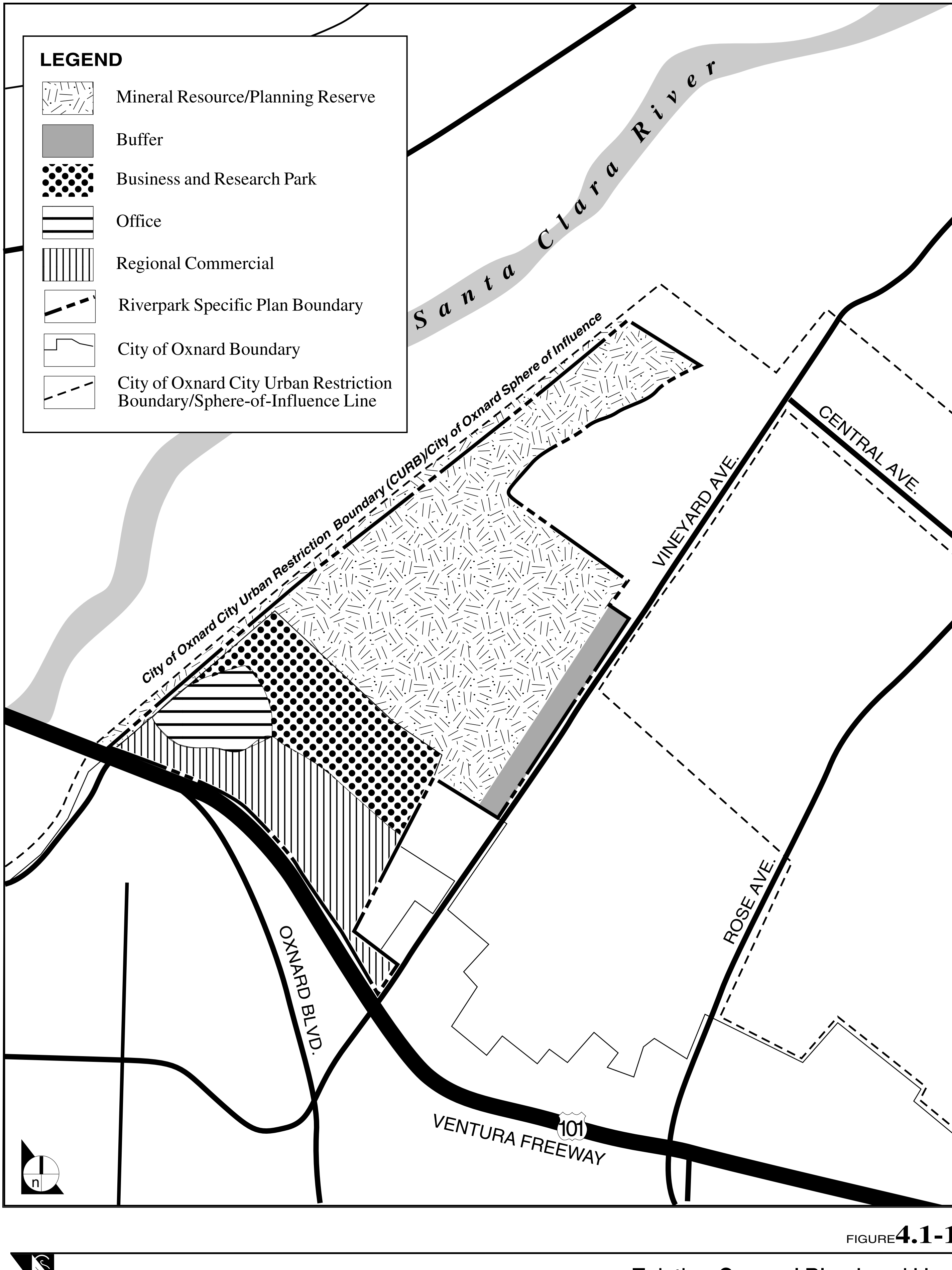

FIGURE **4.1-1**

Existing General Plan Land Use

within the City's Planning Area. The City's population, housing and employment projections through the year 2020 are identified as key factors to be considered in the City's Growth Management Program.

The Growth Management Element includes goals, objectives, principles and policies related to the expansion of the City through annexation of land. A goal of the Growth Management Element is to encourage sensible urban growth based on the ability to provide necessary governmental services and municipal utilities. Objectives include insuring that areas annexed to the city share equitably in the costs of all necessary municipal improvements. A key policy related to the size of the City calls for creating an appropriate balance between urban development and preservation of agricultural uses within the City's Planning Area.

The primary planning tools discussed in the Growth Management Element which relate to the physical size of the City are the City Urban Restriction Boundary (CURB), maintenance of a City Buffer Boundary (CBB), and administration of the Sphere of Influence line by the City and the Ventura County Local Agency Formation Commission (LAFCO).

City Urban Restriction Boundary (CURB) and City Buffer Boundary (CBB)

The Oxnard Save Open Space and Agricultural Resources (SOAR) Ordinance was approved by the voters in November of 1998. The SOAR Ordinance established a City Urban Restriction Boundary (CURB) and a City Buffer Boundary (CBB) by amending the Oxnard *2020 General Plan*. The purpose of the CURB is to define a boundary within which development is planned to take place through the term of the *General Plan* (2020). During this time, the City of Oxnard will restrict urban services and urbanized land uses to land located within the CURB. No form of discretionary entitlement will be granted by the City that will result in urban land uses placed outside of this boundary. Urban uses are identified as "any development which would require the establishment of new sewer service systems; or the significant expansion of existing sewer infrastructure; or would create residential lots less than 10 acres in area per primary residence; or would result in the establishment of commercial or industrial uses which are neither exclusively related to agriculture nor exclusively related to the production of mineral resources."

The City Buffer Boundary encompasses land between the adopted Sphere of Influence line and the Planning Area Boundary. The purpose of this buffer is to maintain agricultural uses located outside the CURB. Agricultural land within this boundary cannot be converted to urban use unless approved by the registered voters of the City.

Housing Element

As mandated by State Law, the City's Housing Element is a five-year plan that currently addresses the period from 2000-2005. The City recently completed an update of the Housing Element, which was adopted by the City Council in December 2000 and conditionally certified by the State Department of Housing and Community Development (HCD) as complying with the State Law in May 2001. The Element identifies policies, programs, and objectives to provide adequate housing sites, promote equal housing opportunities for all segments of the City's population, and preserve and encourage construction of affordable housing. The Element examines specific housing needs of the City's population through extensive review of socio-economic data well as an assessment of the City's existing housing stock and a vacant land inventory within the City that is available for residential uses.

Population Characteristics

The Ventura County Organization of Governments' (VCOG) adopted 2000-2025 population and housing forecasts identify demographic trends throughout the County. The latest projections were adopted in 2000 and have been submitted to SCAG for inclusion in its revised regional growth projections. The adopted demographic information for Ventura County and the City of Oxnard Growth and Non-growth areas considered in the Housing Element study are presented below in Table 4.1-1.

Table 4.1-1
Adopted VCOG Population Projections

	2000	2005	2010	2015	2020	2025	Growth 2000-2020
Ventura County	743,654	778,433	834,687	873,559	914,368	951,080	170,714 (23%)
City of Oxnard - Growth Area	162,623	170,215	178,912	189,439	200,302	213,891	37,679 (23%)
City of Oxnard	151,904	159,301	168,025	176,413	186,901	200,086	34,998 (23%)
City of Oxnard - Non-growth Area	4,815	4,861	4,907	4,953	4,999	5,044	184 (4%)

Source: Ventura County Environmental Management Agency, Department of Planning (2000).

As can be seen from the table, both Ventura County and the City of Oxnard are projected to undergo sustained growth during the 25-year period between 2000 and the year 2025. The total population of the Oxnard growth area in the year 2025 is estimated to be 213,891 persons, while the County will grow to 951,080 persons. This represents a 23 percent increase over the period for both jurisdictions.

Housing Characteristics

The present and projected housing stock contained within the City as contained in the VCOG forecasts is presented below in Table 4.1-2.

Table 4.1-2
Adopted VCOG Housing Projections

	2000	2005	2010	2015	2020	2025	Growth 2000-2020
Ventura County	251,853	264,863	284,483	297,790	312,407	327,024	75,171 (30%)
City of Oxnard-Growth Area	47,690	50,509	54,052	58,289	62,988	67,687	15,298 (32%)
City of Oxnard	44,030	46,689	50,113	53,605	58,066	62,527	14,036 (32%)
City of Oxnard-Non-growth Area	1,049	1,059	1,069	1,079	1,089	1,099	40 (4%)

Source: Ventura County Environmental Management Agency, Department of Planning (2000).

By the year 2020, the total number of houses within the City's Growth Area is projected to increase by 32 percent to a total of 62,988 units. The Non-growth area is not expected to undergo meaningful growth given the County SOAR Ordinance and the City's CURB. As shown, an increase of only 40 units is forecast by the year 2020 for the Non-growth area.

Regional Housing Needs

California Government Code Section 65580 (et seq.) requires that all regional councils of governments determine the existing and projected housing need for its region. State law also requires that each council must determine the share of need allocated to each city and county within its region. A number of planning considerations are assessed in making this determination, including market demand, type and tenure of housing, employment, commuting patterns, suitable sites, and special housing need. The City of Oxnard's Regional Housing Needs Assessment (RHNA) allocation for the period 1998-2005 is 3,298 dwelling units distributed among income groups within the City as shown in Table 4.1-3.

Table 4.1-3
Adopted 1998-2005 City of Oxnard Regional Housing Needs

Income Group	Percent of County Median Family Income	Regional Housing Need
Very Low	0-50%	797 du
Low	51-80%	489 du
Moderate	81-120%	505 du
Upper	120+%	1,507 du
TOTAL		3,298 du

Source: City of Oxnard Housing Element (December 2000).

Zoning Designations

A variety of Zoning designations currently apply to the land within the proposed Specific Plan. The majority of RiverPark Area 'A' is zoned by the City as the Oxnard Town Center Specific Plan. The remaining land in RiverPark Area 'A', located between the Ventura Freeway, Vineyard Avenue and Myrtle Street is currently zoned C-2-PD (General Commercial – Planned Development) and R-1 (Single-Family Residential). RiverPark Area 'B' is zoned by the City as C-R (Community Reserve), and M-1-PD (Light Manufacturing-Planned Development). That portion of RiverPark Area 'B' which contains the Hanson Aggregates mine site sand and gravel mine is currently designated Open Space (O-S) with a Mineral Resource Protection Overlay by the County of Ventura.

Multiplex Theater Ordinance

In support of its downtown redevelopment efforts, the City of Oxnard adopted Ordinance No. 2466. This ordinance restricts multiplex motion picture theaters from locating anywhere in the City except the Central Business District (CBD) Zone of the City.[3]

HERO Redevelopment Plan

RiverPark Area 'A' is located in the Historic Enhancement and Revitalization of Oxnard (HERO) Redevelopment Project Area. The HERO Project Area, includes 2,264 acres in 20 defined subareas. The HERO Redevelopment Project provides a framework for the redevelopment of the 20 subareas located throughout the City of Oxnard. The objectives of the HERO Project include elimination of blight,

3 Multiplex theaters are defined as an establishment containing three or more screens where films, motion pictures, video cassettes, slides or similar photographic reproductions are regularly shown for any form of consideration.

economic revitalization, infrastructure improvement, structural rehabilitation, possible hazardous waste cleanup assistance, and other types of assistance for each specific subarea. It is anticipated that these actions, together with private investment, will facilitate economic revitalization and diminish or eliminate blight in the 20 subareas.[4] RiverPark Area 'A' is located within Subarea 1, identified as the Town Center Subarea, of the HERO Redevelopment Project area.

Oxnard Town Center Specific Plan

RiverPark RiverPark Area 'A' includes the existing Oxnard Town Center Specific Plan Area. This Specific Plan, adopted by the City of Oxnard in 1986, allows up to 1.5 million square feet of office space, 1.2 million square feet of office or research and development space, approximately 1,000 hotel rooms, 50,000 square feet of freestanding restaurant space, a 1.0 million square foot regional shopping mall and related public facilities.

In July of 2000, the City of Oxnard adopted an interim ordinance that placed a 45-day moratorium on development within the Oxnard Town Center Specific Plan. This action was conducted consistent with California Government Code Section 65858, which allows for the prohibition of uses that may be in conflict with a contemplated general plan, specific plan or zoning proposal which the City is considering. In this case, the City if considering the RiverPark Specific Plan. The City of Oxnard extended the moratorium in September 2000 for an additional 10 months and 15 days, and then again in July 2001 for one additional year.

Ventura County El Rio/Del Norte Area Plan

The distribution, location, type, and intensity of land use in unincorporated areas of the County is governed by the Ventura County *General Plan*, as implemented by various community or area plans. The El Rio/Del Norte Area Plan is the primary policy planning component of the County of Ventura *General Plan* which guides land use planning for unincorporated land adjacent to the northern boundary of the City of Oxnard. Land use designations contained in this plan for unincorporated land within the RiverPark Specific Plan area include Open Space 40 (40 acre minimum lot size), A (Agriculture), commercial, and industrial.

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4 *Report to City Council for the Historic Enhancement and Revitalization of Oxnard Redevelopment Project* (HERO Project). Community Development Commission, City of Oxnard, February 1998.

Local Agency Formation Commission (LAFCO)

Background

The Cortese-Knox Act is the framework within which proposed city annexations, incorporations, consolidations, and special district formations are considered. This law establishes a Local Agency Formation Commission (LAFCO) in each county, empowering it to review, approve or deny proposals for boundary changes and incorporations for cities, counties, and special districts. The Act mandates specific factors that the LAFCO must address when considering annexation proposals. The LAFCO in turn establishes the ground rules by which the affected city will process the annexation. Each LAFCO is made up of elected officials from the county, local cities, special districts, and a member of the general public. The specific membership of each LAFCO depends upon the statutory requirements of the Cortese-Knox Act.

Each LAFCO operates independently of the state. However, it is expected to act within a set of state-mandated parameters. The Legislature has taken care to guide the actions of the LAFCOs by providing statewide policies and priorities for the consideration of annexations (Section 56844), and by establishing criteria for the delineation of spheres of influence (Section 56425).

On February 28, 2000, the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (AB 2838) was introduced, which incorporated all of the recommendations relating to reform of the Local Governmental Reorganization Act from *Growth within Bounds*, a report of the Commission on Local Governance for the 21st Century. On September 26 2000, an amended version of this bill was signed into law. The purpose of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 is identified in Section 56001 of the Act, which states that:

> *"The Legislature finds and declares that it is the policy of the state to encourage orderly growth and development which are essential to the social, fiscal, and economic well-being of the state. The Legislature recognizes that the logical formation and determination of local agency boundaries is an important factor in promoting orderly development and in balancing such development with sometimes competing state interests of discouraging urban sprawl, preserving open space and prime agricultural lands, and efficiently extending government services. The Legislature also recognizes that providing housing for persons and families of all incomes is an important factor in promoting orderly development. Therefore, the Legislature further finds and declares that this policy should be effected by the logical formation and modification of the boundaries of local agencies, with a preference granted to accommodating additional growth within, or through the expansion of, the boundaries of those local agencies which can best accommodate and provide necessary governmental services and housing for persons and families of all incomes in the most efficient manner feasible."*

Ventura County LAFCO

The Sphere of Influence Line for the City of Oxnard as adopted by the Ventura County LAFCO is shown in Figure 2.0-2 in Section 2.0, Environmental Setting. This line is intended to represent "the probable ultimate physical boundaries and service area" of the City. This figure also depicts the current boundaries of the City of Oxnard. As shown, the entire RiverPark Specific Plan area is located within the existing Sphere of Influence line for the City of Oxnard. Further, RiverPark Area 'A' is located within the existing City of Oxnard incorporated boundary. RiverPark Area 'B' is located outside the existing incorporated boundaries of the City of Oxnard. Consequently, RiverPark Area 'B' is proposed for annexation into the City of Oxnard.

Guidelines for Orderly Development

The Guidelines for Orderly Development are regional jurisdictional policies that have been adopted by the County of Ventura, all cities in Ventura County, and the Ventura LAFCO. These Guidelines clarify the relationship between the cities and the County with respect to urban planning and services. The guidelines were a result of a cooperative effort to guide future growth and development in the County. The theme of the guidelines is that urban development should be located within incorporated cities whenever and wherever practical in order to ensure the provision of a full range of municipal services and in order to allow for cities to act as the responsible parties for land use planning decisions. One of the planning concepts in the guidelines calls for each defined Area of Interest within the County to contain only one city. The Guidelines contain a variety of policies that are linked with LAFCO goals regarding the discouragement of urban sprawl and the encouragement of the orderly formation and development of local governmental agencies based upon local conditions and circumstances. Specific policies contained in the Guidelines are discussed later in this section.

Southern California Association of Governments

The Specific Plan Area is located within the jurisdiction of the Southern California Association of Governments (SCAG), which includes Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial Counties. To facilitate planning activities for such a large region, SCAG has divided its jurisdiction into a number of sub-regions. The Specific Plan Area is located within the Ventura Council of Governments Subregion, which includes the Cities of Agoura Hills, Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura, Santa Paula, Simi Valley, Thousand Oaks, and Westlake Village, as well as the County of Ventura.

To coordinate regional planning efforts and in response to Federal air and water quality laws, SCAG has prepared a Regional Comprehensive Plan and Guide (RCPG). The RCPG is a comprehensive planning document intended to serve the SCAG region as a framework for decision making over the next 20 years. The plan includes a set of broad goals for the region and identifies strategies designed to guide local decision-making.

PROJECT IMPACTS

Thresholds of Significance

The City of Oxnard considers a project to have a significant land use impact if it would be:

- Inconsistent with the goals or objectives of Oxnard's plans or ordinances related to land use planning
- Conflict with any applicable land use plan, policy, or regulation of another public agency
- Substantial incompatibility between the uses proposed and neighboring land uses is identified as a significant impact.

Consistency with City of Oxnard *General Plan*

Land Use Element

Implementation of the Specific Plan would require the amendment of the Land Use Map designations contained in the *2020 General Plan* in order to be consistent with the proposed Specific Plan and to designate land uses reflected in the Specific Plan. This will require amendments to the 2020 Land Use Map and related text as described in Section 3.0, Project Description.

The City of Oxnard *2020 General Plan* Land Use Element contains a variety of goals, objectives and polices related to land use in the City. Actions intended to implement the City's plans and policies are also contained in the Element. The City's Land Use Goals are broad statements that encapsulate the City's vision. The Land Use Objectives provide more specifics and provide concrete means of achieving the goals. Finally, the City of Oxnard Land Use Policies articulate specific requirements or actions that apply to a particular area within the City. Pertinent goals, objectives, and policies are listed below in bold type, followed by a discussion of the project's consistency with each.

<u>Goals</u>[5]

- A balanced community that meets housing, commercial and employment needs consistent with the holding capacity of the City.

<u>Discussion</u>

The RiverPark Specific Plan guides development of a balanced mixed use community containing residential, commercial, open space and public facility uses. Residential uses allowed by the Specific Plan account for approximately 244 acres of the 701-acre Specific Plan Area (35 percent). Commercial uses allowed within the Specific Plan area occupy 147 acres or 21 percent of the total area. Public facilities serving the allowed uses include a 41-acre school/park site along with a 3-acre site designated for a fire station. The remaining 269 acres (38 percent) of the Specific Plan Area will consist of open space uses such as parks, landscape buffers, trails, and the reclaimed mine pits.

The Specific Plan Area is completely within the City Urban Restriction Boundary as identified in the Growth Management Element of the City of Oxnard *General Plan*. As such, the Specific Plan Area is part of the existing land inventory available to meet the diverse housing needs of the City.

The proposed amendment to the *2020 General Plan* Land Use Map consists of changes to the land use designations for the proposed Specific Plan Area. In addition, the map amendment would change the land use designation for the portion of the existing El Rio West residential neighborhood located between Stroube and Myrtle Streets from Regional Commercial to Low Density Residential. This part of the map amendment would reflect the existing residential uses in this neighborhood and further promote a better balance of residential and employment generating uses in the northern portion of the City of Oxnard.

The proposed amendments to the *General Plan* High Density Residential, Regional Commercial, and Public/Semi Public land uses categories would facilitate mixed land uses in specific plan areas. The proposed amendment to the Multiplex Theater ordinance would also allow for more flexibility in specific plan areas. These proposed amendments would be limited in effect to areas subject to approved specific plans, and for this reason, would have little overall impact on the distribution of land uses throughout the City as defined by the *2020 General Plan*. Given the above, the proposed RiverPark Specific Plan, general plan and code amendments are consistent with this Goal.

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5 City of Oxnard Planning Department: *City of Oxnard 2020 General Plan*, “Land Use Element,” pp. V-15, V-24. Oxnard, California: December 2000.

- A balance between jobs and housing within reasonable commuting distance from each other.

Discussion

The Specific Plan provides for development of a mix of land uses scaled to pedestrian movement. This serves to limit automobile usage by placing employment and neighborhood serving uses within a short distance of residential areas. On a citywide scale, the RiverPark Specific Plan Area is located within short commuting distance of a variety of business and employment centers located in north Oxnard and surrounding communities on the Oxnard Plain. Presently, the approved Oxnard Town Center Specific Plan in RiverPark Area 'A' and the Pacific Commerce Center/Northeast Industrial Area, generally bounded by the Ventura Freeway, West Fifth Street and Del Norte Boulevard, represent the major areas of planned commercial and industrial uses in the City. The RiverPark Specific Plan will promote a better mix of housing in relation to job generating uses by locating a new residential community in the northern part of the City closer to these areas and reducing the amount of commercial and industrial uses currently allowed by the Oxnard Town Center Specific Plan. For these reasons, the project is consistent with this goal of the Land Use Element.

Goal[6]

- Preservation of scenic views, natural topography, natural physical amenities, and air quality.

Discussion

Scenic Views

Views of the Specific Plan Area are available along primary roadways in the area. Existing on-site views consist of cultivated fields, modern commercial office structures located within the Town Center Specific Plan, equipment and structures associated with the County El Rio Maintenance Yard, and the mine pits and facilities of the Hanson site. Background views are of the mountains within the Los Padres National Forest. The City of Oxnard *General Plan* Community Design Element regards the on-site and surrounding agricultural lands as a natural scenic resource. Eucalyptus windrows located in the area are also identified as a dramatic vertical visual element on the predominantly flat topography.

6 City of Oxnard Planning Department: *City of Oxnard 2020 General Plan*, "Land Use Element," pp. V-15, V-24. Oxnard, California: December 2000.

The RiverPark Specific Plan contains development standards and design guidelines that regulate development within the Specific Plan Area. These include regulations on building setback, height, architectural standards, lighting, and landscape requirements. Existing views to the mountains and hills would not be obstructed by the development on the proposed Specific Plan Area with application of these standards and development guidelines. Build-out of uses within the Specific Plan would result in the conversion of some agricultural land to urban use. However, the City of Oxnard has established a mechanism for the preservation of agricultural land in the form of Greenbelt agreements with surrounding cities and establishment of the CURB boundary. The Greenbelts and CURB preserve views of agricultural land and provide a buffer of open space separating Cities found on the Oxnard plain. Finally, the existing eucalyptus windrows are planned for incorporation into the 6.7-acre planned park space extending from Central Park westerly to the Santa Clara River edge and incorporates natural trail connections. Based on the above, the Specific Plan is consistent with this Goal.

Topography

RiverPark Area ‘A’ is generally flat, while topography on RiverPark Area ‘B’ is more varied due to the mining operations of cutting, filling, spoils, and tailing disposal. The Grading Master Plan prepared for the project minimizes landform alteration. The plan maintains existing grades to the degree feasible, except at the mine pits where the slopes will be stabilized and fill material relocated as part of the Reclamation Plan. Based on the above, the Specific Plan is consistent with this Goal.

Natural Physical Amenities

The proposed Specific Plan will enhance the natural physical resources of the Specific Plan Area and surroundings. The Specific Plan Area itself is presently disturbed by human activity including development, farming, and mining operations. No natural plant communities are located on RiverPark Area ‘A’, while limited natural resources are found on RiverPark Area ‘B’. Natural habitat in the vicinity of the Specific Plan Area is associated with the Santa Clara River. This Specific Plan Area is relatively open, with few scattered mature trees near the outer banks and scattered patches of riparian scrub regrowth along the river bottom that is scoured away during large storm events every few years. During most of the year, the river in this area exists as one or more small meandering braided channels.

As part of the proposed Specific Plan, a multi-layered natural habitat area will be created along the edge of the Specific Plan adjacent to the Santa Clara River. This setback will utilize native vegetation communities to attract and support a wide range of wildlife species, especially birds. Selected tree species will provide nesting and foraging habitat for the various species. This newly created forest will also contain an understory of numerous species of compatible native shrubs. These may include species such as: arroyo willow, mulefat, California sagebrush, and coyote. The proposed Reclamation Plan for the Hanson site would also provide for the establishment of native vegetation on the slopes of the existing mine pits.

An overall benefit of the RiverPark wildlife habitat development is the potential to increase plant and wildlife diversity in this segment of the Santa Clara River. In addition, it will lay the foundation for a wildlife corridor that could ultimately extend for a major portion of the Santa Clara River from the coast to remaining foothill and upland areas that already support native plant communities and wildlife populations. The Specific Plan also enhances groundwater management efforts by reclaiming the mine pits in a manner that protects the quality of the exposed groundwater in the pits and allows for use of the pits for groundwater recharge purposes by the United Water Conservation District. Based on the above, the Specific Plan is consistent with this Goal.

Air Quality

The RiverPark Specific Plan guides development of a balanced mixed use community containing residential, commercial, open space and public facility uses in an area presently served by public transit and containing a regional transportation system. Moreover, the Specific Plan emphasizes mixed land use types scaled to pedestrian movement. This serves to limit automobile usage by placing employment and neighborhood serving uses within a short distance of residential areas. Based on the above, the Specific Plan is consistent with this Goal.

<u>Objectives</u>[7]

- Limit the urbanized area of the City and facilitate permanent greenbelts between Oxnard and Neighboring Cities.
- Preserve permanent agricultural land within the Oxnard Planning Area.

<u>Discussion</u>

The Growth Management Element of the *2020 General Plan* includes policies intended to manage the growth allowed by the *General Plan* while preserving natural resources. Historically, the primary method for preserving agricultural land is the City's participation in greenbelt agreements. For

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7 City of Oxnard Planning Department: *City of Oxnard 2020 General Plan*, "Land Use Element," pp. V-15, V-24. Oxnard, California: December 2000.

example, the Cities of Oxnard and Camarillo originally established the Oxnard-Camarillo Greenbelt in mid-1982. The County Board of Supervisors endorsed the Greenbelt in late 1982. This greenbelt agreement includes approximately 29,200 acres of cultivated land.

Since that time, establishment of the City Urban Restriction Boundary (CURB) has provided a stronger method of growth management. Approval of the ordinance establishing a CURB created a mechanism in the City's Growth Management Element to protect agricultural and open space land within the City's Planning Area by limiting the provision of urban services and urbanized land uses to areas located within the CURB. This will promote a more compact development pattern that preserves the agricultural land in large contiguous blocks that are more economically viable and compatible with adjacent land uses. Consequently, development within the CURB, while leaving the balance of land in the City's Planning Area under a Resource Protection, Open Space, or Agricultural designation, is presumptively an appropriate balance.[8] Given that the RiverPark Specific Plan Area is entirely within the CURB, the Specific Plan can be found consistent with these objectives. In addition, by reclaiming the existing sand and gravel mine site for residential uses, the project accommodates projected growth in the City and reduces the pressure for growth to occur on agricultural land in and around the City.

- Provide a variety of housing types throughout the City.

<u>Discussion</u>

The City of Oxnard is aggressively pursuing a wide variety of housing opportunities for the full range of economic segments. As part of this effort, the City has identified and set aside funds for the provision of such housing, along with incentives to encourage the private sector to construct affordable housing. The City is also pursuing housing opportunities for those with greater means in locations most appropriate for such uses. This is consistent with the economic diversity found within the City.

The City of Oxnard Housing Element contains an adequate inventory of vacant land that can accommodate residential development of all types. The Housing Element indicates that the City has a land inventory within the existing CURB boundary that can accommodate 8,500 units, which is sufficient to meet the range of housing required by the Regional Housing Needs Assessment. Within the current planning period, records indicate that the City has directly subsidized or facilitated the production of 572 affordable units, and plans an additional 230 units of affordable housing to lower

8 Oxnard SOAR Ordinance, City of Oxnard, adopted 1998.

income households. Additional opportunities for the development of multi-family housing are provided in the City's commercial zones.

The RiverPark Specific Plan would allow an array of housing types including single-family homes, patio homes, townhomes, and multi-family units (apartments). These products would appeal to a broad range of economic segments. Existing residential uses in the area are limited to single family uses along with two apartment complexes located in the adjacent El Rio West neighborhood. The proposed Specific Plan includes an Affordable Housing Program, requiring 15 percent of the total number of housing units to be affordable to very low and low income households. Housing affordable to households of very low income will likely consist of rental housing in the form of townhouses or apartments. Housing affordable to low income households will likely include apartments and townhouses for rent as well as townhouses and homes for sale. The proposed affordable program in the RiverPark Specific Plan also includes standards for the location of affordable housing to ensure distribution of affordable housing units in the community. In summary, build-out of the RiverPark Specific Plan would broaden the range of housing types available within the northern portion of the City, consistent with the intent of this policy.

- Provide adequate space for schools, libraries, park and recreation areas, and the expansion needs of public facilities to enhance the quality of life for all residents.

<u>Discussion</u>

The proposed RiverPark Specific Plan would guide the development of a mixed-use community with a balanced range of residential, commercial, civic, entertainment and open space uses. Open space uses would occupy the greatest amount of land of any use in the Specific Plan Area at 269 acres, which represents 38 percent of the total amount of land in the 701-acre area. The Specific Plan would provide 86 acres of parkland and open space distributed throughout the community, including neighborhood park space and a trail system allowing for linkages to planned regional trails. A site for new elementary and middle schools to be developed by the Rio School District have also been designated. The playfields at the elementary/intermediate school site would be available for public use through a joint use between the Rio School District and the City of Oxnard Parks and Recreation Department. Planning District D, the Town Square Commercial District, allows the development of a branch library. For these reasons, the Specific Plan as proposed is consistent with this objective.

- Ensure that all new development will be consistent with the Ventura County Air Quality Management Plan and other regional plans.

- Encourage the development of mixed uses in appropriate areas to reduce commuting.

Discussion

The Specific Plan is guided by the design principles of the 'New Urbanism' and 'Smart Growth' movements, which emphasize the importance of mixed land uses, communities scaled for pedestrian movement, limiting automobile usage and the importance of physical design in creating communities that people want to live, work and shop in. RiverPark will incorporate several residential neighborhoods, served by parks, neighborhood-oriented commercial, and a pedestrian movement system designed to reinforce and encourage pedestrian movement. These are linked by a project-wide open space and circulation system to a diverse mix of commercial, office, and recreational uses.

The location and design of the project also allows for the use of alternative means of transportation. The City of Oxnard is served by the South Coast Area Transit (SCAT), and the closest bus route is located adjacent to the Specific Plan Area along Vineyard Avenue. This route includes stops at the Oxnard Intermodal Transit Station. This station functions as a hub for the SCAT inter-city and local bus services and as a connection for Amtrak's Metrolink. SCAT has indicated that transit service can be extended to the Specific Plan Area along Oxnard Boulevard, Ventura Road or other major streets in the community when demand warrants. The Specific Plan includes provisions for bus turnouts and other transit support facilities. As such, future residents of the Specific Plan have the opportunity to utilize several alternative modes of transportation including bus and rail service. In conclusion, physical design feature of the Specific Plan along with the location near an area served by existing transit act to reduce total vehicle miles traveled and hence, vehicle air emissions. Given the above, the project can be found consistent with these objectives. As discussed in Section 4.8, Air Quality, the RiverPark Specific Plan is consistent with the Ventura County Air Quality Management Plan.

Growth Management Element

Goals[9]

- Orderly growth and development that is consistent over the life of the *2020 General Plan*, fostered by the CURB
- Maintain the quality of life desired by the residents of Oxnard
- Sensible urban growth based on the ability to provide the necessary governmental services and municipal utilities.

9 City of Oxnard Planning Department: *City of Oxnard 2020 General Plan*, "Growth Management Element," pp. IV-19. Oxnard, California: December 2000.

Discussion

The Growth Management Element of the *2020 General Plan* is intended to manage the growth allowed by the *General Plan*. One of the primary tools available to accomplish this task is the City Urban Restriction Boundary or CURB. As described above, the CURB represents a boundary within which development is planned to take place through the term of the *General Plan* (2020). During this time, the City of Oxnard will restrict urban services and urbanized land uses to land located within the CURB.

The proposed Specific Plan represents the orderly development of an area planned for urbanization by the *General Plan*. Not only is the Specific Plan area entirely within the CURB boundary, but RiverPark Area 'B' contains a Planning Reserve Overlay. This overlay was placed on certain open space areas contiguous to developed portions of the City to indicate that they may be considered for urbanization during the tenure of the *2020 General Plan*.

Finally, the project is located in an area that is afforded all necessary municipal services and utilities. The analysis contained in Section 4.10 and Section 4.11 of this Draft EIR found that the project would not significantly impact the ability of the utility and service providers to meet demand created by the project. In conclusion, the project is consistent with the goals of the Growth Management Element.

Objectives[10]

- Create an appropriate balance between urban development and preservation of agricultural uses within the Planning Area. Development exclusively within the CURB while leaving the balance in Resource Protection, Open Space, or Agricultural Designations is presumptively an appropriate balance.

Discussion

The RiverPark Specific Plan project is consistent with the objective to preserve agricultural land. By remaining within the urban boundaries established by the CURB, the Specific Plan would not hinder the objective to preserve agricultural land that surrounds the City. The Specific Plan also promotes an appropriate balance of development and open space uses by retaining 38 percent of the Specific Plan

10 City of Oxnard Planning Department: *City of Oxnard 2020 General Plan*, "Growth Management Element," pp. IV-19. Oxnard, California: December 2000.

Area in open space in the form of water quality basins, parks, and landscape buffers. Given the above, the project is consistent with this objective.

- Insure that areas annexed into the City share equitably in the costs of all necessary municipal improvements.

Discussion

The applicant of the RiverPark Specific Plan will be responsible for construction of backbone roadways and utility infrastructure needed to support future development. Development and connection fees provide additional revenue to fund capital improvements needed to support municipal service. A fiscal impact study completed for the project demonstrates that the revenues generated by the RiverPark Project will be sufficient to pay for all required public services from the City.[11] In Given the above, the project is consistent with this objective.

Policies

- The Oxnard City Urban Restriction Boundary – The CURB sets the primary self-imposed demarcation for the geographic urbanization of the City. Although voters utilized the location of the LAFCO Sphere of Influence Boundary for locating the CURB, it serves a fundamentally different purpose. Whereas the LAFCO Sphere of Influence Line regulates annexation, the CURB identifies the area within which primarily urban land uses will be accommodated. Upon adjustment of the Sphere of Influence Line and annexation outside the CURB, more rural, agricultural and open space uses, as well as necessary schools, parks, or other necessary governmental uses may be accommodated under City jurisdiction.

Discussion

The proposed RiverPark Specific Plan is within the urban area defined by the CURB to accommodate future growth of the City. The Specific Plan also provides a variety of public uses including schools parks, and a fire station consistent with this objective.

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11 Urban Futures Fiscal Impact Study

Housing Element

Goals[12]

- Housing costs [should be] within the ability-to-pay of all economic segments.
- Sufficient housing [should be provided] to satisfy the needs of the households with special housing needs (such as the homeless, farm worker households, handicapped, large families and elderly).
- [Provide] A variety of housing types throughout the City, which meet the needs of all economic segments.
- Address the housing needs for all income groups of Oxnard residents in the five-year housing production objectives.
- [Provide] adequate housing opportunities for all persons regardless of race, color, religion, sex, marital status, age, handicapped condition, ancestry, national origin, sexual orientation, or family size or type.

Discussion

The City of Oxnard is aggressively pursuing a wide variety of housing opportunities for the full range of economic segments. The City of Oxnard has prepared an affordable housing production plan. The Affordable Housing Plan provides a description of the existing and anticipated production of affordable housing units to fulfill State housing requirements and identifies a strategy for producing homes to meet that need. Part of this strategy is to encourage the production of affordable housing through the use of incentives to developers. These incentives include the modification of design standards, height and density limits, parking requirements, etc., to make the construction of affordable housing economically viable.

The City of Oxnard also adopted Oxnard City Ordinance 2506, passed in October of 2000, which establishes affordable housing requirements for new developments. Ordinance 2545, which was passed in December of 2000, has since adjusted some of the requirements and added new information on the in-lieu Affordable Housing Payments program. Currently, for all new residential single-family projects that contain ten or more single-family dwelling units, at least ten percent of the project's dwelling units must be sold or rented to persons or families of lower income. Such affordable dwelling units must have at least three bedrooms. For all new residential apartment and condominium projects that contain ten or more dwelling units, at least five percent of the project's dwelling units must be sold or rented to persons

12 City of Oxnard Planning Department: *City of Oxnard 2020 General Plan*, "Housing Element," pp. XIII-60. Oxnard, California: December 2000.

or families of lower income and another five percent to persons and families of very low income. The developer of the project can make a request to the City to pay an in-lieu Affordable Housing Payment to the City's Affordable Housing Fund or contribute offsite land that is dedicated for affordable housing to that City.

In redevelopment plan areas, §33413 of State Redevelopment Law (Health & Safety Code) on inclusionary requirements for affordable housing applies. The basic requirements contained in §33413(b)(2) require that at least 15 percent of all new housing within the redevelopment project area be made affordable to low/moderate income households and that 40 percent of these units be made affordable to very low income households. This requirement is not project specific, but applies to the redevelopment project area as a whole. Further, this requirement can be met by development in all City redevelopment project areas.

The RiverPark 'A' portion of the Specific Plan Area is located in the HERO Redevelopment project area, thus it is required to comply with §33413 of State Redevelopment Law, which states that that at least 15 percent of all new housing within the redevelopment project area as a whole be made affordable to low/moderate income households and that 40 percent of these units be made affordable to very low-income households.

The RiverPark Specific Plan would require 15 percent of the total number of housing units to be affordable to very low and low-income households. This exceeds the existing City requirements. Housing affordable to households of very low income will likely consist of rental housing in the form of townhouses or apartments. Housing affordable to low-income households will likely include apartments and townhouses for rent as well as townhouses and homes for sale. The proposed affordable program in the RiverPark Specific Plan also includes standards for the location of affordable housing to ensure distribution of affordable housing units throughout the community.

Consistency with the City of Oxnard Zoning Ordinance

As described earlier in this section, RiverPark Area 'A' is zoned Town Center Specific Plan, while Area 'B' is zoned Open Space by the County of Ventura. Prior to annexation of the property into the incorporated boundaries of the City of Oxnard, the Specific Plan Area must be pre-zoned. This action determines the zoning that will apply to the property subsequent to the annexation action. The proposed zoning designation for the Specific Plan Area is RiverPark Specific Plan.

One of the allowed uses within Planning District D, Town Square Planning District, is a multiplex theater. The proposal to amend this Ordinance to allow for construction of multiplex theaters in areas designated for regional commercial uses that have been master planned through a Specific Plan. Modification of the ordinance will not cause a significant impact because the Regional Commercial land use designation is applied to a small number of sites in the City. Of these sites, only the RiverPark project would be subject to a specific plan. For this reason, the only location outside of the downtown this change to the code would allow theaters is the RiverPark Specific Plan Area. Given the distance between the downtown and the RiverPark Specific Plan Area, this modification of the Ordinance would not substantially alter the intent to promote the downtown as an entertainment hub.

Consistency with the HERO Redevelopment Plan

The HERO Redevelopment Plan provides flexibility in terms of its land uses controls. Specifically, Section 401 of the Redevelopment Plan states that the intention of the Redevelopment Plan that land uses permitted within the Redevelopment Area be as provided for in the City's *General Plan* as it may be amended from time to time. Accordingly, the proposed uses as approved subject to a *General Plan* Amendment would be consistent with the HERO Redevelopment Plan.

Consistency with the Local Agency Formation Commission Policies

As previously discussed, the Specific Plan Area is located partially outside the incorporated City limits of Oxnard. Given this, prior to project approval and site development, a portion of the Specific Plan area must be annexed to the City. Section 56377 of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 indicates that when reviewing and considering proposals that can be expected to induce, facilitate, or lead to the conversion of existing open space lands to uses other than open-space uses, the commission shall consider two specific principles:

A) Development or use of land for other than open-space uses shall be guided away from existing prime agricultural lands in open-space use towards areas containing non-prime agricultural lands, unless that action would not promote the planned, orderly, efficient development of an area.

B) Development of existing vacant or non-prime agricultural lands for urban uses within the existing jurisdiction of a local agency or within the sphere of influence of a local agency should be encouraged before any proposal is approved which would allow for or lead to the development of existing open space lands for non –open space uses which are outside of the existing jurisdiction of the local agency or outside of the existing sphere of influence of the local agency.

Discussion

Approximately 432 acres of land located within RiverPark RiverPark Area 'B' is located outside the existing City of Oxnard incorporated boundary, but within the City's existing Sphere of Influence. This area can be considered open space under the definition set forth in Section 65560 of the State Planning and Zoning law.[13] The majority of the area proposed for annexation contains a sand and gravel mine and associated production facilities operated by Hanson Aggregates. The Hanson Aggregates site consists of an existing plant area, adjacent stockpile area, and open mine pits. The plant facilities included two ready mix concrete plants, an asphalt plant, a rock and sand plant, a recycler and related shop areas and offices. Mining operations began in the 1940s and the County of Ventura began regulating plant operations in 1965 through a CUP. Hanson Aggregates has ceased operations and recently undertook the actions necessary to reclaim the mine area as required by the CUP.

A small portion of this area contains drainage facilities owned and operated by the Ventura County Flood Control District. The Flood Control District built the two existing retention basins located on the property in 1997 to accept runoff from areas to the east of Vineyard Avenue. The basins were constructed to reduce flooding and eliminate nuisance runoff. A secondary use of this land is for agricultural production.

While a small portion of the El Rio Detention Basin No. 2 site located along Vineyard Avenue is presently utilized for crop production, and the bottom of this basin is also used for agriculture from time to time, this is a secondary use on land that is primarily used for flood control purposes. This agricultural land is a small fragment separated from farmland located in the Oxnard-Camarillo Greenbelt by Vineyard Avenue and the residential uses located in the El Rio neighborhood located immediately east of the Specific Plan Area. Moreover, production has ceased at the Hanson Aggregate facility as the resources at the Specific Plan Area have been extracted. The company has initiated actions to reclaim the mine pits pursuant to an approved mine reclamation plan. Upon completion of the reclamation project the facility will serve as a groundwater recharge basin, which represents another type of open space use.

The City of Oxnard is proposing to annex the 432 acres of land into the City to accommodate build-out of the proposed Specific Plan. The land is located within the CURB boundary, which represents the geographic area that is designated in the Growth Management Element of the *2020 General Plan* to

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[13] Open Space is defined by Section 65560 of Title 7, Planning and Land Use, of the California Government Code. This definition includes land used for managed production of resources such as food, fiber, areas containing major mineral deposits, or areas required for groundwater recharge.

accommodate future growth within the City. The Plans and Policies contained in the City of Oxnard *2020 General Plan* provide for a balance between urban use and agricultural land and open spaces. Annexation of this property would promote the planned, orderly, efficient development of the City of Oxnard by allowing the City to comprehensively plan land located within the CURB. Not only is the Specific Plan Area entirely within the CURB boundary, but the area proposed for annexation already contains a Planning Reserve Overlay. This overlay was placed on certain parcels of land contiguous to developed portions of the City to indicate that they may be considered for urbanization during the tenure of the *2020 General Plan*. Given that the existing agricultural land in the area proposed for annexation is small and isolated from the Oxnard-Camarillo Greenbelt by developed uses, the existing sand and gravel mining facility has ceased production due to depletion of resources, the mine pits themselves will be reclaimed and used for an alternate open space use (recharge basins), and because the area is located within the CURB, annexation of the 432 acres into the City of Oxnard is consistent with the two principles outlined above.

Section 5668 of the Cortese-Knox-Hertzberg legislation also has guidelines for the review of proposed annexation requests. A detailed discussion of each topic can be found in the appropriate sections of this EIR. Following is a brief discussion of the factors considered by LAFCO when considering an annexation:

(a) Population, population density; land area and land use; per capita assessed valuation; topography, natural boundaries, and drainage basins; proximity to other populated areas; the likelihood of significant growth in the area, and in adjacent incorporated and unincorporated areas, during the next 10 years.

(b) The conformity of both the proposal and its anticipated effects with both the adopted commission policies on providing planned, orderly, efficient patterns of urban development, and the policies and priorities set forth in Section 56377.

<u>Discussion</u>

Table 4.1-1 presented earlier in this section identifies the adopted population forecast for the City of Oxnard through the year 2025. As indicated in the table, the City is projected to undergo sustained growth during this period. These projections indicate that the City will increase by 23 percent or 37,679 persons by the year 2025. Housing stock of the City is also projected to increase by 32 percent or 14,036 units in order to support this level of population growth.

The City of Oxnard is proposing annexation of 432 acres of land (RiverPark Area 'B') that is located inside the CURB but outside of the existing incorporated boundary to plan for this projected growth in a comprehensive manner. The area proposed for annexation contains an existing sand and gravel mine and drainage facilities owned and operated by the Ventura County Flood Control District. The topography of the property is gentle with the exception of the mining pits and little natural habitat is present due to disturbance caused by historic mining activity. Moreover, the property is outside of areas subject to the 100-year flood as depicted on the FIRM map for Oxnard.

Located to the west of the Specific Plan Area across the Santa Clara River is agricultural land and residential development in the City of Ventura. Across from the Large Woolsey Pit is a residential neighborhood located in the Serra Community as defined in the City of Ventura Comprehensive Plan. Further to the south, near the Ventura Freeway are residential neighborhoods in the Montalvo Community as defined in the Ventura Comprehensive Plan. Existing uses immediately east of the Specific Plan include the El Rio Community to the south and agricultural land to the north. The El Rio Community includes the residential and commercial uses located north of the Ventura Freeway between Vineyard Avenue and Rose Avenue to the east.

In conclusion, the City of Oxnard is expected to undergo sustained population growth through the term of the *2020 General Plan*. The entire Specific Plan Area, including the proposed annexation area, is suitable for urbanization because it does not contain severe topography, floodways, or sensitive biological resources that could pose a constraint to development. Moreover, it is located adjacent to developed uses and is within the CURB boundary, which represents the geographic boundary within which projected growth of the City is to be accommodated.

(c) Need for organized community services; the present cost and adequacy of governmental services and controls in the area; probable future needs for those services and controls; probable effect of the proposed incorporation, formation, annexation, or exclusion and of alternative courses of action on the cost and adequacy of services and controls in the area and adjacent areas.

(d) The ability of the newly formed or receiving entity to provide the services which are the subject of the application to the area, including the sufficiency of revenues for such services following the proposed boundary change.

Discussion

Future uses developed within the Specific Plan will require utilities and public services. Existing and master-planned utilities and municipal service providers that presently serve existing commercial and residential uses in the immediate area can serve these proposed uses. Development within the Specific Plan Area would be coordinated and timed to ensure that adequate capacity exists to accommodate the project as it is developed. Furthermore, based on the information and analysis contained in Section 4.10, Public Services, and Section 4.11, Public Utilities, of this EIR, the project can be afforded all necessary municipal services and utilities without significantly affecting their existing service obligations with the implementation of mitigation.

(e) The effect of the proposed action and of alternative actions, on adjacent areas, on mutual social and economic interests, and on the local governmental structure of the county.

Discussion

The Specific Plan is part of a larger community fabric found within the north portion of the City of Oxnard. The Specific Plan Area is part of the Del Norte Residential Community designated in the *2020 General Plan*. This community is located north of the Ventura Freeway. One of the goals established by the *General Plan* is to ensure that each of the neighborhood communities defined by the *General Plan* contains adequate housing and public facilities. The project would be complementary to the existing uses in the Del Norte community as it allows a variety of housing types and provides public facilities in the form of park space and new school sites. Build-out of the Specific Plan would also contribute revenue to both the City of Oxnard and Ventura County in the form of sales and property taxes, gas taxes, and miscellaneous development fees imposed for connection to existing service systems.

(f) The effect of the proposal on maintaining the physical and economic integrity of agricultural lands, as defined by Section 56016.

Discussion

The proposed annexation will have no effect on the physical or economic integrity of agricultural lands contained within the Oxnard-Camarillo Greenbelt. While a small portion of the proposed annexation area is presently utilized for crop production, it is a secondary use on land that is improved for flood control purposes. More importantly, this land is located in the CURB and is a small parcel that is separated from farmland located in the Oxnard-Camarillo Greenbelt by Vineyard Avenue, residential development located due east of the Specific Plan Area, and a industrial park. As planned, the nearest residential neighborhood to the existing agricultural land across Vineyard Avenue would be 1,500 feet. Consequently, annexation to allow future development of said land promotes infill development that would not alter the physical boundary of the Greenbelt nor influence the economic integrity of agricultural lands.

(g) The definiteness and certainty of the boundaries of the territory, the nonconformance of proposed boundaries with lines of assessment or ownership, the creation of islands or corridors of unincorporated territory, and other similar matters affecting the proposed boundaries.

Discussion

The entirety of the Specific Plan Area is located within the existing City of Oxnard Sphere of Influence and CURB line, so annexation of RiverPark RiverPark Area 'B' into the City of Oxnard would be consistent with established jurisdictional boundaries. In addition, since the annexation is a contiguous piece of land located adjacent to the existing incorporated boundary, the proposed annexation action would not create islands of unincorporated County territory.

(h) Consistency with city or county general and specific plans.

(i) Any information relating to existing land use designations.

Discussion

As shown previously on Figure 4.1-1, that portion of the Specific Plan Area presently located within the City of Oxnard incorporated boundary is designated for development of Regional Commercial, Commercial Office, and Business and Research Park uses consistent with the adopted Oxnard Town Center Specific Plan. The adopted plan allows development of up to 4.4 million square feet of commercial and industrial space in the area addressed by that plan. That portion of the RiverPark Specific Plan located outside the City's boundary is designated as Open Space-Mineral Resource and Open Space-Buffer on the Oxnard *2020 General Plan* land use map. This area is also designated as a Planning Reserve area as defined by the Oxnard *2020 General Plan*, which represents land located adjacent to developed uses that can be considered for urbanization during the tenure of the *2020 General Plan*.

A comprehensive analysis of project consistency with the City of Oxnard *2020 General Plan* is provided above. The proposed Specific Plan has been found consistent with the goals, objectives, and policies of the *General Plan*.

(j) The sphere of influence of any local agency which may be applicable to the proposal being reviewed.

Discussion

The land proposed for annexation is located entirely within the City's existing Sphere of Influence line.

(k) Timely availability of water supplies adequate for projected needs including, but not limited to, the projected needs as specified in Section 65352.5.

Discussion

As presented in Section 4.11, Public Utilities, of this Draft EIR, the project will receive groundwater extraction allocations in the amount of approximately 1,580 acre-feet upon annexation of RiverPark Area ‘B’ and conversion of the existing uses to the proposed uses. The City has facilities with sufficient capacity to pump and provide this water as needed. As this projected demand for the uses allowed by the Specific Plan is 1,550 acre-feet City’s Water Master Plan, available water will exceed the demand of the project. As adequate water can be supplied to meet the needs of the project in a timely manner, the project is consistent with this policy.

(l) The extent to which the proposal will assist the receiving entity in achieving its fair share of the regional housing needs as determined by the appropriate council of governments.

Discussion

The City of Oxnard’s Regional Housing Needs Assessment allocation for the period 1998-2005 is 3,298 dwelling units (du). Of this total, 1,286 du are to be set aside for households of low and very-low income, while 2,012 du are for moderate and upper income households. The RiverPark Specific Plan provides a range of housing types to accommodate all economic segments of the community and includes an affordable housing program that will result in an increase in the number of affordable units in the City. Allowed uses within the Specific Plan available for affordable units include apartments, townhomes, lofts that are located over commercial buildings, and second units located on certain single-family lots.

Consistency with the Guidelines for Orderly Development

The Guidelines for Orderly Development contain a number of policies which are categorized based upon a proposed project’s location relative to a local city’s Sphere of Influence and incorporated boundary. The foundation of the Guidelines are articulated in the two general policies identified below:

- Urban development should occur, whenever and wherever practical, within incorporated cities which exist to provide a full range of municipal services and are responsible for urban land use planning.
- The cities and County should strive to produce general plans, ordinance and policies which will fulfill these guidelines.

Based upon the above, specific policies are identified for proposed actions that would occur either within a city's current Sphere of Influence, or within a city's Area of Interest. Those policies, which apply to projects within a Sphere of Influence, are identified as follows:

- Applicants for land use permits or entitlements for urban uses shall be encouraged to apply to the City to achieve their development goals and discouraged from applying to the County.
- The City is primarily responsible for local land use planning and for the provision of municipal services.
- Prior to being developed for urban purposes or to receiving municipal services, land should be annexed to the City.
- Annexation to the City is preferable to the formation of new, or expansion of, existing County service areas.
- Land uses which are allowed by the County without annexation should be equal to or more restrictive than land uses allowed by the City.
- Development standards and capital improvement requirements imposed by the County for new or expanding developments should not be less than those that would be imposed by the City.

Projects which are within a City's Area of Interest but outside the City's Sphere of Influence are subject to the following:

- Applications for land use permits or entitlements shall be referred to the City for review and comment.
- The County is primarily responsible for local land use planning, consistent with the general land use goals and objectives of the City.
- Urban development should be allowed only within existing "communities" as designated on the County *General Plan*.
- Unincorporated urbanized areas should financially support County-administered urban services which are comparable to those services provided by Cities.

Discussion

The Specific Plan Area bears relation to the City's planning efforts due to its location within and adjacent to the incorporated boundaries of the City. The southern 269 acres of the Specific Plan Area are located within the existing City incorporated boundary and are also located within the Oxnard Community Development Commission's Historic Enhancement and Revitalization of Oxnard (HERO) Redevelopment Plan Area. The northern 432 acres of the Specific Plan Area were historically used as a sand and gravel mine permitted by the County of Ventura in 1979 and detention basins operated by the Ventura County Flood Control District. All mining activities allowed by the current permit have been completed and the site is undergoing reclamation.

In order to facilitate the reclamation of the mine and plan for the future development of this portion of the City in a coordinated fashion, the City is requesting the annexation of the northern 432 acres of land. This will allow the City to regulate the development of this area through adoption and implementation of a Specific Plan in a manner consistent with the City's land use policies. Thus, the application for development of the Specific Plan Area consistent with the RiverPark Specific Plan was submitted to the City of Oxnard Planning Division for review and approval. Further, all development standards, capital improvement requirements, etc., would be governed based on City standards. These actions would be consistent with the County's Guidelines for Orderly Development which state that the primary responsibility for local land use planning should occur at the local level.

The Specific Plan Area is in close proximity to existing urban development located within the incorporated boundary of the City of Oxnard. In fact, the southern half of the Specific Plan is within the existing Del Norte Community as identified in the City's *2020 General Plan*. All necessary urban services exist in the area and could be readily provided upon annexation into the City of Oxnard. This is also consistent with the guidelines that state that cities are primarily responsible for the full range of urban services.

In conclusion, the requested actions are considered consistent with the Guidelines for Orderly Development. Unincorporated land within the Specific Plan Area is proposed for annexation into the City of Oxnard, which will be responsible for the land use decisions within this area. In addition, the City would be responsible for providing the full range of municipal services upon the completion of these actions consistent with the guidelines.

Consistency with SCAG Regional Comprehensive Plan & Guide

The County of Los Angeles is within the six-county jurisdiction of the Southern California Association of Governments ("SCAG"), which also includes Ventura, Orange, San Bernardino, Riverside, and Imperial Counties. SCAG has divided its jurisdiction into 13 subregions to facilitate regional planning efforts. As previously mentioned the RiverPark Specific Plan Area is located in the Ventura Council of Governments Subregion as defined by SCAG.

The *Regional Comprehensive Plan and Guide* ("RCPG"), dated March 1996, consists of five core chapters, which are growth management, regional mobility, air quality, water quality, and hazardous waste management. These core chapters respond directly to federal and state requirements placed on the Southern California Association of Governments and which local governments are required to use as the basis for their own plans. Under CEQA, local governments are required to discuss the consistency of projects with regional significance against policies contained in the RCPG. Special attention shall be afforded to the core sections and policies of the Plan.

The following is a brief discussion of the mandatory sections of the core chapters that apply to the proposed project, as well as a project consistency analysis with policies identified in each chapter. Goals contained in the Open Space Chapter of the RCPG, an ancillary Chapter, are also evaluated at the request of SCAG in the NOP comment letter dated May 19, 2000.

Growth Management Chapter

Policies in this chapter reference SCAG's mandate in the review of regionally significant projects are discussed below:

- *The population, housing, and jobs forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review.*

Build-out of the Specific Plan would result in construction of up to 2,805 dwelling units that would house a population of approximately 7,220 persons over the 10 to 15 year build-out period of the project. The Specific Plan is also estimated to create approximately 5,368 permanent jobs.[14] As indicated in Table 4.1-4, the VCOG subregion is predicted to undergo sustained growth through the year 2020. Population in this subregion is predicted to increase by 220,100 persons, while the housing stock is projected to increase by 89,400 units. Employment opportunities are also predicted to increase substantially.

Table 4.1-4
SCAG Demographic Projections - VCOG Subregion

	2000	2005	2010	2020	Growth 2000-2020
Population	712,800	745,000	804,300	932,900	220,100 (31%)
Housing	237,000	252,400	274,700	326,400	89,400 (38%)
Employment	306,600	343,200	394,800	485,600	179,000 (58%)

Source: SCAG, Regional Comprehensive Plan and Guide, *Growth Management Chapter, (April 1998).*

[14] Urban Futures, Inc., RiverPark Specific Plan Fiscal Impact Analysis, November 24, 2000.

The increased population resulting from build-out of the Specific Plan when added to the 2000 sub-regional population of 712,800 equates to a projected population of 720,020 residents by the year 2020. This is well within the demographic projection for the year 2020. Similarly, the incremental increase in housing stock is also within SCAG and VCOG growth projections for the year 2010. Project build-out will also generate employment opportunities consistent with subregional growth projections through the year 2020.

Table 4.1-5 depicts SCAG demographic projections for the City of Oxnard. On a local level, build-out of the Specific Plan would result in a population of 158,920 when the estimated population for the project is added to the year 2000 forecast. This figure is well below the 186,900 persons projected to reside in the City by the year 2020. Consequently, the project would be consistent with SCAG population and housing forecasts for the City.

Table 4.1-5
SCAG Demographic Projections – City of Oxnard

	2000	2005	2010	2020	Growth 2000-2020
Population	151,700	156,700	166,000	186,900	35,200 (23%)
Housing	42,200	44,400	47,600	55,000	89,400 (30%)
Employment	42,300	49,100	58,800	75,800	33,500 (79%)

Source: SCAG, Regional Comprehensive Plan and Guide, *Growth Management Chapter, (April 1998).*

- *The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.*

Analysis: As previously indicated, RiverPark Area 'A' is presently developed and utilities including water, sewer, electrical, natural gas, communication links exist to serve uses in this area. In addition, the City's water, sewer and storm drain master plans provide service to this area with planned capacity to serve the land uses proposed. Thus, municipal services and utilities are available to serve the Specific Plan Area. Final plans for on-site utilities will be approved by the City of Oxnard Department of Public Works prior to the issuance of building permits, and all utilities will be improved with each future subdivision constructed within the Specific Plan Area. In addition, project generated residents and businesses would generate revenue in the form of sales taxes, property taxes, fees, etc., which would be available to the City to fund the operation of public services on the Specific Plan Area, such as fire and police service, flood control, library service, street maintenance, etc. Revenues for capital improvements would also be generated by the project directly through various forms of development fees, including, but not limited to water connection fees, sewer connection fees, and school fees. Therefore, the project is consistent with this policy.

- *SCAG shall encourage local jurisdiction's efforts to achieve a balance between the types of jobs they seek to attract and housing prices.*

<u>Analysis</u>: The RiverPark Specific Plan would provide a side range of housing and employment opportunities, including a requirement for 15 percent of the housing built to be affordable. The RiverPark Specific Plan would allow an array of housing types including single-family homes, patio homes, townhomes, and multi-family units (apartments). These products would appeal to a broad range of economic segments consistent with the intent of this policy.

- *SCAG shall encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment.*

<u>Analysis</u>: The City of Oxnard is aggressively pursuing a wide variety of housing opportunities for the full range of economic segments. The City has developed an Affordable Housing Plan to address the need for affordable housing. As part of this effort, the City has identified and set aside funds for the provision of such housing, along with incentives to encourage the private sector to construct affordable housing. The City is also pursuing housing opportunities for those with greater means in locations most appropriate for such uses. This is consistent with the economic diversity found within the City, which contains employment opportunities ranging from high paying professional jobs, such as attorneys, to those of field worker and retail employee.

The RiverPark Specific Plan would provide a wide range of housing and employment opportunities, including a requirement for 15 percent of the housing built to be affordable. The RiverPark Specific Plan would allow an array of housing types including single-family homes, patio homes, townhomes, and multi-family units (apartments). These products would appeal to a broad range of economic segments. Existing residential uses in the study area are limited to single family uses along with two apartment buildings located in the adjacent El Rio West neighborhood. In summary, build-out of the RiverPark Specific Plan would broaden the range of housing types available within the northern portion of the City, consistent with the intent of this policy.

- *SCAG shall encourage patterns of urban development and land use which reduce costs on infrastructure construction and make better use of existing facilities.*

- *SCAG shall support local jurisdictions' efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.*

- *SCAG shall support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide equally to all members of society, accessible and effective services, such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.*

Analysis: The Specific Plan Area is presently partially developed and the full range of infrastructure and municipal services are afforded to the property. The site is located in an area that is master planned for sewer, water and storm drain facilities by the City of Oxnard and is located within a Redevelopment Program Area. In addition, the Specific Plan Area is located on the Ventura Freeway. Caltrans will be making a major improvement project to this segment of the Ventura Freeway in early 2002 with completion in mid-2006. The State Route 101 Improvement and Santa Clara River Bridge Replacement Project will include the replacement of the existing bridges across the Santa Clara River and the widening of the freeway from three to six lanes in each direction from Vineyard Avenue in Oxnard to the Montalvo Spur Overhead, located just north of Johnson Drive in Ventura. The existing 7-lane bridges will be replaced with a single 12-lane bridge. In Oxnard, this project will include the reconstruction of the existing Oxnard Boulevard Interchange and the Ventura Road undercrossing of the freeway, which will be widened from two to five lanes. The new Oxnard Boulevard Interchange will be a tight diamond interchange design providing access from Oxnard Boulevard to the proposed RiverPark Specific Plan Area and existing commercial areas to the south of the freeway. The RiverPark Specific Plan will result in the proposed land uses being located in an area fully served by existing and planned regional and local infrastructure. A fiscal impact study prepared by the City of Oxnard indicates that the revenues generated by the RiverPark Project will be sufficient to pay for all municipal services required. The RiverPark Specific Plan includes sites and provisions to provide necessary public facilities including schools, fire stations, a storefront police station, a branch library, neighborhood and community parkland and affordable housing. The RiverPark Specific Plan is consistent with these RCPG policies.

- *SCAG shall support provisions and incentives created by local jurisdictions to attract housing growth in job rich subregions and job growth in housing subregions.*

Analysis: The purpose of this policy is to reduce vehicle trip lengths by promoting the ability of people to live near to their place of employment. As indicated in Table 4.1-4, the Specific Plan Area is located in a growth area that contains wide variety of employment opportunities. The RiverPark Specific Plan would allow an array of housing types including single-family homes, patio homes, townhomes, and multi-family units (apartments). These products would appeal to a broad range of economic segments. The RiverPark Specific Plan is consistent with these RCPG policies.

- *SCAG shall encourage existing or proposed local jurisdictions' programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.*

Analysis: The RiverPark Specific Plan guides development of a balanced mixed use community containing residential, commercial, open space and public facility uses in an area presently served by public transit and containing a regional transportation system. Moreover, the Specific Plan emphasizes mixed land use types scaled to pedestrian movement. This serves to limit automobile usage by placing employment and neighborhood serving uses within a short distance of residential areas. Based on the above, the Specific Plan is consistent with this policy.

- *Encourage local jurisdiction's plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.*
- *Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers.*
- *Support local jurisdiction strategies to establish mixed-use clusters and other transit-oriented developments around transit stations and along transit corridors.*

Analysis: The Specific Plan guides development of a mixed-use community located within the City Urban Restriction Boundary (CURB), which represents the geographic area that is designated in the Growth Management Element of the *2020 General Plan* to accommodate future growth within the City. Moreover, the Specific Plan Area is served by the South Coast Area Transit (SCAT), and the closest bus route is located adjacent to the Specific Plan Area along Vineyard Avenue. This route includes stops at the Oxnard Intermodal Transit Station. This station functions as a hub for the SCAT inter-city and local bus services and as a connection for Amtrak's Metrolink. Finally, RiverPark RiverPark Area 'A' is located within the existing HERO Redevelopment Project Area. Given the above, the Specific Plan is consistent with these policies.

- *SCAG shall encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural sites and archaeological site.*

Analysis: The Phase 1 Archaeological Report conducted for the Specific Plan area concluded that no prehistoric archaeological site is located within the Specific Plan Area. Thus, the Specific Plan is considered consistent with this policy.

- *SCAG shall discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.*

Analysis: The Specific Plan Area is not subject to flood hazards, wildland fire hazards, nor does the property contain any steep slopes. Like other locations in Southern California, the Specific Plan Area would be subject to seismic hazards common to the region. Through compliance with Uniform Building Code, as required, hazards to the Specific Plan Area associated with seismic events would be reduced to less than significant levels making the RiverPark Specific Plan consistent with this SCAG policy.

- *SCAG shall encourage measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.*
- *Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.*

Analysis: The Specific Plan Area is partially developed and is exposed to noise characteristic of an urban environment by its presence near U.S Highway 101. The Specific Plan Area and surroundings are largely disturbed due to previous mining, farming, and development activity, and no sensitive plants or animals are present on the property. One of the primary objectives of the RiverPark Specific Plan is to reclaim the existing mine pits in a manner that protects the quality of the exposed groundwater in the pits due to the location of these pits in the recharge area of the Oxnard Aquifer system. Upon reclamation of the mine pits, they will be used as water storage and recharge basins, which will further enhance groundwater management efforts for the entire aquifer system. Finally, through compliance with Building Code requirements, hazards to the RiverPark Specific Plan associated with seismic events would be reduced to less than significant levels. With implementation of the proposed improvements, code requirements, and mitigation, the RiverPark Specific Plan would be consistent with this RCPG policy.

Regional Mobility Chapter

The Regional Mobility Chapter is a summary of another SCAG document entitled, *Regional Mobility Element* ("RME"). The RME, adopted in 1998, is the principal transportation policy, strategy and objective statement of SCAG, proposing a comprehensive strategy for achieving mobility and air quality mandates. The RME is also referred to as the *Regional Transportation Plan* ("RTP"), and it serves as both the Federal- and State-required regional long-range transportation plan for the SCAG region through the year 2015.

The Regional Mobility Element links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic, and commercial limitations.

Goals of the RME relevant to the RiverPark Specific Plan are listed below followed by a consistency analysis.

- *Support the coordination of land use and transportation decisions with land use and transportation capacity, taking into account the potential for demand management strategies to mitigate travel demand if provided for as a part of the entire package.*
- *Support efforts to educate the public on the efficacy of demand management strategies and increase the use of alternative transportation.*
- *Public transportation programs shall be considered an essential public service because of their social, economic, and environmental benefits.*
- *Specific service types, levels and configuration should be determined by the local transit providers, transit users, local jurisdictions, and applicable County transportation commissions.*

<u>Analysis</u>: As previously discussed, the RiverPark Specific Plan will accommodate projected regional growth in a location that is adjacent to existing and planned infrastructure, urban services, transportation corridors, and major employment centers. Moreover, the RiverPark Specific Plan is located in an area that is served by a number of mass transit providers. The RiverPark Specific Plan is, therefore, consistent with these policies.

- *Potential down-stream congestion impacts from capacity enhancing projects will be studied.*
- *Transportation investments shall mitigate environmental impacts to an acceptable level.*

<u>Analysis</u>: A traffic study has been prepared for the RiverPark Specific Plan and is discussed fully in Section 4.7, Transportation and Circulation, of this EIR. The study evaluates project-related, as well as long-term, cumulative traffic impacts on the local and regional transportation network. The proposed RiverPark Specific Plan would be responsible for improvements to the roadway network and would be required to participate in the City and County traffic impact fee programs in order to mitigate project-impacted road systems. The RiverPark Specific Plan, therefore, is consistent with this policy.

- *Expanded transportation system management by local jurisdictions will be encouraged.*
- *TSM activities throughout the region shall be coordinated among jurisdictions.*

<u>Analysis</u>: The RiverPark Specific Plan includes a number of transportation system management actions in order to speed the flow of traffic. For example, mitigation measures have been identified that will improve the level of service at the intersections significantly affected by this project. These improvements include not only physical actions such as the construction of dedicated left turn lanes or lane reconfiguration, but also include payment of traffic impact fees that will be used to fund improvements identified in the City's Capital Improvement Program. As a result, the RiverPark Specific Plan is consistent with these RCPG policies.

- *Transportation investments shall be based on SCAG's adopted Regional Performance Indicators.*

  Mobility – Transportation systems should meet the public need for improved access, and for safe, comfortable, convenient and economical movements of people and goods.
  - *Average work trip travel time in minutes – 22 minutes*
  - *PM peak highway speed – 33 mph*
  - *Percent of PM peak travel in delay All Trips_ - 33 percent*

  Accessibility – Transportation systems should ensure the ease with which opportunities are reached. Transportation and land use measures should be employed to ensure minimal time and cost.
  - *Work opportunities within 25 minutes – 88 percent*

  Environment – Transportation systems should sustain development and preservation of the existing system and the environment (All trips).
  - *Meeting Federal and State standards – Meet Air Plan Emissions Budget*

  Reliability – Reasonable and dependable levels of service by mode (All Trips)
  - *Transit – 63 percent*
  - *Highway – 76 percent*

  Safety – Transportation systems should provide minimal, risk, accident, death and injury (All Trips)
  - *Fatalities per million passenger miles – 0.008*
  - *Injury accidents – 0.929*

  Livable Communities – Transportation systems should facilitate livable communities in which all residents have access to all opportunities with minimal travel time. (All Trips)
  - *Vehicle Trips Reduction – 1.5 percent*
  - *Vehicle Miles Traveled Reduction – 10.0 percent*

  Equity – The benefits of transportation investments should be equitably distributed among all ethnic, age and income groups. (All Trips).
  - *Low-income households (Household income $12,000) Share of Net Benefits – Equitable Distribution of Benefits.*

  Cost-Effectiveness – Maximize return on transportation investment. (All Trips).
  - *Net present value – Maximum return on transportation investment*
  - *Value of a dollar invested – Maximum return on transportation investment*

- *Transportation Control Measures shall be a priority*
- *Implementing transit restructuring, including smart shuttles, freight improvements, advanced transportation technologies, airport ground access and travel information services are an RTP priority.*
- *All existing and new public transit services, facilities, and/or systems shall evaluate the potential for private sector participation through the use of competitive procurement.*
- *New freeway facilities shall be open for goods movement except where safety prohibits this.*

Analysis: These Core transportation policies are directed towards regional transportation planning. It is beyond the scope of an individual project to address the regional transportation issues raised in these policies. To the extent applicable, the RiverPark Specific Plan is considered consistent with the intent behind the policies. For example, the RiverPark Specific Plan would accommodate growth in an area already afforded municipal services and public transportation. Moreover, the physical design and mixed-use nature of the Specific Plan promote pedestrian circulation and reduce total vehicle miles traveled. Finally, mitigation has been identified in the Draft EIR that will reduce all traffic impacts to a level considered less than significant. Consequently, the RiverPark Specific Plan would be consistent with the goal to maintain a reliable transportation network that provides for the safe, comfortable, and economical movement of people and goods.

Air Quality Chapter

The Air Quality Chapter of the RCPG was written by SCAG to support the goals of the RCPG and is intended to facilitate an improved standard of living by encouraging sustained economic growth along with an improvement in air quality through the creation of new industries and products required to achieve cleaner air and by providing adequate transportation for all residents while meeting clean air goals.

The project's consistency with the Ventura County *Air Quality Management Plan* ("AQMP") is discussed in Section 4.8 of this Draft EIR. As stated in the Air Quality Chapter, SCAG is responsible for preparing and approving the portions of the AQMP which relate to regional demographic projections and integrated regional land use; housing, employment, and transportation programs; control measures; and strategies. The RCPG Air Quality Chapter presents a series of air quality "issues" and "strategies."

The following policies address those issues presented in the Air Quality Chapter that are relevant to the proposed RiverPark Specific Plan.

- *Through the environmental documentation review process, ensure that plans at all levels of government (regional, air basin, county, subregional and local) consider air quality, land use, transportation and economic relationships to ensure consistency and minimize conflicts.*

Analysis: The Specific Plan is guided by the design principles of the 'New Urbanism' and 'Smart Growth' movements, which emphasize the importance of mixed land uses, communities scaled for pedestrian movement, limiting automobile usage and the importance of physical design in creating communities that people want to live, work and shop in. The proposed RiverPark Specific Plan will incorporate several residential neighborhoods, served by parks, neighborhood-oriented commercial, and a pedestrian movement system designed to reinforce and encourage pedestrian movement. These are linked by a project-wide open space and circulation system to a diverse mix of commercial, office, and recreational uses.

The location and design of the RiverPark Specific Plan also allows for the use of alternative means of transportation. The Specific Plan Area is in area served by the South Coast Area Transit (SCAT), and the closest bus route on Vineyard Avenue. This route includes stops at the Oxnard Intermodal Transit Station. This station functions as a hub for the SCAT inter-city and local bus services and as a connection for Amtrak's Metrolink. As such, future residents of the Specific Plan have the opportunity to utilize several alternative modes of transportation including bus and rail service. In conclusion, physical design features of the Specific Plan along with the location near an area served by existing transit act to reduce total vehicle miles traveled and hence, vehicle air emissions. Although the proposed RiverPark Specific Plan has no control over the contents of regional, subregional, and local plans, those plans and policies that affect development in the Specific Plan Area are identified and evaluated throughout this EIR for project consistency.

- *Determine specific programs and associated actions needed (e.g., indirect source rules, enhanced use of telecommunications, provision of community based shuttle services, provision of demand management based programs, or vehicle miles traveled/emission fees) so that options to command and control regulations can be assessed.*

Analysis: This Core policy is directed towards regional air quality planning. It is beyond the scope of an individual project to address the regional issues raised in this policy. To the extent applicable, the RiverPark Specific Plan is considered consistent with the intent behind the policy as analyzed in the above consistency analysis.

Water Quality Chapter

The stated purpose of this chapter is to provide a regional perspective on current water quality issues and the plans and programs for addressing these issues. The chapter also identifies the current water quality goals and objectives for the region under existing law and provides a framework for ensuring that growth in wastewater treatment capacity is consistent with regional growth projections. Policies of the Water Quality Chapter, which have some relevance to the proposed RiverPark Specific Plan, are discussed below:

- *Encourage "watershed management" programs and strategies, recognizing the primary role of local governments in such efforts.*

It is beyond the scope of the proposed project and EIR to provide watershed management programs and strategies. However, the RiverPark Specific Plan does incorporate measures to minimize the impact associated with the construction and operational impacts. For example, the RiverPark Specific Plan would comply with requirements for development projects under the County's National Pollution Discharge Elimination System (NPDES) Permit, and would obtain all necessary permits for both the construction and ultimate development stages. One of the primary objectives of the RiverPark Specific Plan is to reclaim the existing mine pits in a manner that protects the quality of the exposed groundwater in the pits due to the location of these pits in the recharge area of the Oxnard Aquifer system. Upon reclamation of the mine pits, they will serve as groundwater recharge basins, which will further enhance groundwater management efforts for the entire aquifer system. The proposed RiverPark Specific Plan would, therefore, generally be consistent with the objective of water quality in the watershed.

Open Space Chapter (Ancillary Goals)

- *Provide adequate land resources to meet the outdoor recreation needs of the present and future residents in the region and to promote tourism in the region.*
- *Increase the accessibility to open space lands for outdoor recreation.*
- *Promote self-sustaining regional recreation resources and facilities.*
- *Develop well-managed viable ecosystems or known habitats of rare, threatened and endangered species, including wetlands.*

Analysis: The proposed Specific Plan incorporates a diverse composition of parks, gardens, village squares and greens along with less formal open space in order to provide adequate outdoor recreation facilities. The more formal spaces are located to serve as visual focal points that are easily accessible to local residents for recreational purposes. A trail system that allows for connection to planned regional trails is also included in the plan.

The less formal open spaces of the Specific Plan serve to buffer sensitive resources, promote water quality, and recharge the groundwater basin, which is supportive of the ancillary goal to create self-sustaining recreational resources. For example, a multi-layered habitat will be created along the edge of the Specific Plan adjacent to the Santa Clara River. This setback will utilize native vegetation communities to attract and support a wide range of wildlife species, especially birds. Selected tree species will provide nesting and foraging habitat for the many species.

The Specific Plan will also improve the character of open space on the existing Hansen Aggregate mine site. Presently little vegetation exists at the closed mine facility. The mine pits present in this area are characterized by irregular slope faces which have been incised by erosion caused by wind and wave action. Surface drainage is poorly controlled and flows into the pits despite the presence of earthen berms designed to control surface water runoff. Mine reclamation activity associated with the Specific Plan would stabilize the slopes of the existing mine pits. Improvements to the drainage system will also be created to capture and treat surface water runoff rather than release it directly into the pits as occurs under existing conditions. Finally, the area will be planted with native material that will provide additional foraging and nesting habitat for a variety of animals. The RiverPark Specific Plan, therefore, is consistent with this policy.

- *Maintain open space for adequate protection of lives and properties against natural and man-made hazards.*

- *Minimize potentially hazardous developments in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire and other known hazards, and areas with limited access for emergency equipment.*

- *Minimize public expenditure for infrastructure and facilities to support urban type uses in areas where public health and safety could not be guaranteed.*

<u>Analysis</u>: The topography of the property is gentle with the exception of the mine pits and the property is outside of areas subject to the 100-year flood as depicted on the FIRM map for Oxnard. All of southern California is a seismically active area and uses developed in the entire City of Oxnard are subject to earth movement and secondary seismic hazards such as liquefaction. Full analysis of all potential geotechnical hazards is provided in Section 4.3, Earth Resources, of this Draft EIR. Measures to mitigate all potential impacts have been identified. In addition, all future uses developed within

the Specific Plan Area will comply with all local and regional codes pertaining to the projection of people and property from seismic hazards. Standard mitigation for ground shaking is provided through enforcement of structural and non-structural seismic design provisions defined in the Uniform Building Code (UBC) and related City codes and regulations. The entire Specific Plan Area is suitable for urbanization because it does not contain severe topography, floodways, or hazardous soil conditions that could pose a constraint to development. Consequently, the Specific Plan is consistent with these ancillary goals.

- *Maintain adequate viable resource production lands, particularly lands devoted to commercial agriculture and mining operations.*

Analysis: The Specific Plan Area contains a sand and gravel mine and associated production facilities. Mining operations began in the 1940s and Hansen Aggregates has ceased operations as the resources at the Specific Plan Area have been extracted. The company recently undertook the actions necessary to reclaim the mine area pursuant to an approved Mine Reclamation Plan. Consequently, development as allowed by the Specific Plan would not effect the viability of resource production from the area since mining has ceased at the Specific Plan Area.

RiverPark Area ‘A’ includes agricultural land and, under this agricultural soil, sand and aggregate mineral resources. This portion of the Specific Plan Area is currently designated for urban uses by the City’s *General Plan* and the Oxnard Town Center Specific Plan. As presented in Section 4.3, Earth Resources, it is not economically viable to mine the aggregate resources in RiverPark Area ‘A’.

With regard to agriculture, establishment of the City Urban Restriction Boundary (CURB) has provided a strong means for preserving agricultural land in the City’s Planning Area. The purpose of the CURB is to protect agricultural and open space land within the City’s Planning Area by limiting the provision of urban services and urbanized land uses to areas located within the CURB. Consequently, the appropriate balance between urban development and the preservation of agricultural uses within the City’s Planning Area is set by the City Urban Growth Boundary (CURB).[15] Given that the RiverPark Specific Plan Area is entirely within the CURB, the Specific Plan is consistent with this Open Space goal.

15 Oxnard SOAR Ordinance, City of Oxnard, adopted 1998.

Land Use Compatibility

Consideration of a project's compatibility with surrounding uses is largely based on the interaction of the uses and the extent to which residential quality of life will be affected by this interaction. For purposes of this analysis, land use compatibility is evaluated based on the environmental factors discussed elsewhere in this Draft EIR. Specific issues include noise, traffic, air quality, and aesthetics. The following provides a discussion of land use compatibility with surrounding uses. The internal compatibility of land uses planned for the area is maintained by review of each future tract map against the land use controls and development standards of the Specific Plan.

The Specific Plan Area is adjacent to residential, open space, and industrial land uses, as well as the Ventura Freeway and Vineyard Avenue. The RiverPark Specific Plan contains a series of buffers and edge treatments that transition appropriately into neighboring land uses as a means to avoid land use incompatibilities. Along the southern boundary of the Specific Plan Area is the Ventura Freeway. The Landscape Master Plan includes an approximate 7-acre buffer area extending along the entire freeway frontage of the RiverPark Community that separates the highway from commercial uses found along this perimeter. Its edges will be planted with a mix of native and indigenous grasses, perennials, shrubs, and trees, providing a desirable visual edge and buffer to the freeway at the ground plane of the Commercial Planning Districts established by the Specific Plan.

A continuous landscape buffer is also proposed along the eastern edge of the Specific Plan Area where it abuts the existing El Rio West Neighborhood. At the northern edge of this neighborhood and along this section of the future Ventura Boulevard, a fifty-foot wide landscaped buffer is proposed. This area includes an eight-foot parkway and a six-foot walkway along Ventura Boulevard. The remaining thirty-six feet will be bermed and landscaped with dense plantings of evergreen trees and shrubs.

In addition to the Ventura Boulevard buffer, along the western perimeter of the El Rio Neighborhood, a continuous landscape buffer is planned further south. This edge treatment will include a five-foot area continuously planted with evergreen vertical trees (such as Pinus species). In addition, a twenty-five foot wide parkway will run continuously along the El Rio Neighborhood located west of Vineyard Avenue. This parkway will include evergreen and flowering canopy trees as well as a walking trail. Direct pedestrian access to this trail from the RiverPark Community will be limited to the gated pathway located at the proposed El Rio Children's Park. The use of these landscaped buffers will promote land use compatibility through minimizing noise, visual, and light/glare, impacts.

The Specific Plan also buffers existing natural resources in the Santa Clara River. As part of the proposed Landscape Master Plan, a multi-layered habitat will be created along the edge of the Specific Plan adjacent to the Santa Clara River. This setback will utilize native vegetation communities to attract and support a wide range of wildlife species, especially birds. Selected tree species will provide nesting and foraging habitat for the many species. This newly created forest will also contain an understory of numerous species of compatible native shrubs. In addition to the habitat benefits provided by this buffer, it will also serve as a transition between developed uses within the Specific Plan and the natural resources found within the Santa Clara River.

As proposed, the RiverPark Project will not create any land use incompatibilities.

CUMULATIVE IMPACTS

The proposed RiverPark Specific Plan, along with development of the land uses allowed by the City's *2020 General Plan*, will change the intensity of land uses in the City's Planning Area. In particular, this cumulative development scenario will increase development in the northern portion of the City, and provide additional housing, employment, shopping, and recreational opportunities. With the City's CURB boundary, no land is available for other major development projects north of the Ventura Freeway during the term of the *2020 General Plan*.

There are several related projects in the area at this time. These projects include commercial projects south of the Ventura Freeway in established regional commercial areas, a small residential project proposed in the El Rio West Neighborhood adjacent to the Specific Plan Area and, to the east of the Large Woolsey Mine Pit, the Ventura County Juvenile Justice Center. Each of these projects is consistent with applicable land use designations and development standards. No cumulative land use impacts, therefore, will result from the development of these projects and the RiverPark Specific Plan Area.

Given the land use controls and development standards presently in use within the City of Oxnard, cumulative land use impacts would be minimized to a level that is considered to be less than significant.

MITIGATION MEASURES

No mitigation measures are required as no significant impacts have been identified.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant land use impacts will result from the RiverPark Project.

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INTRODUCTION

This section identifies and describes the visual characteristics of the RiverPark Specific Plan Area and surrounding areas and assesses the significance of the changes to the visual character of the area that would result from the implementation of the RiverPark Project. Sources utilized in the preparation of this section include the Community Design Element of the City's 2020 General Plan *(1990), the proposed RiverPark Specific Plan, and a visual reconnaissance survey.*

ENVIRONMENTAL SETTING

Citywide Visual Setting

The RiverPark Specific Plan Area is located on the relatively low-lying Oxnard Plain toward the northern end of the City of Oxnard. The Oxnard Plain is bordered by the Pacific Ocean and extends inland for approximately 10 miles between Ventura and Point Mugu. The topography of the Plain is predominantly level to gently sloping. Prominent visual features within or adjacent to the Oxnard Plain include the Camarillo Hills to the north, the Santa Monica Mountains to the east, and the Pacific Ocean and coastline to the west and south.

The City of Oxnard is visually defined by natural and man-made visual resources, including open spaces, beaches and coastline, agricultural areas, low rise commercial and residential development, as well as tall buildings which are visible in the City's skyline. The western and southern edges of the City are framed by the Pacific Ocean, the northern edge is bounded by the Santa Clara River, and the northeastern and eastern sides by the agricultural land in the Oxnard-Camarillo Greenbelt. Inland views to the foothills and mountain ranges of the Los Padres National Forest and the Santa Monica Mountains are visible from many of the City's north-south and east-west oriented streets. Land uses located within the northern portion of the City include residential, commercial, open space, and agricultural uses.

On-Site and Surrounding Areas Visual Setting

The Specific Plan Area currently contains four main types of land uses that define the visual setting of the site. RiverPark Area 'A' consists primarily agricultural, commercial, and institutional land uses.

The visual character of this area is defined by the existing strawberry fields, the El Rio Maintenance Yard, and the two existing commercial office buildings in the southwest corner of the Specific Plan Area. The County El Rio Maintenance Yard is surrounded by a fence and contains small one and two-story buildings, ornamental trees, and paved parking areas. The two existing office buildings, the Nordman, Cormany, Hair and Compton Building, located on Town Center Drive, and the State Compensation Insurance Fund Building, located on Ventura Road are low to mid-rise structures. The RiverPark 'B' Area contains the existing sand and gravel mine site and mine pits and two drainage basins. The mine site contains a small number of one-story wood frame buildings, as well as a eucalyptus windrow along the boundary of RiverPark Areas 'A' and 'B'. A smaller row of cottonwood trees is also located near Vineyard Avenue along the northern edge of El Rio Detention Basin No. 2. Overall, the Specific Plan Area has an open space visual character due to the small number of existing structures.

The Specific Plan Area is immediately bounded on the east by Vineyard Avenue and the El Rio West Neighborhood, on the south by the Ventura Freeway, on the west by Santa Clara River and its associated levee, and north by existing industrial, agricultural, and vacant areas. Surrounding land uses include the El Rio residential community to the east of Vineyard Avenue, the Wagon Wheel and Esplanade commercial areas to the south, the Financial Plaza commercial area to the southeast, and agricultural fields to the north and northeast.

Prominent visual features found near the Specific Plan Area include the Ventura Freeway to the south, the high-rise City National and Dean Witter Buildings in the Financial Plaza area, open space and agricultural lands located at the east and north; and the Santa Clara River and its associated levee.

The Community Design Element of the City of Oxnard *2020 General Plan* identifies the agricultural areas found in the eastern, northeastern, and northwestern portions of the City's Planning Area as natural scenic resources. Most of the agricultural spaces, often marked by eucalyptus and cypress windrows, are contained within greenbelts that serve as green buffers surrounding the City's developed core. These agricultural areas and the views to the mountain and hills to the north and are considered scenic resources that contribute to the unique character and visual image of the City.

Public Views

Based on a visual reconnaissance of the project area, two types of public views were identified: (1) those observed from the roadways that bound the Specific Plan Area, and (2) views as seen from adjacent land uses. In order to document the existing visual character of the Specific Plan Area and its surroundings, photographs were taken from locations where public views of the site are most attainable.

Primary Roadways

The Community Design Element of the City of Oxnard *General Plan* identifies scenic resources within the City. Roadways which provide views of the scenic resources and agricultural lands within and around the City are designated as image corridors. The primary roadways that bound the proposed Specific Plan Area are Ventura Freeway and Vineyard Avenue. The Ventura Freeway is designated as Regional Image Corridor, and Vineyard Avenue is a City Image Corridor. In addition, the intersection of the Ventura Freeway and Vineyard Avenue is designated as a Regional Gateway. Although Oxnard Boulevard, which is proposed to be extended into the Specific Plan Area, is also identified as a City Image Corridor, views between the project site and Oxnard Boulevard are currently obstructed by the Ventura Freeway. In addition to the City designations, the Ventura Freeway and the portion of Oxnard Boulevard below the Ventura Freeway are eligible for designation as State Scenic Highways.[1]

The Ventura Freeway forms the southern boundary of the site. It is a six-lane freeway crossing the Oxnard Plain, including the northern portion of the City of Oxnard. Starting at the eastern end of the Specific Plan Area, the foreground view to motorists on the Ventura Freeway includes portions of the existing strawberry fields, a few homes on El Rio Drive, the Newport Boat Showroom building, the County El Rio Maintenance Yard, and mid-rise the Nordman, Cormany, Hair and Compton State Compensation Insurance Fund Buildings. The midground view from the freeway includes the agricultural fields and tree windrows on the Specific Plan Area, and in the background are hills and mountains. Figure 4.2-1 presents a representative northward view of the El Rio Maintenance Yard from south of the Ventura Freeway. As shown, the Ventura Freeway is only slightly elevated above street level. Although the buildings in the El Rio Maintenance Yard site are only one and two stories in height, they obstruct views of the agricultural field and the hills and mountains. Figure 4.2-1 presents a representative northward view of the existing agricultural field from south of the Ventura Freeway. The metal fencing behind it results in limited view of the agricultural fields from the Ventura Freeway.

Vineyard Avenue forms the eastern boundary of the Specific Plan Area. Vineyard Avenue is a four-lane, north-south street. Figure 4.2-2 provides a representative northward view of Vineyard Avenue as seen from the intersection of Myrtle Street and Vineyard Avenue. In the foreground to the left and right

1 California Scenic Highway Mapping System, California Department of Transportation. (http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm) January 2001.

are existing retail commercial uses. Portions of the Specific Plan Area are visible in the midground to the west of Vineyard Avenue, and the mountains and hills in the Los Padres National Forest appear in the background. As shown in the photographs in Figure 4.2-2 and Figure 4.2-3, paved sidewalk, street trees, lights, ornamental landscaping, and utility poles are located along the road.

Views from Nearby Areas

El Rio West Neighborhood

Figure 4.2-4 presents a westward view of the Specific Plan Area from the El Rio West Neighborhood, specifically from the end of Sycamore Street. As shown, there is a clear line of sight from this location to the strawberry fields in the Specific Plan Area in the foreground, the Nordman, Cormany, Hair and Compton Building, the eucalyptus windrow, and other off-site urbanized land uses in the midground. The mountains and hills in the Los Padres National Forest are visible in the background

Industrial Area to the North

Figure 4.2-5 shows the Specific Plan Area as viewed southward from South Bank Road in the Montgomery/Lambert Industrial Area. As can be seen, the topography of the site is flat, offering a clear view of the project site and beyond. In the foreground of the view is the existing mine pit containing water with some vegetation along the banks. The midground view is characterized by the flat agricultural fields on the project site. In the background to the far right and left are the hills and mountains and in center are the City National and Dean Witter Buildings, which are located across the Ventura Freeway.

City of Ventura and the Santa Clara River

To the west of the site is the Santa Clara River. A levee along the Santa Clara River is separated from the project site by a wall. At ground level both the levee and the wall form an effective visual barrier to the river. However, expansive views of the Specific Plan Area are provided from across the river in the City of Ventura. Agricultural uses are located directly across the river with and residential neighborhoods further west. Views are available from several parks along the eastern edge of the City of Ventura including the Bristol Bay Linear Park, Riverview Linear Park, and Northbank Linear Park, as well as along streets bordering agricultural fields that are adjacent to the river. The major roadway in the City of Ventura closest to the project site is Telephone Road. Figure 4.2-6 shows the view from Telephone Road towards the project site. As shown, agricultural fields are located in the foreground, trees and other vegetation along the Santa Clara River are present in the midground, and in the background are the City National and Dean Witter Buildings.

FIGURE 4.2-1

Existing View of Project Site from the South

FIGURE 4.2-2

Existing Northward View of Vineyard Avenue From Myrtle Street

FIGURE 4.2-3

Existing Southwesterly View of the Project Site from Vineyard Avenue

FIGURE 4.2-4

Existing View of the Project Site from El Rio West Neighborhood

FIGURE **4.2-5**

Existing View of the Project Site from the North

FIGURE 4.2-6

Existing Westward View of the Project Site from Telephone Road

South of Ventura Freeway

The Ventura Freeway forms a visual barrier between the Specific Plan Area from the south. The Ventura Freeway, which is elevated above the level of the surrounding streets, obstructs ground-level views to the Specific Plan Area from Oxnard Boulevard, which offers the closest public northward view from south of the Ventura Freeway. The retail and office commercial buildings located to the south of the Ventura Freeway further obstructs views to the project site from south of the Ventura Freeway.

Plans and Policies

The visual quality of the area is addressed by policies in the City of Oxnard *2020 General Plan*. The City of Oxnard *2020 General Plan* contains a variety of goals, objectives, and polices related to aesthetics in the City. Relevant goals and objectives from the Community Design Element are listed below. Policies are discussed in the Project Impact portion of this section.

Community Design Element of the *2020 General Plan*

The Community Design Element of the *2020 General Plan* identifies the aesthetic resources and land uses that define Oxnard's image and visual character. The element addresses the City's natural setting including the agricultural areas, windrows, views of mountains, image corridors, city gateways.

- A unified and high quality visual image for the City.
- A thoughtful and sympathetic relationship between the build environment and natural environment.

<u>Objectives</u>

- Maintain the unique coastal and agricultural character of Oxnard.
- Preserve the visual identity and character of existing neighborhoods.
- Preserve the City's natural features and historic structures.
- Revitalize areas of the City which are currently deteriorated or detract from the visual quality of the City.
- Achieve quality architectural and landscape architectural design that recognizes its surrounding natural environment.
- Upgrade Major Entryways to the City with landscaping and/or signage to enhance the City's image and sense of place.
- Enhance the visual identity of the City's activities nodes.
- Preserve important view corridors.

The Existing Community Design Structure Map contained in the Community Design Element of the *2020 General Plan* identifies scenic resources in the general vicinity of the Specific Plan Area. Figure 4.2-6 presents the scenic resources located in the general vicinity of the Specific Plan Area. The City of Oxnard regards agricultural lands as a natural scenic resource. As a result, the agricultural land to the east and northeast of the Specific Plan Area is shown on Figure 4.2-7 as a scenic resource. The agricultural area provides an open space buffer between the developed areas of Oxnard and Camarillo, and provides a sense of identity for the community. Eucalyptus windrows are also identified as a dramatic vertical visual element on the predominantly flat topography.

Views to the mountains and image corridors are considered important scenic resource of the City. The Ventura Freeway is identified as a Regional Image Corridor, while the Santa Clara River, Vineyard Avenue, and Oxnard Boulevard are City Image Corridors. Vineyard Avenue and Oxnard Boulevard are further identified as view corridors that allow long-range panoramic views that characterize the agricultural image of the City and provide scenic views of the foothills and mountains from urbanized areas. As discussed above, in the vicinity of the Specific Plan Area, these long range scenic views are only available from Vineyard Avenue.

The established urban patterns are considered scenic resources that contribute to the unique character and visual image of the City. The RiverPark ‘A’ Area, most of which is located in the Oxnard Town Center Specific Plan Area, is identified as an area of visual significance. The Oxnard *2020 General Plan* assumes the retail, visitor-serving, and office commercial uses allowed by the Oxnard Town Center Specific Plan would be built. The Oxnard Town Center Specific Plan allows the development of 18 to 24-story high-rise buildings. These uses would have created a visually significant activity node for the City. However, since adoption of this Specific Plan in 1986, only the two mid-rise office buildings in the southwest corner of the Specific Plan Area have been developed.

The Community Design element contains numerous goals, objectives, and policies intended to maintain and enhance the unique scenic features found within the City of Oxnard. A discussion of the consistency of the proposed project with applicable policies is found later in this section.

FIGURE 4.2-7

General Plan Community Design Structure Map

PROJECT IMPACTS

Thresholds of Significance

Based on Appendix G of the CEQA *Guidelines*, the City of Oxnard considers the aesthetic impact of a project to be significant if it would:

- have a substantial, demonstrable negative aesthetic effect on a scenic vista;
- substantially degrade the existing visual character or quality of a site and its surroundings; or
- substantially damage scenic resources within a state scenic highway;
- create a new source of substantial light or glare which would adversely affect day or nighttime views of the area;
- be inconsistent with any applicable policies in the *2020 General Plan* Community Design Element.

Project Characteristics

The proposed RiverPark Specific Plan would allow the development of the 701-acre site with residential, commercial, open space and public facilities uses. Section 3.0, Project Description, presents a description of these design features of the proposed project. The Specific Plan also includes design guidelines for streetscape and buildings that prescribe such elements as park design, trees and shrubs, public art, lighting system, and architectural style.

Section 5 of the RiverPark Specific Plan Area is the Landscape Master Plan. The conceptual landscape and open space plans included in this section of the Specific Plan define the landscaping to be provided along the edges of the project site and along the interior streets. A diverse range of native and ornamental landscaping is proposed throughout the community. Figure 4.2-8 presents the Streetscape Master Plan and Figure 4.2-9 presents the Open Space Master Plan. As shown in the Streetscape Master Plan a visual hierarchy of streets will be created through the use of different landscape designs for the boulevards, avenues, commercial drives and residential neighborhood streets and drives. The Open Space Master Plan shows the variety of open spaces planned throughout the community. The RiverPark Specific Plan would create an array of parks, gardens, village squares, and community greens into the project design. These facilities are designed to be conveniently located within the community and serve as visual focal points in addition to providing recreational opportunities. The slopes of the reclaimed mine pits and the areas around the mine pits will be landscaped with native vegetation. The schools, neighborhood parks, and open spaces on the major streets will create a network of landscaped open spaces throughout the community.

The Landscape Master Plan includes native vegetation along the western edge of the Specific Plan Area and around the edges of the reclaimed mine pits. A linear landscaped riparian edge, composed of native vegetation communities, is proposed within the western edge of the Specific Plan Area in RiverPark Area 'B'. The goal of this native landscape edge is to create a multi-layered habitat that utilizes native vegetation communities to attract and support a wide range of wildlife species, especially birds. Selected tree species, including Fremont Cottonwoods, black cottonwoods, red willow and native sycamores, are proposed to create a cottonwood-willow woodland. Creation of this new forest of trees along the river edge will complement the existing visual character of the river. Overall, open space will make up 269 acres of the 701 acre Specific Plan Area.

Project Impacts

Scenic Vistas

Views of the surrounding topography are considered an important scenic resource of the City, and many of the City's north-south streets serve as important view corridors to the foothills and mountains. As shown in Figure 4.2-8, Vineyard Avenue north of the Ventura Freeway is identified as the only view corridor in the vicinity of the Specific Plan Area. The *General Plan* states that view corridors should be maintained and enhanced.

The proposed development on portions of the Specific Plan Area along Vineyard Avenue consists of commercial uses between the Ventura Freeway and Myrtle Street and institutional uses, including schools and fire stations, north of the El Rio West Residential Neighborhood. The commercial uses would be visually consistent in terms of height and character with other commercial uses on the eastern side of the Vineyard Avenue interchange. North of the El Rio West Neighborhood, the uses would largely have an open space character. The elementary/intermediate school site located between Santa Clara River Boulevard and Northpark Drive will contain grass playfields along Vineyard Avenue. The existing El Rio Retention Basin No. 1 will be reconfigured and incorporated into the project as a water quality treatment detention basin. The Brigham-Vickers and Large Woolsey Mine Pits will also remain. The Specific Plan would maintain uses with an open space character along a majority Vineyard Avenue, thereby minimizing any obstruction of views to the mountain and hills. As such, the visual impact on this scenic vista would be less than significant.

FIGURE **4.2-8**

Streetscape Plan

FIGURE 4.2-9

Open Space Master Pan

Visual Character

The RiverPark Project will change the visual character of the Specific Plan Area. Due to the visually prominent location of the Specific Plan Area on the Ventura Freeway between Vineyard Avenue and the Santa Clara River, the project will also change the visual character of this portion of north Oxnard. The project's effects on the existing visual character of the Specific Plan Area and the surrounding area will differ depending on the location of the view. Motorists travelling by or through the area would see the site primarily from the Ventura Freeway and major roadways in the area. Views are also available from some adjacent and nearby land uses. Discussion of these views as affected by the proposed project is provided below.

The Community Design Element of the *2020 General Plan* designates the Ventura Freeway as a Regional Image Corridor and Vineyard Avenue and Oxnard Boulevard as City Image Corridors. In addition, the intersection of Ventura Freeway and Vineyard Avenue is designated as a Regional Gateway.

The Ventura Freeway runs along the southern border of the site. As part of the project, two sets of landscape treatment are proposed along the Ventura Freeway, as shown in Figure 4.2-10. First, in consideration of the highway speed of the passers-bys, a single row of 30 feet tall Mexican Fan Palms spaced at 30 feet on center is proposed along the freeway frontage. Second, the Specific Plan proposes the creation of a landscaped retention zone, planted with an appropriate mix of native and indigenous grasses, perennials, shrubs, and trees, acting as a ground level visual edge zone abutting the proposed parking areas and streets. Development visible from the freeway will be one to three stories in height, with the exception of the hotel building allowed in Planning District C, immediately west of Oxnard Boulevard. The proposed Specific Plan allows the hotel building to be up to 210 feet in height (18-stories). As such, the height of the proposed development would be similar to existing buildings along nearby stretches of the Ventura Freeway. While the buildings and landscape treatments would fill the foreground and midground view from the freeway, background views to the mountains and hills in the Los Padres National Forest to the north would not be obstructed. Views of the existing agricultural fields on the site from the freeway would be lost. Presently, the view of the fields is limited at travel speed by the existing County El Rio Maintenance Yard, other development visible along El Rio Road, and the two existing mid-rise office buildings in the southwest corner of the Specific Plan Area. Given this, and as the landscape treatment and the types of buildings on the site that would be visible from the Ventura Freeway would be similar to nearby land uses that are visible from the Ventura Freeway, less than significant visual character impact on views from the Ventura Freeway would occur.

Vineyard Avenue runs along portions of the eastern border of the Specific Plan Area. As discussed above, the RiverPark Specific Plan places mostly open space uses along Vineyard Avenue. The existing mine pits and drainage basin in the northeastern corner of the Specific Plan Area will be preserved. The playfields for the new elementary/intermediate school site will be placed along Vineyard Avenue, The new City of Oxnard and County of Ventura Fire Stations will be the only new buildings allowed by the Specific Plan along Vineyard Avenue. As shown in Figure 4.2-11. There would be no significant impact on the visual character of Vineyard Avenue.

The intersection of Vineyard Avenue and the Ventura Freeway is identified as gateways to the City. The proposed project site contains one corner of one of this intersection. The proposed use allowed in this location in Planning District E, would be 1 to 3 story commercial buildings, which will be visually consistent in terms of scale and use with the existing commercial development to the east of Vineyard Avenue. As a result, there will be no significant impact on the visual character of this gateway intersection.

Oxnard Boulevard, which currently does not extend north of the Ventura Freeway, is proposed to be extended north from the new Oxnard Boulevard interchange with the Ventura Freeway. Oxnard Boulevard will serve as the predominant north/south connector through RiverPark, functioning as the primary visual and functional gateway into RiverPark. In the commercial Planning Districts, between the Ventura Freeway and Santa Clara River Boulevard, Oxnard Boulevard would transition from a six lane arterial near the freeway to a four lane section with a median extending continuously through the commercial core. Oxnard Boulevard would intersect Santa Clara River Boulevard in a landscaped traffic circle. North of Santa Clara River Boulevard, this street would assume a more residential scale, becoming narrower and smaller in scale with its landscape treatment reflecting more the adjacent residential neighborhood character. Along most sections of this street, pedestrians will be separated from vehicular traffic by a landscaped parkway. Travelling north from Santa Clara River Boulevard, Oxnard Boulevard will split around a large central park space located between Southpark and Northpark Drives, contain a landscaped traffic circle at the intersection with Riverpark Avenue and split around a neighborhood park at its north end.

While the high-rise hotel will be visible along Oxnard Boulevard this building will only partially obstruct views to the hills and mountains to the north. The proposed landscape and streetscape treatment would create a scenic street that still offers a northward view of the mountains and hills. The proposed project would, therefore, enhance background and foreground views for motorists and pedestrians traveling Oxnard Boulevard and would not detract from any long range views. As a result, the change in the visual character of Oxnard Boulevard, which is a City Image Corridor and a scenic route, would not be significant.

FIGURE 4.2-10

View of Project Site from the South–Post Development

FIGURE 4.2-11

Southwesterly View of the Project Site from Vineyard Avenue–Post Development

Views From Adjacent Areas

As mentioned, The El Rio West residential neighborhood is located immediately east of the Specific Plan Area. At the northern edge of this neighborhood, a fifty-foot wide landscape buffer is proposed to separate Santa Clara River Boulevard from the neighborhood. This buffer area would include an eight-foot parkway and a six-foot sidewalk immediately south of Santa Clara River Boulevard. The remaining thirty-six feet will be bermed and landscaped with dense plantings of evergreen trees and shrubs, such as Pinus eldarica, as shown in Figure 4.2-12.

Along the western perimeter of the El Rio West Neighborhood, a continuous landscape buffer, including a variety of taller shade trees is proposed. This landscape buffer will run continuously along the western edge of the El Rio West Neighborhood with the exception of the new neighborhood park located in the center of this edge. A representative westerly view from the El Rio West Neighborhood is shown in Figure 4.2-13. The existing views from the ends of the streets in this neighborhood of the adjacent agricultural fields will be replaced with a view of the landscape buffer, new neighborhood park and residential development. There will be no adverse change in the views from this neighborhood and the change in view, is therefore, not significant.

Figure 4.2-5 depicts the existing Specific Plan Area as viewed southward from the terminus of South Bank Road, which is located in the Montgomery/Lambert industrial area to the northeast of the Specific Plan Area. Development of the proposed project would include landscaping that will utilize native, indigenous plant materials in order to stabilize the existing edges of the basin, as well as fencing to restrict physical access to the bank's edges. Beyond the basin, the project proposes residential uses. No significant adverse visual impact will result.

To the west of the Specific Plan Area are the Santa Clara River, beyond which are agricultural fields, residential communities, and parks in the City of Ventura. Expansive views of the Santa Clara River and the project site are visible from elevated portions of these agricultural, recreational, and residential land uses. The City of Ventura Comprehensive Plan (1989) calls for the creation of a linear park system along the eastern edge of the City, portions of which would be located along the Santa Clara River. This linear park is intended to link public and private open space areas, provide an alternative circulation system, protect natural values, and accommodate leisure time pursuits. The Circulation Element of the City of Ventura's Comprehensive Plan further states that the linear park is intended to preserve public access and views of the ridgeline, river, and ocean corridors. Development of the RiverPark Project would replace agricultural fields and the existing sand and gravel with a variety of landscaped urban uses while only landscaping and maintaining the groundwater recharge basins, as shown in Figure 4.2-14. The project would also create a new riparian woodland along the on the Santa Clara River in RiverPark Area 'B'. The tall native trees proposed in this location would be visually compatible with the native vegetation and visual character of the river and screen views of the new residential neighborhoods. The commercial development in the southern portion of the Specific Plan Area will be similar in character to other existing commercial development around the Vineyard Avenue freeway interchange visible from the eastern edge of Ventura. There will be no adverse change in the visual character of views from the eastern edge of the City of Ventura. The change in views from the City of Ventura, therefore, is not significant.

Consistency with Applicable Plans and Policies

Community Design Element of the *2020 General Plan*

In order to determine the Specific Plan's consistency with the Oxnard *2020 General Plan* as well as to determine the project's effects on the visual character and quality of the site, consistency with the policies from the Community Design Element are discussed below. Policies are designed by the City for the achievement of stated objectives and goals of the *General Plan*, and, therefore, compliance with the policies results in compliance with the goals and objectives. The following provides a discussion of the consistency of the proposed project with applicable policies. Included below is discussion pertaining to scenic resources that are shown in Figure 4.2-6, including agricultural buffer, eucalyptus windrows, views to the mountains and image corridors, and the established urban patterns.

Policies and Discussion

- Freeway corridors should be improved aesthetically through the use of landscaping and adjacent architectural treatment.

As mentioned, the proposed project includes two sets of landscape treatment for the border along the Ventura Freeway. First, in consideration of the highway speed of the passers-bys, a single row of 30 feet tall Mexican Fan Palms spaced at 30 feet on center is proposed along the freeway frontage. Second, the Specific Plan proposes the creation of a landscaped retention zone, planted with an appropriate mix of native and indigenous grasses, perennials, shrubs, and trees, acting as a ground level visual edge zone abutting the proposed parking areas and streets. The RiverPark Project is consistent with this policy.

- The street tree program should be expanded to include ground covers and other landscaping for median strips and to include landscaping for major entryways

FIGURE 4.2-12

Cross Section of El Rio West Neighborhood Buffer-Northern Edge

FIGURE 4.2-13

View of the Project Site from El Rio West Neighborhood–Post Development

FIGURE 4.2-14

Westward View of the Project Site from Telephone Road–Post Development

The Streetscape Master Plan shown in Figure 4.2.8, creates different landscape treatments for the four primary types of streets in the Specific Plan Area. Oxnard Boulevard, Ventura Road and Santa Clara River Boulevard make up the first type, which are called "Boulevards." The second type of street is the "Avenue." Avenues in RiverPark include Myrtle Street, Riverpark Avenue, Oxnard Boulevard between Santa Clara River Boulevard and the neighborhood park near its north end and Northpark and Southpark Avenues east of Oxnard Boulevard. The Streetscape Master Plan also addresses the main commercial drives and large parking areas that will be located in the commercial Planning Districts between the Ventura Freeway, Ventura Road, Santa Clara River Boulevard and Myrtle Street. The Boulevards and Avenues have landscaped medians and unique landscape features such as landscaped traffic circles, additional landscaping at major intersections, and along Oxnard Boulevard north of Santa Clara River Boulevard, two major park spaces. As proposed, the project is consistent with this policy.

- Incentives for windrow preservation along freeway corridors, where feasible, should be developed, as well as for special edge treatments along greenbelt areas. A landscape buffer corridor at least 30 feet in width should be developed along freeway corridors.

The Specific Plan Area contains a eucalyptus windrow that is proposed to be incorporated into a linear park space connecting the Central Park in Oxnard Boulevard west to a park at the western edge of the Specific Plan Area immediately north of the elementary school site. In addition to preserving this windrow, the new cottonwood forest proposed along the western edge of the Specific Plan Area in RiverPark Area 'B' will introduce additional tall trees visible from the Ventura Freeway. As previously mentioned, two sets of landscape treatments are proposed along the Ventura Freeway. This landscape buffer along the freeway varies in width but is more than thirty feet wide. The Specific Plan Area is not adjacent to any greenbelt areas. Vineyard Avenue separates the Specific Plan Area from the agricultural land to the east in the Oxnard-Camarillo-Del Norte Greenbelt. The portions of the Specific Plan Area closest to the greenbelt consist of open space uses, including the reclaimed mine pits and a water quality detention basin. The school site located between Northpark Drive and Santa Clara River Boulevard will consist of grassy playfields along Vineyard Avenue. This edge of open space uses along Vineyard Avenue ensures land use compatibility with the agricultural uses in the greenbelt. The RiverPark Project is consistent with this policy.

- The City shall continue to require that the Staff Development Advisory Committee review new development projects for consistency with the City's development design policies and appropriateness for the proposed sites.

The RiverPark Specific Plan has been reviewed by the City's Development Advisory Committee. In addition, all individual building projects built within the Specific Plan Area will be subject to review by the Development Advisory Committee. The RiverPark Project is consistent with this policy.

- Urban development on a human scale, especially in the three identified activities nodes, shall be encouraged. These areas constitute the focus of pedestrian activity within the City and therefore should include pedestrian-oriented street furniture such as benches, planters, and landscaping.

The Oxnard *2020 General Plan* identifies the Oxnard Town Center Specific Plan Area, which is contained in the proposed RiverPark Specific Plan Area, as an activity node in the City. As proposed the RiverPark Specific Plan is inspired by the design principles of the 'New Urbanism' and 'Smart Growth' movements, which emphasize the importance of mixed land uses, communities scaled for pedestrian movement, limiting automobile usage and the importance of physical design in creating communities that people want to live, work and shop in. Pedestrian-scaled safe travel routes link throughout the Specific Plan Area. Parks and open space elements are strategically distributed to not only enhance neighborhood identity but to provide an array of both passive and active recreation experiences. Street section design incorporates and encourages convenient, safe and attractive pedestrian linkages. The Specific Plan emphasizes pedestrian movement throughout the community and includes a Pedestrian Circulation Master Plan. Furthermore, a consistently used and well-designed system of street furniture will be utilized within the RiverPark Specific Plan Area. The intent is to provide a unified, functional and visually appealing array of elements including pedestrian and vehicular street lights, transit waiting canopies, kiosks, tree grates and guards, benches and trash receptacles. The RiverPark Project is consistent with this policy.

- The City shall continue and formalize in area plans the architectural design themes established in visually distinctive areas of the City, including the activity nodes.

The RiverPark Specific Plan contains design standards addressing the design characteristics of development in each Planning District. Depending on the type of uses within each Planning District, the Specific Plan contains different types of guidelines. For Commercial/Entertainment uses, the Commercial Land Use Master Plan of the Specific Plan contains street-, place- and building-specific recommendations on design concept, building details, fenestration, sidewalk uses, trees, planters, paving, lights, and wayfinding/environmental graphics, and other elements. For Residential uses, the Residential Land Use Master Plan of the Specific Plan further divides the Planning Districts into Sub-Districts that define the blocks and lots within which specific building types may be built to ensure harmonious streetscapes and unique neighborhood characters. The Master Plan further prescribes elements of the building types, including materials, configurations, methods for building envelope, roofing, windows and doors, and signage. Given the extensive design guidelines included in the Specific Plan, the RiverPark Project is consistent with this policy.

- The City shall continue to implement the Art-In-Public Places Program, and encourage the placement of art in major new residential, commercial, industrial, institutional, and government development projects.

The Specific Plan identifies locations for art in the public places in the Commercial Planning Districts and in the parks and other planned open spaces. While additional locations may be identified as detailed development plans are created for individual building locations, the identified site opportunities represent areas of significant visual prominence and focus suitable for art or sculpture features. Given these features in the Specific Plan, the RiverPark Project is consistent with this policy.

- The design of municipal buildings throughout the City shall be in accordance with any specific plan guidelines or community design guidelines that may apply to a particular geographic area, or consistent with the strong, unified, and harmonious architectural design concept of a specific area if one has been established. In the absence of the above, then architectural style shall be compatible with adjacent existing or proposed development.

The only municipal building planned for the Specific Plan Area is the new City of Oxnard Fire Station planned on the northwest corner of Vineyard Avenue and Northpark Avenue. This new fire station will be designed by the City to consistent with the existing visual character of Vineyard Avenue consistent with this policy.

- The design of new neighborhoods in specific plan areas is encouraged to consider themes and principles of design, such as neo-traditional town planning, which will help achieve a sense of community and place which is often not found in standard single-family divisions. Elements may include central parks, schools and community and commercial facilities, strong pedestrian orientation and de-emphasis of automobile related elements, strong streetscape elements and residence orientation to the street.

The RiverPark Specific Plan follows the design principles of the 'New Urbanism' and 'Smart Growth' movements, which emphasize the importance of mixed land uses, communities scaled for pedestrian movement, limiting automobile usage and the importance of physical design in creating communities that people want to live, work and shop in. Accordingly, the RiverPark Project is designed as a diverse, environmentally-conscious, mixed-use, and pedestrian-oriented community with a complete range of facilities for living, learning, working, entertainment, and recreation. As these design principles are applied within the Commercial Land Use, Residential Land Use, Landscape, and other Master Plans within the Specific Plan, the project is consistent with this policy.

- High-rise development (which is considered to be any type of inhabitable structure which has nine or more stories) shall be limited to the following areas: Financial Plaza/Oxnard Town Center/Wagon Wheel, Mandalay Bay Specific Plan Area, and the Rice Avenue/Highway 101 Interchange.

The RiverPark Specific Plan is consistent with this policy, because the only structure that may be more than nine stories tall in the Specific Plan Area is the hotel allowed in Planning District C, the Convention/Hotel District. This District is located within the boundaries of the existing Oxnard Town Center Specific Plan.

- In order to achieve a varied and interesting skyline, high-rise development shall be required to provide roof features and caps which avoid a "flat-top" appearance and provide relief of exterior vertical planes with vertical setbacks. Specific plans and zoning ordinances shall be amended to provide appropriate design criteria.

As mentioned, the only structure that may be more than nine stories tall in the Specific Plan Area is the hotel allowed in Planning District C. The Specific Plan contains design requirements applicable to this building that are consistent with this policy.

- High-rise buildings should be limited to 25 stories.

The Specific Plan is consistent with this policy, as the height of the hotel building is limited to 18 stories (210 feet).

Light and Glare

The development of the RiverPark Project would introduce new sources of nighttime lighting in the area. These sources would primarily be the form of street and parking lot lights and exterior security lights on buildings. These sources of lighting would all be required to meet existing zoning ordinance performance for lighting. The Specific Plan provides landscape buffers around the most sensitive adjacent residential uses in the El Rio West Neighborhood that would further screen any lighting. As a result of the standard types of lighting that will occur and existing City codes, no significant impacts will result from the permitted uses.

The Specific Plan also permits development of a 5,000 seat multi-use ballpark in Planning District D, the Town Square Commercial District, subject to the issuance of a Special Use Permit (SUP) by the City of Oxnard. Planning District D is located between the Ventura Freeway, Oxnard Boulevard, Santa Clara River Boulevard and Myrtle Street. The RiverPark Specific Plan would permit the ballpark facility to be used by a minor league baseball team and be available for other public and entertainment events, such as festivals, fairs, and concerts. The ballpark would also be made available for use by high school and college baseball teams. The precise location, specific design and operational characteristics of this facility would be proposed at the time an application for a SUP is submitted to the City.

This type of ballpark is likely to be lighted for nighttime use. Use of high intensity lighting for the field could result in light and glare impacts. While the precise location of such a facility within District D is not known at this time, the potential for impacts can be assessed based on the type of lighting design typical for such a facility. Light and glare effects are considered significant if they exceed typical light levels that would be found on land uses that are sensitive receptors, including residential uses. The proposed RiverPark Specific Plan would permit development of high density housing in along portions of Oxnard Boulevard, Santa Clara River Boulevard and Myrtle Street. High and medium density housing is also permitted to the west, north and east of Planning District D. Housing in these areas would be separated from Planning District D by major streets including Oxnard Boulevard, Santa Clara River Boulevard and Myrtle Street. Spill light around the ballpark is likely not be significant, because modern lighting technology prevents glare from the lamp fixtures to passers by. All lamps within a fixture on a pole would be installed with reflector cones and aiming shrouds to make more efficient use of the light. Although they will always be seen, in a similar fashion as lights from distant high school football or amateur softball fields often are, properly aimed sports lights will produce no glare to surrounding areas.

A preliminary lighting design for a ballpark was prepared based on the lighting standards for minor league ballpark facilities.[2] This lighting plan includes eight light poles with light fixtures around a ballpark. Potential light and glare effects can be assessed by calculating light level values at the farthest point that may be affected by spill light, which is the overflow of residual light away from the targeted area. Spill light is calculated from the edge of the target area for each light, because the lights are all aimed at the playing field. Based on typical measurement standards for ballpark lighting, the calculation line around the ballpark extends 250 feet away from, and perpendicular to, the baselines of the baseball diamond. Due to the proximity of the light fixtures to the field, the calculation line extends 150 feet beyond the outfield fence. Any light outside the calculation line is considered negligible, and in most cases is not even measurable. The vertical fc values in these areas vary from 1.5 to 3.0 fc, which are equal or less than typical parking lot lighting that will generally vary from 1.5 to 5.0 vertical fc, with an average of 3 fc. The horizontal fc values listed in these areas are typically less than 0.75 fc, which are equal or less than typical parking lot lighting that will

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2 HNTB Design/Build, Inc., Sports Lighting Study for Oxnard Ballpark, January 2001

generally vary from 0.5 to 1.0 horizontal fc. In other words the maximum light spillage within 150 feet of the ballpark would likely not be greater than 3 fc. Areas within 250 feet of a ballpark are likely to consist of parking areas and other areas associated with the ballpark use. The potential for sensitive uses to be impacted is, therefore, minimal.

As the Specific Plan would allow residential development in and adjacent to Planning District D, there is some potential for lighting from a ballpark facility to impact residential uses, depending on the location and orientation of the ballpark in relation to areas where residential uses are permitted and the lighting design. This potential impact is considered significant. This potential impact can be further assessed at the time an application for a Special Use Permit for a ballpark is submitted.

CUMULATIVE IMPACTS

There are several related projects proposed, approved or under construction in the vicinity of the RiverPark Specific Plan Area. These projects include the Esplanade Plaza Shopping Center, located across the Ventura Freeway from the Specific Plan Area; the Financial Plaza III Tower office building, located south of the freeway and east of Vineyard Avenue; the Ventura County Juvenile Justice Center, located immediately east of the Large Woolsey mine pit; and a single family residential project in the El Rio West Neighborhood, located immediately east of the Specific Plan Area between Stroube and Sycamore Streets.

The Esplanade Plaza Shopping Center involves the redevelopment of an existing regional mall project. The Financial Plaza Tower III project involves the extension of a previously approved Special Use Permit for a high-rise office building located adjacent to the existing high-rise City National and Dean Witter Buildings. These projects are both consistent with the *2020 General Plan* commercial designations for these areas and uses around these sites. No significant visual impact will result from development of these commercial projects and the commercial Planning Districts in the Specific Plan Area. The residential project in the El Rio West Neighborhood consists of single family homes that will be visually consistent with the existing homes in El Rio West and the proposed homes in the adjacent portion of the Specific Plan Area. No significant visual impact will result from the development of this project and the RiverPark Project. The Juvenile Justice Center is under construction on a site located between the Montgomery/Lambert and Beedy Street Industrial areas. This complex will be visually consistent in terms of height with the adjacent industrial uses. No significant visual impact will result from the development of this project and the RiverPark Project.

MITIGATION MEASURES

4.2-1 Any application for a Special Use Permit for a ballpark facility in Planning District D shall be accompanied by a lighting study, based on a lighting plan for the facility, demonstrating that no areas where residential uses are permitted by the Specific Plan would have light levels over 3 fc from the ballpark lighting.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant aesthetic impacts are anticipated as a result of the RiverPark Project.

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4.3 EARTH RESOURCES

INTRODUCTION

This section describes the geologic and geotechnical conditions of the Specific Plan Area, and identifies mineral resources within the Specific Plan Area. This section evaluates the consistency of the RiverPark Project with applicable State, County, and City policies regarding minerals and identifies potentially significant geologic, geotechnical, and mineral resource impacts.

This analysis is based on technical information provided for the site by Fugro West, Inc. and by West Coast Environmental and Engineering. Much of this technical information relies upon existing available geologic and geotechnical data pertinent to the study area, including published and unpublished geologic and geotechnical maps, geotechnical reports for portions of the subject site and for adjacent properties, literature, and research data, along with pertinent well logs and historical stereo aerial photographs.

Based on this information this section analyzes the potential geologic and earth resources effects of the proposed Mine Reclamation Plan and the land uses that would be permitted by the RiverPark Specific Plan. As individual building projects are proposed within the Specific Plan Area in the future, additional and more detailed geologic and geotechnical information on individual building sites would be provided, including information derived from future subsurface investigations.

EXISTING CONDITIONS

As a result of prior and current uses of RiverPark Areas ‘A’ and ‘B’, many of the physical characteristics of RiverPark Areas ‘A’ and ‘B’ differ significantly. The reader is referred to Section 2.0, Environmental Setting and Section 3.0, Project Description, for a description of the Specific Plan Area, proposed uses and improvements, and land uses around the Specific Plan Area.

Geologic Setting

The RiverPark Specific Plan Area is situated in the southern portion of the Transverse Ranges Geomorphic Province of California. The province is characterized by east-west-trending mountain ranges composed of sedimentary and volcanic rocks ranging in age from Cretaceous to Recent. Major east-trending folds, reverse faults, and left-lateral strike-slip faults reflect regional north-south compression and are characteristic of the Transverse Ranges. The Transverse Ranges Geomorphic

Province is bound on the north by the Santa Ynez fault, on the east by the San Bernardino Mountains, on the south by the Transverse Ranges frontal fault zone, and on the west by the Pacific Ocean.

The Ventura Basin, including its offshore continuation in the Santa Barbara Channel, is the dominant structural element of the western Transverse Ranges. The Basin is filled with a thick sequence of Cenozoic[1] sedimentary rocks estimated to be more than 20,000 feet in total thickness.

Located along the Santa Clara River channel, the site is underlain by a 1,000- to 2,000-foot-thick sequence of recent (Quaternary age[2]) alluvium and terrace deposits, which are generally unconsolidated to partially consolidated. The alluvial materials generally consist of older stream channel (Qos) and floodplain deposits (Qfp) of sand, gravel, cobbles, silt, and clay that are generally stratified and locally cross-bedded. Figure 4.3-1, Geologic Map, shows the surface distribution of sediments in the project area.

Site Topography

Natural elevations across RiverPark Area 'A' vary from about 75 feet above mean sea level (msl) adjacent to the base of the southwestern end of the river levee to about 90 feet above msl at the eastern end of the property. Elevations on RiverPark Area 'B' vary from below sea level in the mining pits to roughly 138 feet above msl on a stockpile in the plant area. This wide variation in elevations reflects the existing El Rio Retention Basin No. 2 and the mine pit excavations, and the stockpiling of excavated and imported materials.

RiverPark Area 'B' specifically contains four mining pits: the Large Woolsey, Small Woolsey, Vickers, and Brigham pits, as shown in Figure 2.0-6, RiverPark Area 'B' Features. Each of these is briefly described below.

- The Large Woolsey pit is adjacent to the northeastern end of the plant area. The Santa Clara River levee runs parallel to the northwestern side of this pit, while industrial development and the Ventura County Juvenile Justice Center site borders its southeastern side.
- The Small Woolsey pit is located east of the plant area. Industrial property along Montgomery Avenue adjoins the northeastern side of this pit, and private industrial property along Carnegie Street adjoins its southeastern end. A peninsula consisting of excess fine granular material, obtained during the washing of sand and gravel, partially separates the Vickers pit from the southwestern side of the Small Woolsey pit.

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1 The Cenozoic Era represents the last 65 million years.
2 The recent Quaternary Period represents the last 11,000 years.

LEGEND

af	Artificial Fill
Qbs	Beach and Dune Sand Deposits
Qsc	Stream Channel Deposits
Qfp	Flood Plain Deposits
Qd	Deltaic Deposits
Qt	Marine and Nonmarine Terrace Deposits
Qof	Older Alluvial Fan Deposits
Qos	Older Stream Channel Deposits
Qls	Landslide Deposits
TQsp	San Pedro Formation
TQsb	Santa Barbara Formation

Geologic contact, dashed where approximate

Anticline, showing plunge, dotted where concealed

Syncline, showing plunge, dotted where concealed

Fault, dotted where concealed

Suggested fault trace as identified on aerial photos, but not verified

25 Strike and dip of bedding

Oxa Oxnard Aquifer is exposed within area shown as Qfp

S Area of known historic subsidence of land

Petroleum, natural gas, and natural gas liquid

BASE MAP SOURCE: California Division of Mines and Geology (CDMG), Geology and Mineral Resources Study of Southern Ventura County, California, Preliminary Report 14, (Weber et al., 1973).

NORTH

0 4000 8000

FEET

FIGURE **4.3-1**

Geologic Map

- The Vickers pit is bound on the northwest by the plant area, on the southeast by the El Rio Drainage Basin No. 1, and on the southwest by the Brigham pit. A land bridge that was formerly the plant entrance road separates the Brigham and Vickers pits.
- The Brigham pit is bound on the northwest by the plant site, on the west by the "stockpile" area, on the southwest by the current entrance road, and on the southeast by the El Rio Drainage Basin No. 1.

The pits were actively mined between the mid-1970s and the late 1990s and no single photograph or topographic map exists that accurately reflects the deepest excavations or steepest slope gradients excavated into the native, undisturbed earth materials. Topographic maps indicate that the top of pit slope elevations range from about 100 feet above msl at the northeastern end of the Large Woolsey pit to about 85 feet above msl at the western end of the Brigham pit. The historical elevations at the pit bottoms range from about 2 feet below msl at the northeastern end of the Large Woolsey pit and at the northwestern end of the Small Woolsey pit, to about 8 feet below msl in the Brigham pit and 4 feet below msl in the Vickers pit.

In general, topographic maps indicate that the mining pits on RiverPark Area 'B' are up to about 100 feet in depth, with excavated slope gradients typically between about 2h (horizontal):1v (vertical) and 1h:1v. Oversteepened pit slope areas with gradients steeper than 1h:1v generally appear to be localized and do not appear to involve the entire slope height (refer to the July 2001 Fugro West, Inc report in Appendix 4.3 for specific areas where those steeper gradients exist on RiverPark Area 'B').

The northwestern end of the RiverPark Area 'B' site is an approximately 80-acre stockpile area that was actively mined for aggregate materials from the mid-1960s through the early 1970s. Topographic maps from that period suggest that mining excavations extended at least as deep as about 29 feet above msl at the southeastern end of the stockpile area. Excavations from that period have since been backfilled, resulting in the existing topography which varies from about 60 feet above msl (along the southeastern boundary) to about 110 feet above msl along a fill ridge in the center of the stockpile area.

The approximately 50-acre plant area is located immediately northeast of the stockpile area. From a review of historical aerial photographs, excavations had already begun in the plant area by 1947 and continued up until about 1960. Excavations in the plant area generally appear to have been limited in extent and depth, typically on the order of about 20 feet deep. Those excavations were filled to the present topography, which generally ranges from about 82 feet above msl near the southwestern corner to about 95 feet above msl near the northeastern corner.

Drainage Characteristics

Drainage within the project area occurs as sheet flow and through numerous man-made diversion and catchment structures. Within RiverPark Area 'A', runoff generally flows toward the southwest and west, while within RiverPark Area 'B', the general direction of drainage has been disrupted by numerous mining pits and material stockpiles on the site, and by two County of Ventura water detention basins along Vineyard Avenue.

The RiverPark Specific Plan Area lies within the floodplain of the Santa Clara River and aerial photographs reveal a wide and braided channel morphology that historically has encroached on the northeastern end of the subject property. A levee exists along the length of the RiverPark river frontage to protect the Specific Plan Area from flooding. The reader is referred to Section 4.5, Water Resources, and Section 4.11.1, Stormwater Drainage, for more detailed discussion of the drainage characteristics of the site and project area.

Earth Materials

On the basis of subsurface investigations both on and near the RiverPark Specific Plan Area, the general native soil profile predominantly consists of alluvial (i.e., river bed and floodplain) deposits; however, due to activities on the site over the past decades, there is considerable artificial fill throughout the RiverPark Area 'B' site. The greatest proportion of artificial fill lies in the stockpile area, the southeastern third of which was excavated to depths of at least 60 feet (about 30 feet above msl) in the mid- to late 1960s. Artificial fill on the RiverPark Area 'A' site is generally within the upper 5 feet, resulting from agricultural discing. Alluvium and artificial fill on the site (illustrated on Figure 4.3-1, Geologic Map), as well as slope materials from mining operations on RiverPark Area 'B', are described below.

Alluvium (Qal)

The alluvium appears to consist primarily of silty to well-graded sand with varying amounts of gravel and cobbles, and scattered thin silt and clay layers. Along the river levee in the stockpile area, alternating native clay and silt layers are common below a depth of about 30 feet.

On the basis of descriptions and sampler blow counts ("N-values"[3]) from borings drilled on the subject site and on adjacent properties, the natural silty sand to well-graded sand (with varying amounts of gravel and cobbles) materials generally appear to range from medium dense to very dense. Those sandy materials are anticipated to be non-expansive. Natural fine-grained clay and clayey silt lenses are anticipated to be thin and discontinuous. Those materials generally have been found to range from medium stiff to medium dense.

Artificial Fill (Af)

The artificial fill on the site appears to consist predominantly of silty sand to well-graded sand with varying amounts of gravel. Within the stockpile area of RiverPark Area 'B', up to about 60 feet of artificial fill is located in the southeastern third, about 20 feet in the northwestern third, and about 35 feet elsewhere. Artificial fill in the stockpile area generally consists of silty sand to sand, with silt and clay layers predominant in the upper 20 to 40 feet of the southern half of that area. In the plant area, the fill consists of sand and silty sand, and the depth of the fill generally varies from a few feet to about 20 feet. In the slope areas of RiverPark Area 'B', approximately 65 feet of fill is present within about 200 feet of the present slope crest along the northwestern end of the Vickers pit (this pitward fill comprises the "fill peninsula" that extends into the Vickers and Small Woolsey Pits), about 15 feet of fill is present along the southeastern slope of the Large Woolsey pit, and about 35 feet of artificial fill is present along the western corner of the Brigham pit. Additionally, up to about 35 feet of artificial fill exists along the northwestern two-thirds of the southwestern slope of the Brigham pit, extending to the southwestern property line. See the discussion on slope materials below for further discussion on artificial fill at the RiverPark Area 'B' site.

El Rio Drainage Basin No. 2 was excavated by the Ventura County Flood Control District (VCFCD) in 1997. Materials excavated below the surficial topsoil at the basin site were hauled to the CalMat plant (now Vulcan Materials) to separate gravel for aggregate production, while the silty sand topsoil materials from the basin were stockpiled at the site and placed on the basin bottom once excavation was completed. The basin is approximately 15 feet deep with approximately 2h:1v side slopes. The basin bottom is level and has a bottom elevation of about 75 feet above msl. The southwestern corner of the basin was excavated to about 10 feet below its present elevation and loosely backfilled. There may be pockets of loose fill in other areas of the basin. Soil materials encountered during the excavation of the El Rio Detention Basin No. 2 consisted predominantly of medium-grained sand with 30 to 40 percent gravel and less than 10 percent fines.

3 The N-value is the penetration resistance (i.e., number of blow counts) as the Standard Penetration Test (SPT) sampler is driven 12 inches (during the field exploration with the drill rig).

In the areas surrounding the RiverPark property, artificial fill associated with agriculture was estimated to be generally between about 2 and 5 feet in depth, and appears to be derived from surficial on-site silty sands, well-graded sands, sandy silts, and clayey silts. The topsoils are anticipated to be loose because of agricultural discing. Similar materials are expected on the cultivated portion of RiverPark Area 'A'.

Mining Pit Slope Materials

Mining pit slope materials on RiverPark Area 'B' consist of native, undisturbed granular soil and, in some areas, artificial fills. In general, native slope materials consist of dense to very dense, well-graded sand with varying amounts of gravel, and with intermittent gravel layers in a sandy matrix on the order of several feet thick. Artificial fills consist of sands and silty sands that were discarded from the aggregate mining process.

Thin clay lenses (typically on the order of 1- to 2-inches thick) were encountered in a few boring locations on RiverPark Area 'B'[4]; however, the elevation of the clay layers varied significantly between borings, when encountered, or were not noted in adjacent borings.

Several areas of fill placement along the pit slope areas are known, and several localized slope failures from uncontrolled runoff or drain pipe failures exist along the northeastern and eastern slopes of the Small Woolsey pit and the southeastern slope of the Large Woolsey pit. Additionally, one "washout" at the northern end of the southeastern slope of the Large Woolsey pit involved at least the upper 30 feet of slope materials.[5] Those failed areas were restored to their prior configuration by the placement of artificial fill consisting of "spill fills" below the water level or in inaccessible slope areas, and conventional fill placement with grading equipment and some level of compactive effort as the filling process continued above the water level. However, there were no known records of the observation of standard grading methods consisting of keying and benching fill materials into native slope materials, and testing of those fill materials by a geotechnical engineer during their placement. According to a study performed subsequent to fill placement, the artificial fill materials used to restore the slope at the eastern corner of the Small Woolsey pit consisted of fine silty sand with some fine gravel.

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4 This information is based on borings done on the site by Earth Systems Consultants in 1997, Fugro West, Inc. in 1998 and 99, and The J. Byers Group, Inc. in 2000. The specific references for these borings are provided in the July 2001 Fugro West, Inc. report in Appendix 4.3 of this EIR.

5 This information is based on borings done on the site by Earth Systems Consultants in 1997; the specific reference for these borings is provided in the July 2001 Fugro West, Inc. report in Appendix 4.3 of this EIR.

The approximate locations of the slope failures (and subsequent fills placed to restore the pre-failure slope gradients) along the southeastern and northeastern slopes of the Small Woolsey pit and the southeastern slope of the Large Woolsey pit are shown on Figure 4.3-2, Slope Reclamation Plan.

Seismicity

The RiverPark Specific Plan Area is located in a seismically active region and it can be expected that the project would be subjected to strong ground shaking during its design life. Ventura County is the only county in southern California that has not directly experienced the effects of a devastating historical earthquake on a fault within its borders. That quiescence is in clear conflict with the active tectonic framework of the County because there are numerous regional and local active faults in the County that pose a seismic risk to the area.

Geodetic surveys indicate that the Ventura Basin is experiencing crustal shortening at an annual rate of about 1 centimeter per year in a north-south direction. Because no historical earthquakes have been recorded in the area over the course of at least 200 years (aside from the 1812 and 1857 earthquakes occurring on the San Andreas fault - occurrences that probably did little to relieve crustal strain in the Ventura Basin), the Ventura region is likely to experience a large earthquake, or a cluster of large earthquakes, in the near future.

On the basis of the crustal shortening rate noted above, the Ventura region should have experienced the equivalent of two moment magnitude 7.5 earthquakes during the last 200 years. However, no large-magnitude earthquakes have occurred historically along the Simi-Santa Rosa, Oak Ridge, San Cayetano, Ventura, or any other major fault in the County. Obviously, portions of Ventura County have been affected by earthquakes occurring in other geographic regions, such as the damage in Fillmore and Simi Valley that resulted from the January 17, 1994, Northridge earthquake (magnitude 6.7). However, no earthquakes with magnitudes larger than 6.0 have occurred historically on faults in Ventura County.

The relative earthquake quiescence in Ventura County is disconcerting because portions of Ventura County exhibit some of the greatest Quaternary deformation rates in California and the world. For instance, the Ventura anticline, located about 12 miles north of the Specific Plan Area, has exhibited uplift rates of about 6 millimeters per year (mm/yr) for the last 40,000 to 100,000 years. That rate compares with typical coastal terrace uplift rates in other areas of California of about 0.1 to 0.5 mm/yr. That high deformation rate implies a high tectonic activity rate for the region that has not been experienced historically.

Table 4.3-1, Summary of Nearby Faults, presents a summary of the distances to the Specific Plan Area and the maximum magnitude of some of the nearby faults that may cause future shaking at the Specific Plan Area.

Table 4.3-1
Summary of Nearby Faults

Fault Name	Distance Between Site and Surface Projection of Earthquake Rupture Area (miles)	Estimated Maximum Earthquake
Oak Ridge (onshore)	0.25	6.9
Simi-Santa Rosa	3	6.7
Ventura-Pitas Point	4	6.8
Channel Island Thrust (Eastern)	5	7.4
Montalvo-Oak Ridge Trend	6	6.6
Anacapa-Dume	6	7.3
Oak Ridge (Blind Thrust) Offshore	7	6.9
Red Mountain	11	6.9
San Cayetano	14	6.8
Santa Ana	14	6.7
Malibu Coast	18	6.7
San Andreas	41.5	7.8

Source: Fugro West, Inc.

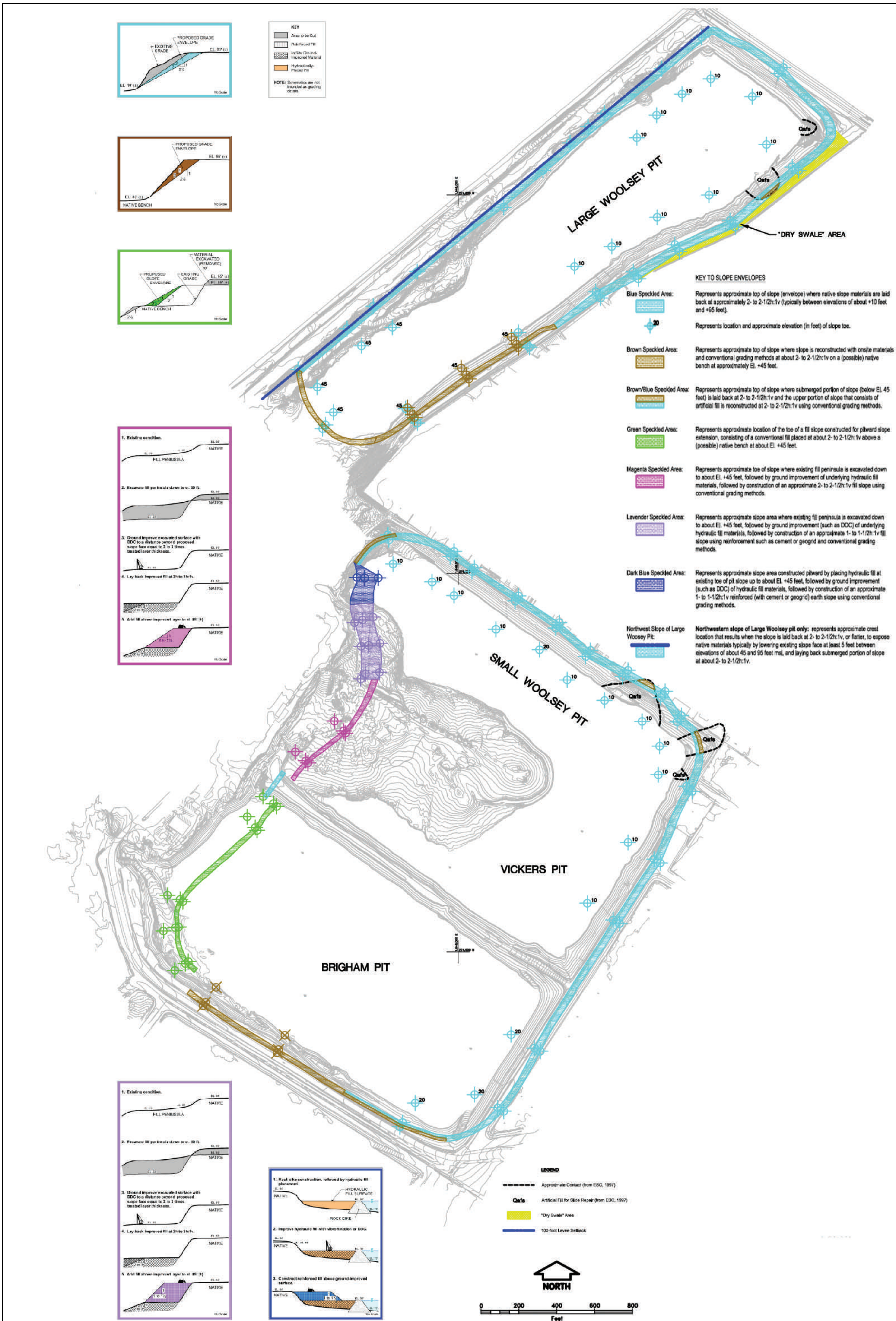
Figure 4.3-1, Geologic Map, shows the proximity of the RiverPark Specific Plan Area to the Oak Ridge (onshore) fault. The closest portion of the Oak Ridge fault system to the project is along the inferred McGrath fault trace, located approximately 1,500 feet northwest of the site.

The potential earthquake-induced hazards that may affect the RiverPark Specific Plan Area consist of fault rupture and strong ground motions, and the secondary effects of ground motion, such as liquefaction, lateral spreading, settlement in dry sands, tsunamis, and seiches. Each of those is discussed below.

Ground Rupture Potential

Ground rupture caused by movement along a fault could likely result in catastrophic structural damage to buildings constructed along that fault trace. Consequently, the State of California, through the Alquist-Priolo Earthquake Fault Zoning Act, prohibits the construction of occupied structures[6] within a

6 The California Division of Mines and Geology (CDMG, 1997) defines an occupied structure as one that is occupied at least 2,000 person-hours per year.



NOTE: For detailed 24"x36" map please see Appendix 4.3.

FIGURE 4.3-2

Site Reclamation Plan

designated fault zone without demonstrating that the structures would not encroach a 50-foot setback from the fault trace. Local government, such as the County of Ventura, identifies other faults, in addition to those faults mandated by the State, for which minimum construction setback requirements must be maintained. No Alquist-Priolo Earthquake Fault Zones, or any other mapped fault zone, encroaches onto the Specific Plan Area.

Potential for Strong Ground Motion

Strong ground motion from seismic wave propagation can cause significant damage to structures. At any location, the intensity of ground motion is a function of the distance to the fault rupture, the local soil/bedrock conditions, and the earthquake magnitude (among others).

A published regional probabilistic seismic hazard map prepared by the California Division of Mines and Geology (CDMG, 2001) estimates that a peak horizontal ground acceleration (phga) on the order of about 0.7g should have about a 10 percent probability of exceedance at the site in a 50-year exposure period. That level of ground shaking generally corresponds to the level of ground motion that would have a return period of about 475 years. The predominant (modal) magnitude that produced the 475-year ground motion is 6.9, and the predominant (modal) distance is about 1 mile. Recent studies (Bozorgnia et al., 1999) have observed that at such close distances and for such large earthquakes, the peak vertical acceleration can be about 1.6 times the peak horizontal acceleration.

Liquefaction Potential

Soil liquefaction results from the earthquake-induced temporary build-up of excess pore water pressure that can result in a condition of near-zero effective stress and the temporary loss of strength. Soil materials considered to be susceptible to liquefaction include loose to medium dense sands and non-plastic silts that typically are below the groundwater level. Clay soil or sand and silt with more than 15 percent clay-sized particles (particles less than 0.005 mm) are typically considered non-liquefiable.

Groundwater typically is present beneath the proposed development ground surface, as high as about 65 feet above msl at the western end of RiverPark Area ‘A’ to about 76 feet above msl at the northeastern end of RiverPark Area ‘B’, with significant seasonal and annual fluctuations related to rainfall, recharge, and withdrawal. However, blow count data from borings drilled on or adjacent to the Specific Plan Area suggest that the native granular soils are predominantly dense to very dense; such soils are typically not susceptible to liquefaction. The loose to medium dense sandy artificial fill materials encountered in the stockpile area on RiverPark Area ‘B’, however, appear to be susceptible to liquefaction. Furthermore, pockets of artificial fill that extend to depths on the order of about 10 feet below the bottom of the El Rio Detention Basin No. 2 also are likely to be loose and because of their potentially submerged condition, susceptible to liquefaction.

Lateral Spreading

Lateral spreading movement may occur when a soil mass slides laterally on liquefied soil layers, moving downslope or towards a free face. The magnitude of lateral spreading movements depends on earthquake magnitude, distance between the site and the seismic event, thickness of the liquefied layer, ground slope or ratio of free-face height to distance between the free face and structure, fines content and average particle size of the material comprising the liquefied layer, and N-value. The mining pit slopes on RiverPark Area 'B' and the embankment slopes adjacent to the Santa Clara River are two examples of free-faces on or adjacent to the Specific Plan Area.

The potential for lateral spreading appears to be low in the native materials on the site; however, there may be a potential for lateral movement in the loose artificial fill materials in the stockpile area of RiverPark Area 'B', and in other unexplored fill areas, including along the Hanson Aggregates' plant entrance road located adjacent to the northeastern side of the El Rio Detention Basin No. 2 and within slope repair areas and the artificial fill peninsula that extends from the southeastern plant boundary into the Vickers pit.

Seismically Induced Settlement

Seismically induced settlement can occur during earthquake shaking in sandy soils that are loose to medium dense and above the water table. Seismically induced settlement differs from settlement resulting from liquefaction of saturated granular materials because it may occur in dry sands. In southern California, seismically induced settlement of dry and partly-saturated sand was observed during the 1971 San Fernando and 1994 Northridge earthquakes.

The upper 10 to 20 feet of soil at the RiverPark Specific Plan Area is anticipated, for the most part, to remain above the groundwater level. Artificial fills encountered in the stockpile and plant areas of the Hanson Aggregates property typically were loose to medium dense. Native sands and sandy silts encountered in the upper 20 feet on and adjacent to the Specific Plan Area typically were medium dense. Loose sandy fill materials are anticipated to be more susceptible to seismically induced settlement than the medium dense native sand and sandy silt materials. The potential for seismically induced settlement of the native sand and silty sand materials in the upper 10 to 20 feet appears to be minor.

Tsunamis and Seiches

Large earthquakes can induce tsunamis, which are sea waves characterized by significant runup reaches extending beyond coastal beach areas. The most significant historical tsunami in this area resulted from the 1812 Santa Barbara Channel earthquake in which the wave runup extended to Mission San Buenaventura (about 30 feet above msl).

According to the Ventura County Seismic Safety and Safety Element (1974), a tsunami runup elevation for most of Ventura County is about 35 feet above msl. The site lies in "Zone 3," which has an expected tsunami runup elevation in the range of 15 to 30 feet (with a 90 percent probability of not being exceeded in 50 years). The Specific Plan Area is generally above 75 feet above msl and is located several miles from the Pacific Ocean; therefore, impacts from tsunami hazards is low.

Seiches are seismically induced waves generated in a closed body of water from ground excitations such as earthquake shaking, tectonic tilting, fault rupture of the basin floor, landsliding of the basin slopes, volcanic pressure waves, or from atmospheric disturbances. The mining pit slopes are anticipated to have a minimum freeboard of about 2.5 feet under the fullest pit conditions. Therefore, ground excitations or atmospheric disturbances resulting in maximum wave heights less than the minimum anticipated freeboard height should not pose a hazard. Atmospheric pressure changes resulting in wind surges are not likely to produce wave heights greater than about 0.5 foot because of the relatively small size of the pits. Current volcanic activity is absent in the Oxnard plain area, so that potential source of seiche activity is unlikely. The potential for landslides of the pit slopes will be reduced to a less than significant level by increasing the stability of the pit slopes through implementation of the slope reclamation plan in the proposed Mine Reclamation Plan.

Oscillations from ground shaking, tectonic tilt, and fault rupture may produce seiche waves that could exceed the available pit slope freeboard. The nearest known active fault to the RiverPark site, the Oak Ridge fault, is located about 1,500 feet to the northwest. Therefore, the potential for seiche waves generated from fault rupture within the RiverPark basins is less than insignificant. Numerical models developed by Ichinose et al. (2000) for Lake Tahoe predict maximum seiche wave heights on the order of 0.5 meter as a result of tectonic tilting caused by fault rupture occurring outside the Lake Tahoe basin. It is conceivable that tectonic tilting resulting from activity along the nearby Oak Ridge fault may result in wave heights on the order of several feet.

Seiche waves resulting from oscillations generated from earthquake ground shaking have been observed hundreds of miles from the earthquake source (Richter, 1958). In most cases of those distant events, the vertical amplitude of earthquake-shaking-induced seiche waves was no more than a few feet (Sherard, 1967).

When wave oscillations are in phase with ground motions from near-field events (i.e., nearby earthquake activity), significant wave heights may result. However, for water waves to be in phase with near-field ground motions, the body of water should be small. The size body of water most likely affected by near-field oscillations is in-ground swimming pools. Anecdotal observations of significant sloshing of in-ground swimming pools during the Northridge and other recent earthquakes are common. Conversely, larger bodies of water, such as the mining pits, are less likely to be in phase with near-field ground motions because their periods are typically much longer.

A National Science Foundation-funded study was performed by a University of Southern California graduate student, Christophe Ruscher, under the direction of Professor Costas Synolakis to estimate the seiche wave height that occurred in the Los Angeles reservoir as a result of the January 17, 1994, Northridge earthquake. That study (Ruscher, 1997), which consisted of the development of scaled physical models of the Los Angeles reservoir, was not able to substantiate the development of any more than just a few feet of reservoir sloshing due to earthquake induced oscillations.

The Los Angeles reservoir geometry is somewhat similar to the contiguous Brigham, Vickers, and Small Woolsey pit dimension and depth. Additionally, the ground movement from the Northridge fault is similar to that anticipated from the nearby Oak Ridge fault. If seiche waves in the mining pits were comparable in height to those estimated in the Los Angeles reservoir study, they would barely overtop the pit slope crests when the pits are at their fullest. Most of the year, freeboard in the mining pits is anticipated to range from 10 to 30 feet or more, during which time seiche runup would not overtop the pit slopes.

The minor overtopping of the slope crests by seiche waves induced from ground shaking or tectonic tilting would not be expected to travel very far beyond the crest. Additionally, landscape berms, trees, and shrubs would tend to impede the reach of the wave. Occupied structures for the RiverPark Area 'B' development are planned at least 75 feet from the proposed slope crests and existing occupied structures on adjacent properties will have a setback of at least 30 feet from proposed slope crests after implementation of the slope reclamation plan. Therefore, seiche potential is not considered significant in the mining pit areas.

Other Geohazards

Other geotechnical hazards or concerns relative to the RiverPark Specific Plan Area that are not directly related to earthquakes include hydroconsolidation, subsidence, expansive soils, and the stability of artificial fills on the RiverPark Specific Plan Area. A preliminary analysis of each of those relative to the Specific Plan Area is discussed below followed by a description of pit slope conditions at the Hanson Aggregate Plant on RiverPark Area 'B'. The absence or presence of the aforementioned potential geotechnical hazards on the RiverPark Specific Plan Area will be confirmed with specific geotechnical studies prepared for individual building projects within the Specific Plan Area.

Hydroconsolidation

Hydroconsolidation is a phenomenon in which natural soil deposits or fill materials collapse (settle) when wetted. Natural deposits susceptible to hydroconsolidation are typically aeolian, alluvial, or colluvial materials, with high apparent strength when dry. That dry strength may be attributed to the clay and silt constituency of the soil, and the presence of salts. Additionally, capillary tension may act to "bond" soil grains. Once those soils are wetted, the constituency including soluble salts or "bonding" agents is weakened or dissolved, capillary tensions are reduced, and collapse occurs.

Loose on-site artificial fills may be susceptible to collapse settlement. Because on-site native sands and sandy silts above the groundwater level generally are medium dense, the collapse potential in those materials is anticipated to be low. Native materials below the historical high groundwater level for the site should not have a significant collapse potential because they have been saturated at some time in the past.

Consolidation

Because the native soil profiles are likely to consist primarily of medium dense to very dense sand with varying amounts of gravel, the consolidation potential of undisturbed, native soils likely is low. However, uncontrolled artificial fill materials typically are variable in density and are likely to compress upon loading. As previously discussed, artificial fill is likely within the upper few feet of soil on RiverPark Area 'A', as well as in deep pockets on RiverPark Area 'B'.

Subsidence

Subsidence is the sinking of the ground surface caused by the compression of earth materials resulting from manmade activities, such as groundwater or oil and gas withdrawal, or from peat oxidation. The resulting compression typically occurs only once within the affected soils and cannot be repeated during fluctuations (i.e., rise and fall) of the groundwater level. The potential for subsidence from peat oxidation on the Specific Plan Area is not likely because of the absence of peat deposits in borings excavated on and near the site. Similarly, oil and gas withdrawal is not a likely cause of subsidence at the site because there are no known active oil or natural gas wells in that area.

Groundwater withdrawal may have caused some of the regional subsidence observed in the Oxnard Plain, and in the project area, over the last several decades. The Oxnard Plain has been monitored by the U.S. Coast and Geodetic Survey since the 1930s. Records to 1968 show numerous bench marks that have settled a foot over a 15 to 20 year period (i.e., between about 1950 and 1968). The Draft Safety Element Technical Appendix 7 (City of San Buenaventura, 1989) estimates subsidence in the project vicinity (near U.S. Highway 101 and the Santa Clara River) at about 0.05 feet/year. However, groundwater levels would have to continue to decline for subsidence to continue at that rate. Because groundwater levels are not likely to retreat below historic low levels, more recent subsidence rates (i.e., since 1968) from groundwater withdrawal should have retreated, if not ceased.

Expansive Soil

Expansive soil is characterized by a clay composition whereby clay particles expand dramatically upon wetting. Montmorillonitic clays[7] are most susceptible to expansion, resulting in heaving soils. Foundations for structures constructed on expansive soils require special design considerations that are identified in the Uniform Building Code.

Surficial materials on the Specific Plan Area generally consist of granular materials (silty sand, well-graded sand, sandy silt, and some clayey silt) that are not anticipated to be expansive. However, clayey silt soils on the site may demonstrate a slight to moderate expansion potential.

Artificial Fill

As previously discussed, artificial fill is located on both RiverPark Area ‘A’ and ‘B’. Artificial fill materials between about 2 and 5 feet thick have been encountered in agricultural areas surrounding the

7 Montmorillonitic clays are a group of clay minerals characterized by swelling in water due to the introduction of interlayer water.

Specific Plan Area and fills of similar thickness are anticipated on RiverPark Area 'A', which is under agricultural production. Artificial fill materials also were encountered in the stockpile and the plant areas on RiverPark Area 'B' to depths ranging from a few feet to at least 60 feet, and were found to be quite variable in thickness, density, and composition. Artificial fill also exists in other areas of the site, such as the El Rio Detention Basin No. 2, mining pit slope areas, and along the plant entrance road alignment (see previous discussion on artificial materials under Earth Materials).

Groundwater Conditions

Groundwater was reported as shallow as 11 feet below ground surface (bgs), or about 65 feet above msl, in the southwestern corner of the Specific Plan Area. At the State Compensation Fund building site, adjacent to the levee along the Santa Clara River, groundwater was encountered at depths of about 25 to 26 feet (i.e., between about 50 and 52 feet above msl). Along the southeastern boundary of RiverPark Area 'A', groundwater was encountered at a depth of about 30 feet bgs (i.e., about 60 feet above msl).

In late October 2000, the groundwater level in the pits on RiverPark Area 'B' receded to below 42 feet above msl in the Brigham pit, below 45 feet above msl in the Vickers and Small Woolsey pits, and below 47 feet above msl in the Large Woolsey pit. The historical high groundwater levels range from roughly 76 feet above msl at the northernmost end of the site to roughly 60 feet above msl toward the State Fund Insurance building at the southwestern corner of the Specific Plan Area.

Because the RiverPark Specific Plan Area is located adjacent to an active river channel, the groundwater level at the site is anticipated to fluctuate significantly over the seasons and from one year to the next, depending on rainfall, runoff volumes, recharge, withdrawal, and irrigation. The highest historical groundwater elevation for RiverPark Area 'B' was estimated to be about 76 feet above msl.

Mineral Resources

Oil

The RiverPark Specific Plan Area is outside the Oxnard Oil Field. Three abandoned oil wells exist on the site; however, no oil or natural gas exploration and drilling currently occurs on the site. The wells were capped according to the standards of the California Division of Oil and Gas, which includes a cap 10 feet below the ground surface.

Aggregates

Aggregates represent a principal mineral resource within Ventura County, and include sand, gravel, and rock which are used for base fill, asphalt, concrete and riprap, among other things. Sand and gravel deposits (as well as extraction sites) within Ventura County occur primarily along the Santa Clara River channel as a result of alluvium transported by the river from the San Gabriel Mountains, and the Los Padres and Santa Inez Mountains of northeastern Ventura County. This alluvium forms a linear deposit ranging from 0.25 to 5.00 miles in width, and at least 1,000 feet deep. The Specific Plan Area is located within the Western Ventura County Production Consumption Region (PCR) for aggregates, as defined by the State. The aggregate resources in this PCR are almost exclusively located in and adjacent to the Santa Clara River. As of 1997/98, this PCR has been importing almost 100 percent of its aggregate materials from Simi Valley, Los Angeles County, and Kern County.[8]

With the exception of portions of RiverPark Area 'A' that have been "lost to urbanization" (according to DMG Open File Report (OFR) 93-10), much of the Specific Plan Area is located in an area designated as a regionally-significant construction aggregate resource area by the California State Mining and Geology Board (SMGB).[9] According to Section 2726 of the State Surface Mining and Reclamation Act (SMARA), this means that the area is

> *known to contain a deposit of minerals, the extraction of which is judged to be of prime importance in meeting future needs for minerals in a particular region of the state within which the minerals are located and which, if prematurely developed for alternate incompatible land uses, could result in the permanent loss of minerals that are of more than local significance.*

RiverPark Area 'A' has never been mined. RiverPark Area 'B' consists of a existing surface mining site; however, no further excavation of the aggregates occurs on this site due to poor material quality (excess fines content in remaining native materials) and the high water levels in the mining pits, making mining operations no longer economically feasible.

PLAN AND POLICY CONSISTENCY ANALYSIS

This subsection examines the consistency of the project with the State Surface Mining and Reclamation Act, the City of Oxnard *2020 General Plan* for the western portion of the site (RiverPark Area 'A'), and

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8 Ingrid Elsel, West Coast Environmental, correspondence to Impact Sciences, Inc., 21 February 2001.
9 Jason Marshall, California Department of Conservation, correspondence to the City of Oxnard, 9 June 2000.

the Surface Mining Ordinance of the City of Oxnard. As RiverPark Area 'B' is presently located in unincorporated Ventura County, the County's plans and policies related to mineral resources are also discussed.

State Surface Mining and Reclamation Act (SMARA)

The State Surface Mining and Reclamation Act of 1975, as amended (SMARA) mandated the initiation of mineral land classification to help identify and protect mineral resources in areas within the State that are subject to urban expansion or other irreversible land uses which would preclude mineral extraction. After designation of mineral resource areas, SMARA provided for the classification of designated lands containing mineral deposits of regional or statewide significance. In addition, SMARA was designed to provide guidelines for the proper reclamation of mineral lands.

In compliance with SMARA, the State Division of Mines and Geology prepared Mineral Resource Zone maps that identify the following mineral resource zones:

MRZ-1 Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

MRZ-2 Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.

MRZ-3 Areas containing mineral deposits the significance of which cannot be evaluated from available data.

MRZ-4 Areas where available information is inadequate for assignment to any other MRZ zone.

The RiverPark Specific Plan Area is located within MRZ-2.

To meet its basic objectives, SMARA requires each jurisdiction with an MRZ-2 Zone to prepare a Mineral Resource Management Plan to protect access to mineral resources and to require reclamation when mining operations are closed. Furthermore, to ensure proper reclamation of mining sites, SMARA requires all jurisdictions with mining operations to adopt a reclamation ordinance and have it certified by the State Mining and Geology Board.

Ventura County Compliance with SMARA

In conformance with the requirements of SMARA, the County of Ventura prepared and adopted a Mineral Resource Management Plan (MRMP) in 1986 for the unincorporated portions of the County, which includes RiverPark Area ‘B’. The County's MRMP identifies resource areas, management policies, and standard permit conditions for mining operations. The Plan identifies protected resource areas where no other land use would be allowed unless a finding can be made that the proposed use would not hamper or preclude access to the resource and/or the economic value of the proposed use equals or exceeds the value of the resources thought to exist in the affected portion of the protected resource area. As the only portion of the Specific Plan Area within unincorporated Ventura County is RiverPark Area ‘B’, and as mineral extraction operations have ceased on this property due to poor aggregate quality, high water table, and other economic and environmental factors, development of RiverPark Area ‘B’ as proposed would be consistent with this policy of the MRMP.

To meet SMARA's objective to ensure proper reclamation of surface mining operations, Ventura County adopted a reclamation ordinance in compliance with SMARA (Sec. 8107-9 of the Zoning Code). A reclamation plan for the Hanson mining site was prepared in accordance with Section 8107-9 of the County's Zoning Code and was adopted in March 1979. This plan will remain in effect until the City of Oxnard and the State of California Department of Mine Reclamation approve the revised Reclamation Plan proposed as part of the RiverPark project. If RiverPark were not approved, the Hanson Aggregates Reclamation Plan, which has already been approved and amended by the County of Ventura, would remain in effect.

City of Oxnard *2020 General Plan*

Development in the City of Oxnard is subject to the City of Oxnard *2020 General Plan* (November 1990). The Specific Plan Area is located within Mineral Resource Zone 2 (MRZ-2). The RiverPark Area ‘A’ site is currently designated for regional commercial, office, and limited industrial uses, and much of the RiverPark Area ‘B’ site is currently designated as Open Space-Mineral Resource on the Oxnard *2020 General Plan* land use map. The Open Space and Conservation Element Map designates RiverPark Area ‘A’ as "developed," indicating that improvements already exist on this portion of the site.[10] The Open Space and Conservation Element contains a goals and policy that address mineral resources. The RiverPark Project includes a proposed general plan amendment that would modify the objective below. With this amendment, the text shown in italics below would be added. Consistency with the City’s *General Plan* Development Policies relative to mineral resources is discussed in the Impacts sub-section.

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10 As shown in Figure 2.0-5, the southwestern corner of RiverPark Area ‘A’ has been previously developed with streets and two office buildings. The northernmost of these two office buildings, known as the State Compensation Fund Insurance Building, is a three-story building containing 115,000 square feet of space. The southernmost of these two buildings, known as the Nordman, Cormany, Hair and Compton Building, is a seven-story, 106,000 square foot building

A. Goals

1. Maintenance and enhancement of natural resources and open space.

B. Objectives[11]

4. Provide for the continued timely *extraction of minerals where continued extraction is feasible and economical*, while minimizing land use conflicts.

Surface Mining Ordinance of the City of Oxnard

The Surface Mining Ordinance of the City of Oxnard (Ordinance #2597) was approved by the City of Oxnard on September 18, 2001, and by the State Mining and Geology Board on October 1, 2001. The ordinance established regulations for surface mining operations in the City. Article IV, Reclamation Plans, of the ordinance requires that reclamation plans be prepared in accordance with SMARA regulations and other conditions set forth in the ordinance, and that financial assurances be posted with the City to ensure the reclamation of the mining site. Relative to the proposed project, Section 38-34 of the City's ordinance states that the City Planning Commission may approve a reclamation plan upon making the following findings:

- The plan complies with SMARA, SMARA regulations, and Chapter 38 of the City Code.
- The plan and the potential uses of reclaimed land pursuant to such plan are consistent with Chapter 38 of the City Code, the general plan, and any applicable resource plan or element.
- The plan has been reviewed if and as required by CEQA and the city's environmental review guidelines, and all significant adverse impacts from reclamation of the mined lands are mitigated to the maximum extent feasible.
- The land and resources to be reclaimed will be restored to a condition that is compatible with, and blends in with, the surrounding natural environment, topography, and other resources.
- The reclamation plan will ensure that the mined lands are restored to a useable condition that is readily adaptable for alternative land uses consistent with the general plan and any applicable resource plan or element.
- Sections 38-21 and 38-32 of the Ordinance have been satisfied. Those sections specify the notification requirements for a surface mining permit application and for an application for approval of a reclamation plan.

[11] Objectives 1 through 3, and 5 though 8 of the General Plan's Development Policies do not apply to mineral resources.

IMPACT ANALYSIS

Thresholds of Significance

Geology and Soils

Relative to geology and soils, the City of Oxnard considers a project to result in a significant effect on the environment if it would:

1. Expose people or structures to potential substantial adverse effects, including the risk of loss, involving:

    a. 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 (refer to Division of Mines and Geology Special Pub. 42 [*2020 General Plan, VIII- Safety Element; FEIR 88-3, 4.8 - Earth Resources*]),

    b. strong seismic ground shaking (*2020 General Plan, VIII - Safety Element; FEIR 88-3, 4.8 - Earth Resources*),

    c. seismic-related ground failure, including liquefaction (*2020 General Plan, VIII - Safety Element; FEIR 88-3, 4.8 - Earth Resources*), and/or

    d. landslides (*2020 General Plan, VIII - Safety Element; FEIR 88-3, 4.8 - Earth Resources*);

2. Result in substantial soil erosion or the loss of topsoil (*2020 General Plan, VIII - Safety Element; FEIR 88-3, 4.8 - Earth Resources*);

3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse (*2020 General Plan, VIII - Safety Element; FEIR 88-3, 4.8 - Earth Resources*); and/or

4. 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 (*2020 General Plan, VIII - Safety Element; FEIR 88-3, 4.8 - Earth Resources*).

Slope Stability

The proposed pit slope configurations, whether at existing or proposed gradients and composition, should meet or exceed minimum stability criteria to be considered as posing a less than significant impact. The criteria being used by the City of Oxnard consists of a calculated factor of safety of at least 1.5 for static stability and a factor of safety of at least 1.1 for pseudostatic stability (using a horizontal seismic coefficient of 0.15g). Slope conditions that constitute a landslide hazard[12] or that do not meet those minimum factors of safety would be classified as "significant" impacts.

Mineral Resources

With respect to mineral resources, based on the City's *2020 General Plan*, the City considers a project to result in a significant effect on the environment if it would:

- result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state
- result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan
- be inconsistent with Section 2763(a) of SMARA which states:

> *Lead agency land use decisions involving areas designated as being of regional significance shall be in accordance with the lead agency's mineral resource management policies and shall also, in balancing mineral values against alternative land uses, consider the importance of these minerals to their market region as a whole and not just their importance to the lead agency's area of jurisdiction.*

Proposed Improvements

The RiverPark Specific Plan would allow the development of a mixed-use community containing commercial, residential, open space, and public facilities (see Section 3.0, Project Description, for a more complete description of uses proposed on the site). The existing mining pits on RiverPark Area 'B' would be reclaimed and remain as open space. The proposed reclamation concept involves reconfiguring the edges of the pits, stabilizing the slopes of the pits, and planting the crest and upper slope areas with vegetation. The proposed RiverPark Area 'B' residential lots typically will be constructed behind (i.e., landward of) the existing pit slope crests and will maintain a setback of at least 75 feet from the proposed tops of the reconfigured pit slopes.

As proposed, the southeastern edge of the RiverPark Area 'B' residential development generally coincides with the existing Brigham and Vickers pit slope crest, but encroaches upon the western end of

[12] According to the County of Ventura, a landslide hazard constitutes a "…natural or man-induced slope instability that may adversely influence life or property." The landslide hazard, as defined by the County, consists of "…all gravity-induced downslope movements, including the separate phenomena of rockfall, soil creep, soil failures, dry raveling, rotational and translational slides, flows, slumps and complex combination of the above phenomena. The hazard applies to both natural and constructed slopes."

the Small Woolsey pit by up to about 100 feet beyond that slope crest. The proposed RiverPark Area 'B' development incorporates a perimeter road adjacent to the edge of the residential lots along the Brigham, Vickers, and Small Woolsey pits and a dry swale that further separates the residential lot areas from the northwestern end of the Brigham and Vickers pits. A dry swale also is planned adjacent to the slope crest along the northeastern end of the southeastern side of the Large Woolsey pit.

The proposed perimeter road adjacent to the residential lots and near the Brigham, Vickers, and Small Woolsey pit slopes is on the order of about 25 feet wide, and the outlying dry swale area, where planned, is on the order of about 50 to 75 feet wide. The perimeter road and dry swale would provide a minimum setback of about 75 feet between the closest edge of the residential property and the proposed top of slope and generally extend about 75 to 150 feet beyond the existing slope crest. Encroachment into the pits will require the construction of a fill over the steepest historical excavated slopes along the northwestern side of the Brigham, Vickers, and Small Woolsey pits.

An elementary school is also proposed beyond the southern corner of the Brigham pit. Also, lined detention basins are proposed at the location of the existing El Rio Drainage Basin No. 1 (along Vineyard Avenue), between the northeastern end of the plant area and the western end of the Large Woolsey pit, and adjacent to the southwestern side of the Brigham pit.

Areas outside the RiverPark Area 'B' development, but adjacent to the top of pit slopes, consist of the following public or private properties:

- An existing industrial development along the northeastern side of the Small Woolsey pit and the southwestern half of the southeastern side of the Large Woolsey pit.
- A levee between the southeastern bank of the Santa Clara River and the northwestern slope of the Large Woolsey pit, and the drain adjacent to the northeastern end of the Large Woolsey pit, both of which are maintained by the Ventura County Flood Control District.
- A juvenile detention facility under construction by the County of Ventura on the property adjacent to the northeastern half of the southeastern side of the Large Woolsey pit.

Pitward Fills

Pit slope areas to receive fills to extend the RiverPark Area 'B' development envelope pitward are shown on Figure 4.3-2, Slope Reclamation Plan (please refer to the July 2001 Fugro West Inc. report for a discussion of the general methodology for the construction of pitward fills adjacent to the RiverPark development areas).

On the basis of the slope evaluations and the objectives of the Slope Reclamation Plan, potential slope envelopes have been developed for the pit slope areas to improve slope stability and to reduce lateral movements consistent with the standards of the County of Ventura, which are being used by the City of Oxnard, and the Southern California Earthquake Center (SCEC 2000). The slope envelopes represent proposed slope configurations that satisfy the minimum City of Oxnard factor of safety requirements for static and pseudostatic conditions and, where needed, reduce seismically induced lateral movements to levels recommended by SCEC 2000 by increasing the setback of occupied structures on adjacent properties to the slope crest. Refer to the July 2001 Fugro West, Inc. report in Appendix 4.3 of this EIR for further discussion on this topic.

Project Impacts

Construction Impacts

Approximately 10 million yards of earth materials will be graded over the entire 701-acre site. A balanced grading program involving excavation and replacement of the 10 million cubic yards of material is planned. The majority of this grading would consist of the excavation and/or replacement of earth materials in RiverPark Area 'B' to improve the structural characteristics of the soils in the stockpile and plant areas and to stabilize the slopes of the existing mining pits.

In RiverPark Area 'A', the existing elevations range from approximately 75 to 90 feet above msl. The maximum cut or fill in RiverPark Area 'A' will be about 7 feet with an average of 5 feet of material that will need to be removed and recompacted. Overall, approximately 1.9 million cubic yards of earth materials will be excavated in RiverPark Area 'A'. The resulting grades will be 75 to 90 feet above msl.

Grading of RiverPark Area 'B' will be consistent with the proposed reclamation plan, wherein approximately 7.8 million cubic yards of earth will be excavated. The majority of this material, approximately 6 million yards, will be excavated in the stockpile area of the mine site. Approximately 1.5 million cubic yards will be excavated in the plant area of the mine site. The majority of this material will be replaced where excavated to improve the structural characteristics of the soils. The existing land bridge separating the Brigham and Small Woolsey pits and the peninsula of fill material that presently extends into the Vickers and Small Woolsey Pits from the northwest, consisting of approximately 0.35 million cubic yard of material, would also be excavated. Excavation of the existing slopes of the pits would involve 0.60 million cubic yards.

Outside the pit areas, the existing elevations vary from approximately 70 to 115 feet above msl in RiverPark Area 'B'. After grading, the elevations will vary from about 80 to 100 feet above msl. In order to create the planned grades some material will be relocated between Areas 'A' and 'B'.

Grading of RiverPark Area 'B' would be consistent with the reclamation plan proposed for this site. During grading and remediation operations, there is potential for wind and water erosion of on-site soils should grading take place during moderate- to high-wind conditions or the rainy season, respectively. Erosion of on-site soils would result in a significant impact unless mitigated.

During construction, sloped excavations are anticipated during the removal of the artificial fills described previously. Artificial fill and native materials encountered during subsurface explorations and excavations (i.e., silty sand, sand, and sand with gravel) have a potential for caving and sloughing. Unless mitigated, temporary slopes could be unstable and could fail, resulting in a significant geotechnical impact.

Groundwater likely will be encountered in the excavation for the deep fill removal in the southeastern third of the stockpile area. Dewatering will be necessary to lower the groundwater level in that area to at least 5 feet below the targeted excavation bottom, or to elevations between about 20 and 25 feet above msl. Other shallower fill removals in the stockpile area also may require dewatering, depending on groundwater levels at the time of construction. In general, a significant geotechnical impact from dewatering consists of subsidence of earth materials as a result of drawdown. However, because groundwater levels have fluctuated from historical highs up to about elevation 76 feet above msl to lows below sea level over the past several decades, temporarily lowering the groundwater level by about 20 to 25 feet during dewatering should not pose a significant subsidence hazard. Dewatering of the southeastern third of the stockpile area of RiverPark Area 'B' likely would involve the discharging of at least 100 acre feet of water per day into the Santa Clara River, or nearby mining pits on or adjacent to the RiverPark property, or at United Water Conservation District's (UWCD's) El Rio Spreading Grounds. Significant construction impacts from discharging large volumes of water in adjacent pits would result from rapid recirculation (i.e., recharge) of the discharged water, that would interfere with the dewatering operation. Other significant impacts from the dewatering operation may consist of drawdown in proximal wells, water quality of discharge, groundwater depletion (e.g., if pumped water is discharged into the river), and are addressed further in Section 4.5, Water Resources.

Due to the geologic characteristics of RiverPark Area 'A' and the nature of the proposed grading and construction activities, the overall geologic stability of this portion of the site would not normally be compromised. Upon completion, the proposed reclamation and grading of the RiverPark Area 'B' site would improve the geologic stability of that portion of the site compared to existing conditions.

Operational Impacts

The following impact analysis was prepared in response to the thresholds of significance outlined previously.

Impacts Associated With Seismic Hazards

As previously discussed, no known earthquake faults traverse the site, and on that basis, the site is not subject to ground rupture. However, there is potential for strong ground motion, liquefaction, lateral spreading, and seismically induced settlement on the site. Each of those seismic hazards relative to the Specific Plan Area is discussed below.

Potential for Strong Ground Motion

There is about a 10 percent probability of exceedance in a 50-year exposure period that the site will experience a pgha on the order of about 0.7g. The predominant (modal) magnitude that produced the 475-year ground motion is 6.9 and the predominant (modal) distance is 1 mile. Because the Specific Plan Area is close to major earthquake sources, the peak vertical acceleration may be about 1.6 times the peak horizontal acceleration. As with most Southern California sites, earthquake-related ground shaking could cause structural damage to on-site improvements; however, all structures within the site would be required to be constructed in conformance with the Uniform Building Code (UBC), with amendments, as adopted by the City of Oxnard. Similar to other Southern California sites that are located near earthquake sources, project compliance with the UBC would reduce effects associated with strong ground motion; although, the risk of damage would not be completely eliminated. However, the implementation of Uniform Building Code (UBC) standards for new construction is the procedure that is commonly applied in Southern California to mitigate earthquake shaking hazards to an acceptable level.

Liquefaction Potential

Liquefaction-induced settlements in granular, submerged artificial fill materials on the Specific Plan Area could be significant and somewhat proportionate to the fill thickness. However, native sand materials generally appear to be dense to very dense and therefore not likely susceptible to liquefaction. As individual building projects are developed within the RiverPark Specific Plan Area at later dates, further evaluation of the proposed development area for liquefaction potential would be necessary. If areas on any individual building sites are found to have liquefaction potential, development in those areas could result in a significant seismic hazard impact if estimated liquefaction induced differential settlements exceed design tolerances.

Lateral Spreading

Although existing data for the Specific Plan Area and adjacent properties do not indicate a potential for significant lateral movements in the native materials, there may be potential for lateral movements in the fills on the site, including the loose artificial fill materials in the stockpile area, the pit slope areas, and along the Hanson Aggregates' plant entrance road located adjacent to the northeastern side of the El Rio Detention Basin No. 2. Because the data obtained from borings excavated on nearby properties are limited in depth, frequency, and location to fully characterize site conditions, site-specific studies are recommended to further evaluate the potential for lateral movements. If susceptible areas are identified in subsequent studies, development in those areas could result in a significant geologic impact.

Seismically Induced Settlement

The loose to medium dense artificial fill materials found in the stockpile and plant areas of the RiverPark Area ‘B’ site, as well as the artificial fill pockets below the bottom of the El Rio Detention Basin No. 2, are susceptible to seismically induced settlement, while the potential for seismically induced settlement of the native sand and silty sand materials in the upper 10 to 20 feet appears to be minor. Development in those areas is susceptible to seismically induced settlement and could result in a significant impact.

Impacts Associated With Erosion

Once the proposed development areas of the site are built-out, the ground surface would be covered with non-erosive materials (i.e., pavement and structures) and vegetation that would minimize wind- and water-related erosion of the site. As a result, no significant post-development impacts associated with erosion from those areas would occur.

With respect to the open pits that would remain on the site after reclamation of RiverPark Area 'B', the approved reclamation plan for the site requires slope erosion protection for the excavation pits.[13] Slope erosion protection would consist of establishing grades adjacent to slope crest areas to divert runoff away from the pit slopes. In addition, as part of the project, the slopes of the pits are proposed to be planted with vegetation. As a result of these features of the Reclamation Plan, erosion impacts will not be significant.

Impacts Associated With Soil Instability

Other geotechnical hazards or concerns identified on the RiverPark Specific Plan Area include soil instability characterized by hydroconsolidation, consolidation, artificial fills, and expansive soils. If the proposed development would occur on unstable earth materials, a significant impact would result. Each of those geotechnical concerns is discussed below and the reader is referred to Appendix 4.3 of this EIR for more detailed discussion of on-site soils. As previously stated, the presence and extent of those geologic hazards on the site will be confirmed with specific geotechnical studies on the site as the project builds out.

Hydroconsolidation

Loose on-site artificial fills, such as those encountered in the stockpile and plant areas and along the plant entrance road, and located above the highest recent (i.e., since fill placement) groundwater level, may be susceptible to collapse (i.e., hydroconsolidation) settlement, which could result in a significant geologic impact unless mitigated.

Consolidation

Uncontrolled artificial fill materials typically are variable in density and are likely to compress upon loading, resulting in settlement. Artificial fill is likely within the upper few feet of soil in RiverPark Area 'A' and exists to a larger extent in the stockpile, plant, and plant entrance road areas of RiverPark Area 'B'. Unless mitigated, development on soils with consolidation potential would result in a significant impact.

Artificial Fill

Artificial fill materials were encountered in the stockpile and the plant areas of RiverPark Area 'B' to depths ranging from a few feet to at least 60 feet, and were found to be quite variable in thickness,

13 John Hecht, P.E., West Coast Environmental, correspondence to Hanson Aggregates, 28 November 2000.

density, and composition. Artificial fill materials between about 2 and 5 feet thick have been encountered in agricultural areas surrounding the Specific Plan Area and are anticipated on RiverPark Area 'A', which is under agricultural production. Artificial fill may also exist in other areas of the site. Uncontrolled artificial fills generally are considered to be unsuitable for support of structures and other improvements because of their variability. Therefore, unless mitigated, development on artificial fills would be unstable and would result in a significant geologic impact.

Expansive Soils

Clayey silt soils on the site may demonstrate a slight to moderate expansion potential. Development on expansive soils could result in a significant impact unless mitigated.

Impacts Associated With Slope Instability

Areas adjacent to the existing and proposed pit slopes may be impacted by: (1) gross instability of the pit slopes under static or seismic conditions, and/or (2) seismically induced lateral movements. Potentially impacted slope areas would consist of those areas where artificial fills are present along the slope face (Figure 4.3-2) or where the excavated pit slope gradient is steeper than about 2h:1v. For earthquake-induced lateral movements, potentially impacted areas may include RiverPark development areas and neighboring public and private properties adjacent to the pit slope crests.

Potential Instability of Artificial Fills

Artificial fill materials in slope areas are likely to be less stable than the indigenous native sand and gravel, particularly during seismic shaking. In general, the artificial fill materials discarded from the aggregate mining process and placed in the pit areas were typically finer-grained than native granular materials. Those materials may have been end-dumped or may have been placed hydraulically (i.e., under water) into pit areas to be reclaimed. Neither method of placement reliably results in a dense state; therefore, those materials are considered to be potentially much weaker than the underlying native, undisturbed alluvial materials.

Additionally, artificial fills placed without keying and benching into native materials and without compactive effort are vulnerable to settlement and lateral movements under static conditions (such as creep), as well as under seismic conditions. Settlement potential has been demonstrated for the fill slope located along the existing entrance road to the Hanson Aggregates plant (i.e., the fill extends from the southwestern slope of the Brigham pit to the southwestern property line). Settlement of the fill in that area has adversely impacted the entrance road pavement, which has suffered repeated episodes of cracking with vertical offset visible across the cracks.

Moreover, submerged fill materials likely would be susceptible to liquefaction and lateral movements during an earthquake. Such fill materials could fail, or flow, into the pit during an earthquake, thereby exposing an original cut slope surface of the denser native materials. In addition to the proposed development areas, there are slope stability concerns for existing pit slopes adjacent to public and private properties. For example, the 1977, 1988, 1989, and 1992 topographic maps suggest that the lower 30 feet or so of the northwestern half of the southeastern slope of the Small Woolsey Pit was excavated at about 1/2h:1v. A slope toe that steep is not likely to be stable under static and seismic conditions. Other oversteepened areas have been identified from the review of the aerial photographs and the 1977, 1988, 1989, 1992, and 1999 topographic maps, and are summarized in Appendix A of the July 2001 Fugro West, Inc. report in Appendix 4.3 of this EIR.

Slope Stability Evaluation

The evaluation of the pit slopes consisted of performing slope stability computations using the program XSTABL (Sharma, 2000) and estimating lateral movements using procedures developed by the Southern California Earthquake Center (SCEC) (2000). The slopes were modeled to approximate a configuration compatible with the reclamation and development plans and the topographic data compiled by Fugro West, Inc. (please see the July 2001 Fugro West, Inc report in Appendix 4.3 for a detailed description of the methods and assumptions used in the evaluation). The results of the evaluation of gross slope stability and lateral movements indicates that some remediation of the pit slopes is necessary to satisfy minimum factor of safety requirements being used by the City of Oxnard and to reduce lateral movements to an acceptable range for occupied structures in proposed development areas and on adjacent properties.

Based on the threshold of significance for slope stability identified above, significant impacts associated with the existing and proposed slopes consist of the following:

- Slopes or slope areas where artificial fills are suspect because artificial fills placed under water, by dumping, or without appropriate benching and compaction are likely to be vulnerable to instability, settlement, and to liquefaction and lateral movements during seismic shaking.
- Areas where native slopes are steeper than 2h:1v will not satisfy factor of safety criteria for static and seismic conditions and are steeper than the limits being used by the City of Oxnard.
- Seismically induced lateral movements within about 80 feet of the pit slope crests are estimated to be on the order of 2 inches or more. According to the SCEC (2000), occupied

structures are not recommended in areas with estimated lateral movements greater than 2 inches.

Specific significant slope stability impacts for the pit slopes on RiverPark Area 'B' include the following:

- Brigham Pit Southwestern Slope/Western Corner: Existing artificial fills are subject to settlement and lateral movements.
- Brigham Pit Southeastern End of Southwestern Slope: Existing artificial fills are subject to settlement and lateral movements. Does not meet minimum factor of safety requirements.
- Brigham Pit Southeastern Slope: Does not meet minimum factor of safety requirements.
- Brigham Pit Northwestern End: Steep portions of slope do not meet minimum factor of safety requirements.
- Vickers Pit Northwestern End: Existing artificial fills subject to settlement and lateral movements.
- Vickers Pit North End of Northwestern Slope: Existing artificial fills subject to settlement and lateral movements.
- Vickers Pit Southeastern Slope: Does not meet minimum factor of safety requirements.
- Small Woolsey Pit Northern End: Existing artificial fills subject to settlement and lateral movements; steep portions of slope do not meet minimum factor of safety requirements.
- Small Woolsey Pit Northwestern Corner: Hydraulic fill subject to liquefaction and lateral movement.
- Small Woolsey Pit Southeastern Slope: Does not meet minimum factor of safety requirements.
- Small Woolsey Pit Eastern Corner: Existing artificial fills subject to settlement and lateral movements.
- Large Woolsey Pit Southwestern End: Existing artificial fills subject to settlement and lateral movements.
- Large Woolsey Pit Southwestern Half of Southeastern Slope: Existing artificial fills subject to settlement and lateral movements.
- Large Woolsey Pit Northeastern Half of Southeastern Slope: Existing artificial fills subject to settlement and lateral movements, slope does not meet minimum factor of safety requirements.
- Large Woolsey Pit Northeastern Slope: Does not meet minimum factor of safety requirements.
- Large Woolsey Pit Northwestern Slope: Steep portions of slope do not meet minimum factor of safety requirements and artificial fills subject to settlement and lateral movement.

Impacts to Mineral Resources

Loss of a Known Mineral Resource of Regional and State Value

In 1982, the State Mining and Geology Board designated sand and gravel resource areas in Ventura County as resource areas of regional significance, including those resources on the RiverPark Specific

Plan Area. Mining operations on RiverPark Area 'B' are complete and further resource recovery on the site is considered infeasible. Development of RiverPark Area 'A' would result in the loss of approximately 2.2 million tons of aggregate resources,[14] and the loss of a mineral resource of regional and state significance.

In evaluating the site's mineral value against the feasibility of mining its resources, the following conclusions have been made:

- The mineral resources on the Specific Plan Area have been estimated to be less than 1.5 million cubic yards, or approximately 2.2 million tons when taking required setbacks into account.[15]
- The site is within a portion of Ventura County that already imports 100 percent of its aggregate materials, so the local construction industry would not be affected in the near- or long-term.
- The cost of permitting an aggregate resource of such a relatively small quantity is not cost effective.
- The resources have no net value due to the costs associated with the environmental review of permitting of the mining operations.
- Although the site has mineral resources, development of a mining operation would generate significant scenic impacts. The site lies adjacent to and below the Ventura Freeway and any mining operations would be visible to thousands of daily commuters.
- Because the site is located at the junction of two major highways, it has high value for urban development.

While the City's *General Plan* has designated RiverPark Area 'A' for urban use since 1986 and mining of the site would be economically infeasible due to its location, expected poor quality of materials recovered, and other environmental factors, the loss of this mineral resource is a significant impact.

Loss of Availability of a Locally-Important Mineral Resource Recovery Site

Neither the City's *General Plan* nor other land use plans reviewed for this impact analysis have identified the RiverPark Specific Plan Area as a "locally-important mineral resource recovery site."

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[14] Ingrid Elsel, West Coast Environmental, correspondence to Impact Sciences, Inc., 22 February 2001. This quantity is based on the assumptions that the top 3 to 5 feet of material on RiverPark Area 'A' are comprised of agricultural soil and have no value as aggregate, and that only 50 percent of the materials excavated would have commercial value. This amount does not take into account material lost as a result of required setbacks from roadways and adjacent public and private uses.

[15] Section 81078-9.6.2 of the Ventura County Zoning Ordinance states that no processing equipment or facilities shall be permanently located and no mining shall occur within the following horizontal setbacks:

a. 100 feet of any dedicated public street or highway unless the Public Works Agency determines that a lesser distance would be acceptable.
b. 100 feet of any dwelling not accessory to the project, unless a waiver is signed pursuant to Section 8107-9.6.13 allowing the setback to be reduced. In no case shall permanent processing facilities, equipment, or mining be located less than 50 feet from said structure.
c. 200 feet from any institution, school, or other building used as a place of public assemblage, unless a waiver signed pursuant to Section 8107.9.6.12 allowing the setback to be reduced. In no case shall permanent processing facilities, equipment, or mining be located less than 100 feet from said structures.

Therefore, the RiverPark Project will not result in a significant impact in relation to loss of a locally important mineral resource recovery site.

Project Consistency with City's Mineral Resource Management Policies

Consistency with the City's *General Plan* Development Policies relative to mineral resources is addressed below. The RiverPark Project includes a proposed general plan amendment that would modify Policies 31 and 32. With this amendment, the text shown in italics below would be added.

C. Policies[16]

10. The City shall adequately control any mining activities and comment on the appropriateness of mining activities conducted under the authority of adjacent jurisdictions.

No mining activities are proposed on the RiverPark Specific Plan Area; however, the project would be consistent with this policy because extraction of the mineral resources in RiverPark Area 'A' is not feasible or economical. The City of Oxnard, based on the findings of this EIR and related studies, will ultimately determine whether mining activities should occur on RiverPark Area 'A'.

30. The City should promote the efficient reclamation of mineral resources areas.

RiverPark Area 'B' mining area is covered by a County-approved reclamation plan; however, the City will be asked to consider a new reclamation plan as part of the proposed RiverPark Specific Plan. The existing reclamation plan will remain in effect until the City of Oxnard and the State Department of Mine Reclamation approve the proposed reclamation plan. Although RiverPark Area 'B' is within unincorporated Ventura County, the City of Oxnard will ultimately determine whether the proposed reclamation plan and associated re-use of RiverPark Area 'B' represent an "efficient reclamation" of the site. As such, the project is consistent with this policy.

31. The management of mineral resource extraction activities which are currently outside the City limits but within the City's Sphere of *Influence may come under the jurisdiction of the City where the City determines that annexation best serves the community's interests.* Consideration of urban land uses in these areas *may be made if such uses will* occur only after or *in conjunction with completion* of reclamation requirements.

The project is consistent with this policy. RiverPark Area 'B' is currently outside City limits, but is within the City's Sphere of Influence. This area will be annexed to the City of Oxnard as part of this

16 Policies 1 through 9, and 11 though 29 of the General Plan's Development Policies do not apply to mineral resources.

project. A new reclamation plan is currently under consideration and subject to approval by the City of Oxnard. Once approved, the City will ensure implementation of the reclamation plan.

32. In MRZ-2 Areas designated for land uses other than low density residential, industrial, open space and agriculture, the extraction of mineral resources prior to permitting development should be encouraged *where such extraction is feasible and economical.*

Although RiverPark Area 'A' is in an MRZ-2 area, the City's *General Plan* designates RiverPark Area 'A' as committed to urban development. Furthermore, the location and configuration of the RiverPark Area 'A' site, as well as other environmentally-related issues (e.g., poor aggregate quality, high water table, required setbacks from adjacent properties, etc.), make aggregate mining on the site uneconomical.[17] Therefore, while it is the City's policy to encourage mineral extraction where possible, prior land use decisions and the physical restrictions of the site make mining impractical.

33. The approval of new development adjacent to an operational aggregate mine or MRZ-2 area should be designed and conditioned to avoid impinging on mining operations.

Mining operations on RiverPark Area 'B' have ceased and no other mining operations occur adjacent to in or in close proximity to the RiverPark Specific Plan Area. Furthermore, neither RiverPark Area 'A' or adjacent properties are considered developable for aggregate mining (see discussion below regarding the mining potential of RiverPark Area 'A'). Therefore, the project proposes no new development adjacent to actively mined areas or adjacent to a developable MRZ-2 area. As a result, this policy does not apply to the proposed project.

34. New mining operations should be designed to produce the least amount of incompatibility with surrounding, existing land uses (i.e., limited hours of operation, pest control, etc.).

35. Specialized production techniques, such as slant drilling, shall be required to limit the land area committed to oil recovery and to extract such resources adjacent to existing development.

No new mining operations are proposed as part of this project; therefore, no further analysis relative to Policies 34 and 35 is required.

Project Consistency with SMARA Section 2763(a)

Section 2763(a) of SMARA states:

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17 Ingrid Elsel, West Coast Environmental, correspondence to Impact Sciences, Inc., 22 February 2001.

> *Lead agency land use decisions involving areas designated as being of regional significance shall be in accordance with the lead agency's mineral resource management policies and shall also, in balancing mineral values against alternative land uses, consider the importance of these minerals to their market region as a whole and not just their importance to the lead agency's area of jurisdiction.*

As discussed previously, the project is consistent with the City's mineral resource management policies. No further mining operations are proposed on RiverPark Area 'B' because it is no longer economically feasible to mine the site (see discussion above) and the remaining resources would not make significant contributions to the aggregate market. The volume of recoverable aggregate material on RiverPark Area 'A' that is designated as a regionally significant resource area is estimated to be 1.5 million cubic yards, or approximately 2.2 million tons.[18] This calculation assumes that the site has 5 feet of overburden or topsoil, and that mining of the site would be practical only to within 10 feet of historic high groundwater.[19] It was also conservatively assumed that 50 percent of the material that would be recovered on the site would be usable for building materials (actual recovery at the Hanson Aggregates plant site on RiverPark Area 'B' has been between 25 and 50 percent). This amount does not take into account material lost as a result of setback requirements for the site that would reduce the mineable area. Material quality at RiverPark Area 'A' also is a concern because mining operations on western RiverPark Area 'B' (closest to RiverPark Area 'A') encountered a higher clay content than the plant and pit perimeter areas, particularly at shallow depths near the river levee, which suggests that mineral resource quality on RiverPark Area 'A' could be poor.

As of 1997/98, Western Ventura County has been importing 100 percent of its aggregate materials from Simi Valley, Los Angeles County, and Kern County, resulting in additional transportation costs and associated environmental effects. While the benefits of producing this material on the RiverPark Specific Plan Area would be high, especially in a region that has no current production, the environmental and economic costs of producing the material (in addition to mining restrictions on depth and width of operations along the river and competition from highly productive cash crops[20]) can be great. As of 1997/98, no mining permits have been issued in the Western Ventura County PCR for environmental reasons.[21] For those same reasons, no permits are expected to be issued in the foreseeable future, and there is no guarantee that a mining permit for RiverPark Area 'A' (if filed) would be approved. Furthermore, the quality of the aggregate materials underlying the site is questionable given the higher clay content at shallow depths found near the river levee on the western portion of

18 Ingrid Elsel, West Coast Environmental, correspondence to Impact Sciences, Inc., 22 February 2001.

19 As previously mentioned, groundwater levels encountered in previous subsurface explorations in the RiverPark Area 'A' area have ranged from 11 to 30 feet below ground surface.

20 Ventura County General Plan, Resources Appendix, p. 40.

21 Ingrid Elsel, West Coast Environmental, correspondence to Impact Sciences, Inc., 21 February 2001.

RiverPark Area 'B', adjacent to the RiverPark Area 'A' site. Therefore, it is not cost-effective to seek a permit to mine an aggregate resource in an environmentally-sensitive area, especially one that is believed to be of a relatively small quantity and of an unknown quality.

Cumulative Impacts

Cumulative Geotechnical Impacts

Geotechnical impacts are site specific in nature and each development site is subject to, at minimum, uniform site development and construction standards relative to seismic and other geologic conditions that are prevalent within the region. Because the development of each site in the project area would have to be consistent with City of Oxnard requirements and the adopted Uniform Building Code as it pertains to protection against known geologic hazards, impacts of cumulative development would be less than significant given known geologic considerations.

Slope stability impacts associated with RiverPark Area 'B' are isolated to that Specific Plan Area Therefore, as with the proposed project, cumulative development projects are expected to be consistent with jurisdictional requirements relative to geologic hazards and there would be no significant cumulative development impacts relative to slope stability.

Cumulative Impacts to Mineral Resources

The State has determined that the annual per capita consumption rate for aggregates in the Western Ventura County Production Consumption Region (PCR) is 11.0 tons. Based upon population projections developed by the County, the Southern California Association of Governments, and the State Department of Finance, the Western PCR population is expected to exceed 700,000 by the year 2030; therefore, the cumulative demand for aggregates is 310 million tons by 2030.[22]

The State has estimated that the Western Ventura County PCR has a total remaining aggregate supply of 4,077 million tons[23]; however, given the mining restrictions[24] currently in place in the County, only

22 Ventura County General Plan, Resources Appendix, as amended July 12, 1994, p. 31. The County's General Plan Resources Appendix (page 31) acknowledges that this projection is a very gross measure of demand and has an inherent degree of uncertainty due to recessions, natural disasters, etc.

23 Ingrid Elsel, West Coast Environmental, correspondence to Impact Sciences, Inc., 21 February 2001.

24 The County has set depth/profile standards for aggregate excavations in order to stabilize the riverbed and to promote downstream transport of sediment from the upper reaches of the river to the degraded lower reaches of the river. (Ventura County General Plan Goals, Policies and Programs, amended July 18, 1995, p. 16.)

an estimated 200 million tons of this amount is potentially available for this PCR.[25] As a result, there is a significant shortfall of aggregate available in this PCR to meet the projected demand and, as mentioned, as of 1997/98, 100 percent of the aggregate for this PCR are imported from other areas. RiverPark Area 'A' has a mineral resource potential of 2.2 million tons; however, because mineral resource extraction on the site is unlikely due to environmental and economic constraints, the loss of this resource is not realistically expected to exacerbate the shortfall of aggregate resources in this PCR.

It should be noted, however, that the adjacent Simi PCR has surplus resources beyond the projected demand within its own region. Given its proximity to the Western Ventura County PCR, it is a likely alternative source of aggregates. Additional sources of supply may also include surplus aggregates in the Saugus Newhall PCR[26] and Kern County. Given those potential sources of supply, the cumulative impact of population growth in the Western Ventura County PCR on aggregate resources would be less than significant.

MITIGATION MEASURES

General Site Preparation Measures

4.3-1 During the initial stage of the mitigation of unstable soil units during site preparation, organic material and vegetation, hazardous materials, old foundations from demolished structures, underground utilities, debris, unsuitable fill materials, and/or deleterious materials shall be stripped, removed, and wasted from construction areas by the contractor. Abandoned below-grade or underground structures, such as wells, cesspools, pipelines, mining equipment, old foundations, etc., that are not relocated prior to grading shall be removed or treated in a manner prescribed by the controlling governmental agencies.

4.3-2 Grading shall be performed by the contractor in accordance with the City of Oxnard grading ordinance and Chapter 33 of the Uniform Building Code (1997).

4.3-3 Artificial fill materials should be removed down to competent native earth materials. The excavation bottom should be observed by the Geotechnical Engineer or Geologist prior to processing the excavation bottom and placing backfill. Once the bottom has been accepted by the Geotechnical Engineer, the exposed surface shall be scarified by the contractor to a depth

25 Ventura County General Plan, Resources Appendix, as amended July 12, 1994, p. 38. This amount is based on the fact that, in 1990, only 4.1 percent of the total deposits in heavily mined sectors at that time were actually available for extraction. This factor is acknowledged as being conservative (p. 39).

26 Ventura County General Plan, Resources Appendix, p. 40.

of 8 inches, aerated or moistened as required to bring the soil to within 2 percent of optimum moisture content, and compacted to a minimum of 93 percent relative compaction, according to ASTM D1557. If the excavation bottom requires stabilization or if scarification is likely to induce pumping conditions, scarification of the excavation bottoms near the groundwater level may be waived by the Geotechnical Engineer.

4.3-4 To reduce the potential for unstable subgrade conditions in excavations near the groundwater level during grading, the contractor shall consider using equipment that imparts light loads to the subgrade in order to help avert "pumping" subgrade conditions. Should groundwater be encountered during excavation, the dewatering contractor shall be responsible for the design of the dewatering system. The design shall prevent piping and soil migration, or erosion, and shall draw down the water level a minimum of 5 feet below any point along the excavation bottom. The Geotechnical Engineer shall provide on-site inspection to ensure that this measure is implemented.

4.3-5 To mitigate unstable subgrade which may develop during grading, special stabilization measures shall be implemented by the contractor and as specified by the Geotechnical Engineer. If soft or pumping subgrade is encountered during grading (e.g., excavation bottom near groundwater level), one of the following measures shall be employed to provide a firm and unyielding subgrade surface:

- use of a geosynthetic fabric, such as Mirafi 600X, or equivalent, placed beneath a minimum one foot lift of gravel or rock fill,
- working of rock fill into clayey subgrade soils, or
- working cement into sandy subgrade or lime into clayey subgrade.

Any special subgrade stabilization measures shall be approved and observed by the Geotechnical Engineer.

4.3-6 During the mitigation of unstable soil units during site preparation at the Specific Plan Area on-site materials used as backfill shall be free of organic material, hazardous material, debris, or any other deleterious materials. Backfill in deep removal areas (i.e., exceeding 25 feet in depth) shall consist of granular materials in the lower 50 feet. Clay (i.e., potentially expansive materials) shall not be placed by the contractor in the upper 5 feet (with respect to proposed grade) of backfill.

4.3-7 During the backfilling of excavations resulting from artificial fill removal or placement of fill in slope areas, rock or gravel less than 4 inches in maximum dimension may be utilized by the contractor in the fill, provided those materials are not placed in concentrated pockets and provided they have sufficient sand-sized material surrounding the individual rock fragments. Fill material shall not contain more than 20 percent by weight of particle sizes larger than 2 inches.

4.3-8 During the backfilling of excavations resulting from artificial fill removal or placement of fill in slope areas, imported fill that may be used on the site by the contractor shall be equal to or better than on-site materials in gradation, strength, and expansive characteristics. Imported fill material shall be evaluated by the Geotechnical Engineer to verify suitability for its intended use.

4.3-9 During the backfilling of excavations resulting from artificial fill removal or placement of fill in slope areas, fill materials shall be placed by the contractor in layers that do not exceed 8 inches in loose thickness. Each layer shall be spread evenly, moisture-conditioned to within 2 percent above or below optimum moisture content, and processed and compacted to obtain a uniformly dense layer. The fill shall be placed and compacted on near-horizontal planes to a minimum of 93 percent (relative compaction) of the maximum dry density as determined from ASTM D1557.

Mitigation for Construction Impacts

4.3-10 To mitigate potential unstable slope conditions during grading, temporary excavation slopes shall be continuously monitored by the contractor and loose or unstable soil masses shall be removed immediately. The contractor shall ensure that temporary slopes and excavations shall conform to federal Occupational Safety and Health (OSHA) regulations and California Division of Occupational Safety and Health (DOSH) regulations, and other applicable local ordinances and building codes, as required. The contractor should be responsible for the design and construction of shoring systems such that the construction will not result in settlement or instability of nearby structures. Stockpiled materials or equipment shall not be placed within a distance from the slope crest on RiverPark Area ‘B’ equal to the height of the slope.

4.3-11 To mitigate potential unstable slope conditions during grading, the contractor shall ensure that runoff is directed away from temporary slopes and shall not be allowed to flow across slope faces and excavations. Provisions shall be made by the contractor for collecting and pumping seepage or water out of excavations.

4.3-12 To mitigate potential unstable slope conditions during grading, impacts from rapid recharge during dewatering operations shall be reduced by the contractor by discharging pumped water to more distant basins, such as the Large Woolsey pit, or the UWCD El Rio Spreading Grounds.

4.3-13 To mitigate the potential for surface erosion during grading, sandbags, desilting basins, and other temporary surface drainage devices shall be used by the contractor to control water runoff. Wind erosion shall be controlled with the use of water trucks and silt fences, as necessary.

Mitigation for Impacts Associated with Seismic Hazards

4.3-14 Prior to final design, a site-specific study for the different development types (i.e., residential, commercial, and educational) and with a specificity commensurate with individual structure use, size, and footprint, shall be completed to estimate the potential for liquefaction-induced differential settlement in submerged native earth materials. Although a significant impact from liquefaction is not anticipated in native materials on the RiverPark Specific Plan Area, site-specific evaluations of that potential shall be performed within footprint areas of future commercial and educational facilities to verify that there is no significant impact within specific building areas. Measures to reduce the liquefaction hazard, if any, to less than significant, shall be included in the study. These studies shall require review and approval by the City of Oxnard.

4.3-15 To mitigate the potential for liquefaction–induced settlement in existing artificial fills those materials shall be removed and replaced by the contractor as compacted fill placed in accordance with the “General Site Preparation Measures,” presented previously.

4.3-16 To mitigate the potential for lateral spreading in existing artificial fill materials, one of the following two methods shall be implemented: 1) removal and compaction of the fill materials in accordance with the “General Site Preparation Measures,” presented previously, or 2) ground-improvement (such as deep dynamic compaction or vibroflotation) in granular fill materials. Site-specific studies shall be conducted by the Geotechnical Engineer to further evaluate the potential for lateral movements in native alluvial materials at the site and to select the appropriate treatment (i.e., ground improvement) method and develop specifications for that treatment, where necessary.

4.3-17 To mitigate the potential for seismically induced settlement in the loose artificial fill materials on the site, the contractor shall remove existing artificial fill materials down to competent native materials and replace those materials as a controlled, compacted fill, in accordance with the "General Site Preparation Measures," presented previously. The slight potential for seismically induced settlement in the native sand and sandy silt materials either shall be mitigated through foundation design of the proposed structures or shall be (at least) partially mitigated with the overexcavation and recompaction of surficial soils in building areas, so that the resulting potential can be tolerated in the structure design.

Mitigation for Impacts Associated with Soil Instability

Most of the following potential significant impacts associated with soil instability (with the exception of expansive soils) result from the presence of loose, uncontrolled artificial fills on the RiverPark Specific Plan Area. Those significant impacts shall be mitigated by the removal and replacement of those materials as a controlled, compacted fill.

Hydroconsolidation

4.3-18 To mitigate potentially significant impacts associated with hydroconsolidation, artificial fill materials shall be removed and replaced by the contractor as a controlled, compacted fill in accordance with the "General Site Preparation Measures," presented previously, or as specified by the Geotechnical Engineer.

Consolidation

4.3-19 To mitigate potentially significant impacts associated with consolidation and compressibility, existing artificial fill materials shall be removed and replaced by the contractor as a controlled, compacted fill in accordance with the "General Site Preparation Measures," presented previously.

Artificial Fill

4.3-20 To mitigate potentially significant impacts associated with the variability of existing artificial fill materials, artificial fill materials on the Specific Plan Area shall be removed and replaced as controlled, compacted fill in accordance with the "General Site Preparation Measures," presented previously.

4.3-21 During the mitigation of existing artificial fill in the stockpile area, removals are anticipated to extend below the current groundwater level and may require dewatering by the contractor. Removal bottoms shall be observed by the Geotechnical Engineer or Geologist. If fill remains in the excavation bottom, the excavation shall be deepened by the contractor until the fill is completely removed. The bottom shall be firm or dense and unyielding. If unstable conditions are encountered, the excavation bottom shall be stabilized. Fills in these areas shall be placed by the contractor in accordance with the "General Site Preparation Measures," presented previously.

4.3-22 To mitigate potentially significant impacts associated with artificial fill in the plant area on RiverPark Area 'B', the entire plant area shall be overexcavated by the contractor to a minimum depth of 20 feet below existing grade, or 5 feet below proposed grade, whichever is deeper. The bottom of excavation shall be observed by the Geotechnical Engineer or Geologist prior to processing. Areas where artificial fill is exposed in the bottom will require deeper removals, so that the existing artificial fill is completely removed. The depth of removal and fills in those areas shall be determined by the Geotechnical Engineer or Geologist.

4.3-23 To mitigate potentially significant impacts associated with artificial fill and to reduce differential settlements in the fill, areas adjacent to deepened removals shall be excavated by the contractor to a depth such that the variation in fill thickness does not exceed 20 percent. Alternatively, areas where the fill thickness variation exceeds 20 percent shall be designated by the Geotechnical Engineer for nonstructural uses. Additionally, deep removals (e.g., in stockpile area) shall overlap a sufficient distance into the adjacent constructed fill to ensure that existing artificial fill is removed and the compactness of the fill being placed is consistent throughout.

Expansive Soils

4.3-24 To mitigate potentially significant impacts associated with expansive soils, foundations bearing on soils with a low to moderate shall be designed with deeper perimeter footing embedment to act as a barrier for moisture migration under interior floor slabs; low to moderately expansive foundation subgrade shall be pre-moistened to reduce the potential and the effects of shrink/swell cycles beneath the slabs; and slabs shall be thickened and contain additional reinforcement, as specified by the Geotechnical Engineer.

Mitigation for Impacts Associated with Slope Instability

General Background Discussion

The existing pit slopes can be mitigated to effect the minimum factor of safety requirements being used by the City of Oxnard for gross stability (these measures are described below). Additionally, reducing lateral movements of occupied structures near pit slope crests is feasible by establishing structure setback criteria and, where setbacks currently are not sufficient, reducing lateral movements by providing lateral reinforcement to the upper portion of the pit slopes.

Laying back existing slopes to 2- to 2-1/2h:1v increases the factor of safety under static and pseudostatic conditions to exceed 1.5 and 1.1, respectively, and reduces the potential for relict unstable fills in the slopes. However, there are some areas where laying back the entire slope to effect a more stable configuration is not viable because of the proximity of the slope crest to either the proposed development or adjacent private or public properties. For those areas, reinforcing the upper half of the slope by providing additional lateral resistance from, for example, drilled piers, tiebacks, or minipiles would decrease the lateral movements behind the slope crest.

Additionally, artificial fills should be removed and replaced with compacted fills that are keyed and benched into native, undisturbed slope materials. On the basis of the slope evaluations and the objectives of the Slope Reclamation Plan, potential slope envelopes have been developed for the pit slope areas to improve slope stability and to reduce lateral movements to suggested tolerable values in accordance with the City of Oxnard and the SCEC (2000).

The following recommended mitigation measures for stabilizing the existing pit slopes as shown on the proposed Slope Reclamation Plan are based on the following assumptions:

- The water level in the pits will recede to below 45 feet above msl to allow conventional (dry) grading methods.
- The exposed benches at about that elevation (i.e., 45 feet above msl) comprise native, undisturbed materials.
- Native materials adjacent to all slope areas consist of granular soils.
- Artificial fills will be removed in the course of implementing the Slope Reclamation Plan.

4.3-25 Prior to grading on RiverPark Area 'B', Mitigation Measures 26 through 38 shall include a performance standard specified by the Geotechnical Engineer, as well as an alternative measure in the event unanticipated slope conditions prevail (see Table 1 in the July 2001 Fugro West, Inc. report in Appendix 4.3 of this EIR).

4.3-26 To mitigate potentially significant impacts associated with instability of the Brigham Pit - Southwestern Slope: The extensive artificial fills along the northwestern two-thirds of the southwestern slope of the Brigham pit shall be removed by the contractor down to a native bench that appears between elevations of about 40 and 50 feet above msl on the 1977, 1988, 1989, and 1992 topographic maps. Placement of fill above the exposed native bench shall be in accordance with conventional grading methods, including the keying and benching of fill materials into dense, undisturbed native materials. Undisturbed native slopes below that bench that are found to be steeper than a 2- to 2-1/2h:1v gradient shall be laid back to inclinations of 2- to 2-1/2h:1v. (The top of the reconstructed fill slope is approximately shown as the brown envelope on Figure 4.3-2, Slope Reclamation Plan.)

4.3-27 To mitigate potentially significant impacts associated with instability of the Brigham Pit - Western Corner: The deep fill at the southeastern quarter of the stockpile area will require removals by the contractor to below El. 10 feet, thereby necessitating local dewatering. The fill removal on the Brigham pit side of that deep removal shall extend down to native materials, which, according to the 1977, 1988, 1989, and 1992 topographic maps, are likely between elevations of about 40 and 50 feet above msl. The fill on the native bench shall be placed according to conventional grading methods, including keying and benching of the fill into dense undisturbed native materials. (The toe of the pitward fill slope is approximately shown as the green envelope on Figure 4.3-2, Slope Reclamation Plan.)

4.3-28 To mitigate potentially significant impacts associated with instability of the Brigham Pit - Southeastern Slope and Southern Corner: The southeastern slope of the Brigham pit should be laid back by the contractor at about 2- to 2-1/2h:1v, as shown by the blue envelope on Figure 4.3-2, Slope Reclamation Plan. The proposed East Detention Basin will be set back a horizontal distance of about 40 feet from the top of the southeastern slope of the Brigham pit. To accommodate that setback, the existing basin (i.e., El Rio Drainage Basin No. 1) slope should be shifted to the southeast by constructing a fill over the existing basin slope face.

The southern corner (i.e., the southeastern end of the southwestern slope) also shall be laid back to inclinations of 2- to 2-1/2h:1v and existing artificial fill in the upper portion of the slope shall be removed and replaced with compacted fill. (The top of the combination slope is shown as the brown/blue envelope on Figure 4.3-2, Slope Reclamation Plan.)

4.3-29 To mitigate potentially significant impacts associated with instability of the Brigham Pit - Northwestern End: The slope along the northwestern end of the Brigham pit may be reconstructed pitward by the contractor by placing fill over a native bench suggested in the 1977, 1988, 1989, and 1992 topographic maps, at an elevation of about 40 to 50 feet above msl. Placement of fill above the native bench shall be in accordance with conventional grading methods, including the keying and benching of fill materials into dense, undisturbed native materials. Undisturbed native slopes below the conventionally-constructed fill slope that are found to be steeper than a 2- to 2-1/2h:1v gradient shall be laid back to inclinations of 2- to 2-1/2h:1v. (The toe of the pitward fill is approximately shown as the green envelope on Figure 4.3-2, Slope Reclamation Plan.)

4.3-30 To mitigate potentially significant impacts associated with instability of the Vickers Pit - Northwestern End: The existing fill peninsula in the Vickers pit will be largely removed to generate fill materials for the overall project. For pitward slope construction, existing fill materials at the northwestern end of the Vickers pit shall be removed by the contractor down to a native bench suggested by the 1977, 1988, 1989, and 1992 topographic maps at about El. 45 to 50 feet within a distance of roughly 100 feet from the current slope crest in the plant area. The steep slope below the native bench shall be laid back to about 2-1/2h:1v.

To extend the development area further pitward (i.e., greater than about 100 feet beyond the current slope crest), the removals shall extend down to about El. 40 to 50 feet, and 10 feet above the groundwater level. That area shall be densified by the contractor using DDC to a horizontal distance pitward of about 2 to 3 times the thickness of the fill being densified, followed by laying back the pitward edge of the improved zone at about 2- to 2-1/2h:1v. The fill placed above the densified layer shall be constructed at 2- to 2-1/2h:1v with conventional grading methods. (The toe of the pitward fill slope is approximately shown as the magenta envelope on Figure 4.3-2, Slope Reclamation Plan.)

The fill placed above the densified layer of hydraulically placed fill along the northern third of the existing fill peninsula (i.e., the north end of northwestern slope of the Vickers pit) shall be mechanically reinforced with geogrid, metal strips, or cement to limit the pitward extension of the overall slope toe (comprising DDC-densified materials), because beyond the slope envelope shown on the Slope Reclamation Plan, the submerged fill thickness likely exceeds the "reach" of the DDC treatment. (This slope area is approximated by the lavender envelope on Figure 4.3-2, Slope Reclamation Plan.)

4.3-31 To mitigate potentially significant impacts associated with instability of the Vickers Pit - Southeastern Slope: The southeastern slope of the Vickers pit shall be laid back to 2- to 2-1/2h:1v. (The resulting slope crest area is approximated by the blue envelope on the Figure 4.3-2, Slope Reclamation Plan.) The proposed East Detention Basin will be set back a horizontal distance of about 40 feet from the top of the southeastern slope of the Vickers pit. To accommodate that setback, the existing basin (i.e., El Rio Drainage Basin No. 1) slope shall be shifted to the southeast by constructing a fill over the existing basin slope face.

4.3-32 To mitigate potentially significant impacts associated with instability of the Small Woolsey Pit - Northern End: The northern end of the Small Woolsey pit shall be laid back at about 2- to 2-1/2h:1v by the contractor. Artificial fill materials above an elevation of about 50 feet above msl, where according to the 1977, 1988, 1989, and 1992 topographic maps, native materials are likely to be encountered, shall be removed and replaced as a compacted fill. This removal shall continue northwestward and northward so that existing artificial fill is removed in the proposed detention basin area and along the northern end of the RiverPark development. (The slope crest area is approximated by the blue/brown envelope on Figure 4.3-2, Slope Reclamation Plan.)

4.3-33 To mitigate potentially significant impacts associated with instability of the Small Woolsey Pit - Northwestern Corner: The pitward extension of the development at the northwestern corner of the Small Woolsey pit consists of the underwater construction of a rock dike up to an elevation of a few feet above the groundwater level (El. 45 feet), followed by the placement of hydraulic (granular) fill against the rock dike. The submerged hydraulically placed fill shall then be densified by the contractor using vibroflotation, followed by the construction of a mechanically reinforced fill (e.g., with geogrid, metal strips, or cement) above the densified surface, using conventional grading methods. If the groundwater recedes below an elevation of about 45 feet, DDC may be used as an alternative method to densify the hydraulically placed fill. (This slope area is the dark blue envelope on Figure 4.3-2, Slope Reclamation Plan.)

4.3-34 To mitigate potentially significant impacts associated with instability of the Small Woolsey Pit - Southeastern Slope: Portions of the southeastern slope of the Small Woolsey pit are steeper than 2h:1v. For example, the lower 30 feet of the slope below the currently exposed bench at about El. 45 feet at the northwestern end of the pit (formerly an access road to the pit bottom), appears to be about 1/2h:1v according to the 1992 topographic map. Alternatives for increasing the stability and increasing the distance between the slope crest and the property line (and to reduce lateral movements at the property line) along the southeastern slope of the Small Woolsey Pit consist of the following:

- Laying the steep slope areas back to 2- to 2-1/2h:1v, and/or
- Reinforcing the upper portion of the slope with drilled piers to reduce lateral movements at the property line or adjacent occupied structures to less than 2 inches.

The artificial fills placed during the slope repair at the eastern corner (i.e., the southern end of the southeastern slope) of the Small Woolsey pit shall be removed down to native materials. That slope area shall be reconstructed at a gradient of 2- to 2-1/2h:1v using conventional grading methods. Reinforcing the upper portion of the reconstructed slope using, for example, drilled piers may be necessary to reduce lateral movements at the property line or adjacent occupied structures to less than 2 inches.

4.3-35 To mitigate potentially significant impacts associated with instability of the Large Woolsey Pit - Northern Detention Basin Over Southwestern End: Artificial fill at the southwestern end of the Large Woolsey pit shall be removed down to about El. 40 by the contractor, where according to the 1977, 1988, 1989, and 1992 topographic maps, native materials are likely to be exposed. The pit fill slope shall be constructed at about 2-1/2h:1v. For granular soil conditions, the proposed detention basin shall be set back at least 20 feet from the top of the northwestern slope of the Small Woolsey pit and the top of the proposed southwestern fill slope of the Large Woolsey pit. Fill materials shall comprise on-site sand and gravelly sand so that seepage forces are not introduced near the pit slopes in the event of a leak in the basin liner. (The slope crest area is approximated by the brown envelope on Figure 4.3-2, Slope Reclamation Plan.)

4.3-36 To mitigate potentially significant impacts associated with instability of the Large Woolsey Pit - Southeastern Slope: The northeastern half of the southeastern slope of the Large Woolsey pit (i.e., where the toe extends to about El. 10 feet) shall be laid back by the contractor at about 2- to 2-1/2h:1v to expose undisturbed native materials. Additionally, the artificial fill placed during the slope repair at the northeastern end of the southeastern slope shall be removed down to native, undisturbed slope materials. Some areas may require lateral reinforcement of the upper portion of the slope to keep lateral movements below significant threshold levels for adjacent occupied structures.

To increase the setback behind the slope crest to the property line (thereby decreasing lateral movements at the property line), the southwestern half of the southeastern slope (i.e., where the pit bottom is between about El. 35 and 40 feet), can be reconstructed about 20 to 30 feet pitward on the broad native bench exposed at about El. 45 feet. The slope may be constructed using conventional grading methods at a gradient of about 2- to 2-1/2h:1v. (The approximate slope crest envelope to effect the increased setback along the southwestern portion of the southeastern slope is shown in brown on Figure 4.3-2, Slope Reclamation Plan.)

4.3-37 To mitigate potentially significant impacts associated with instability of the Large Woolsey Pit - Northeastern Slope: The northeastern slope shall be laid back by the contractor at 2- to 2-1/2h:1v. (The slope crest area for the 2- to 2-1/2h:1v configuration is approximated by the blue envelope on Figure 4.3-2, Slope Reclamation Plan.) In some areas of the northeastern slope, the 2- to 2-1/2h:1v inclination may encroach the County of Ventura drainage easement. If that encroachment is not acceptable, the upper portion of the slope may be reinforced with drilled piers to increase the factor of safety of a 2h:1v gradient to an acceptable level.

4.3-38 To mitigate potentially significant impacts associated with instability of the Large Woolsey Pit - Northwestern Slope: The northwestern pit slope that parallels the Santa Clara River levee shall be laid back at 2- to 2-1/2h:1v by the contractor. The southwestern third of thee slope shall be trimmed back by lowering the existing gradient so that native materials are exposed and the resulting gradient is 2- 2-1/2h:1v or flatter. (The slope crest area is approximated by the blue envelope on Figure 4.3-2, Slope Reclamation Plan.)

4.3-39 To mitigate potentially significant impacts associated with unstable slopes, prior to preparation of site grading plans for the slope areas, site-specific geotechnical studies shall be performed by the Geotechnical Engineer. Those studies shall evaluate the uniformity of slope materials and verify that benches (where keyways are planned for reconstructed slopes) consist of native, undisturbed materials. Areas between proposed dry swales and the slope faces shall be explored to verify the absence of continuous clay layers. These studies shall require review and approval by the City of Oxnard.

4.3-40 To mitigate potentially significant impacts associated with unstable slopes, the following elements shall be included in the design-level study of the pit slopes by the Geotechnical Engineer:

- An evaluation of the composition and strength of slope materials, consisting of incremental penetration resistance tests, the continuous characterization of overall slope materials, and laboratory tests appropriate for the material composition, grain-size, and sample quality. Continuous characterization of slope materials may be achieved by excavating a trench above the full, unsubmerged upper portion of the pit slope face.
- The extent of artificial fills shall be explored further by reconnaissance mapping and trenching.

These studies shall require review and approval by the City of Oxnard.

Once additional field data and material samples are collected and evaluated, higher strengths for slope materials may be justifiable. If higher strength values result, reevaluation of slope stability and lateral movements should reduce the lateral movements estimated herein and increase the factors of safety for gross stability under static and pseudostatic conditions.

Mitigation for Lateral Movement

4.3-41 Seismically induced lateral movements should decrease with increasing distance from the top of the slope. Occupied structures shall be located on the final site map at least 80 feet beyond the top of unreinforced slopes to limit seismically induced lateral movements to less than 2 inches (as recommended by the SCEC [2000]). Setback distances from slope crests to occupied structures (or property lines, where applicable) may be reduced to about 30 feet in areas where the upper slope is laterally reinforced with drilled piers or other means such as tiebacks or minipiles. The Geotechnical Engineer shall confirm setback distances prior to final map approval.

4.3-42 Dry swales, detention basins, greenbelt areas, and streets may be located on the final site map within 80 feet of the slope crest provided those improvements can potentially accommodate several inches of seismically induced lateral movement. Alternatively, damage to dry swales and streets from seismically induced lateral movements can be subsequently repaired. The Geotechnical Engineer shall confirm final locations of these facilities prior to final map approval.

4.3-43 To mitigate potentially significant impacts associated with lateral movement, utility lines shall be placed by the contractor on opposite side (from slope crest) of streets planned within 50 to 100 feet of the pit slope crests to maximize the setback and shall have flexible connections able to withstand movements of at least 2 inches.

4.3-44 To mitigate potentially significant impacts associated with lateral movement, private properties located adjacent to slope crests shall be inventoried by the Geotechnical Engineer for occupied structures,[27] so that setback criteria can be satisfied and/or owners apprised of the risk of earthquake-induced lateral movements to their structures and improvements (whether occupied or not). The Geotechnical Engineer shall provide documentation of this inventory to the City of Oxnard. Any notifications to adjacent owners of the risk of earthquake-induced lateral movements shall be as specified by the City Attorney.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

No unavoidable significant geotechnical or geologic hazard impacts will result from the RiverPark Project.

The loss of access to approximately 2.2 million tons of mineral resources underlying the agricultural soils in RiverPark Area ‘A’ is considered an unavoidable significant impact of the RiverPark Project.

27 The California Division of Mines and Geology (CDMG, 1977) defines an occupied structure as one that is occupied at least 2,000 person-hours per year.

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4.4 BIOLOGICAL RESOURCES

INTRODUCTION

This section addresses the biological resources found on and in the vicinity of the Specific Plan Area and the potential for the RiverPark Project to directly or indirectly impact individuals, populations, and species of native wildlife and plants. The majority of the Specific Plan Area has historically been used for mining and farming. As a result, the Specific Plan Area is not in its natural condition and most vegetation other than the agricultural crops are species typically associated with heavily disturbed areas and habitats. Wildlife is mostly associated with the open water in the mine pits. The indirect impact analysis is primarily directed toward possible effects on the adjacent Santa Clara River, including the riparian vegetation and wildlife and fish species.

METHODS

Literature Review

In order to identify special-status plant and animal species (those species considered rare, threatened, endangered, or otherwise sensitive by various state and federal resource agencies) known to occur in the vicinity of the Specific Plan area, the May 2001 update of the California Natural Diversity Data Base (CNDDB) and the 2001 California Native Plant Society (CNPS) electronic data base (for the Oxnard, Camarillo, Santa Paula, and Saticoy, California USGS 7.5-minute quadrangle maps) were reviewed. Other data sources reviewed included: (1) the Federal Register listing package for each federally-listed endangered or threatened species potentially occurring on the Specific Plan area or in the project vicinity; (2) literature pertaining to habitat requirements of special-status species potentially occurring on the Specific Plan Area; (3) the *Natural Environmental Study Report* (1999), *Biological Assessment* (2000), and the Supplemental Draft EIR/EIS for the Highway 101 Santa Clara River Bridge Replacement project as prepared by the Office of Environmental Planning of the California Department of Transportation; and (4) plant and animal distribution data contained in Hall (1981); Garrett and Dunn (1981); Holland (1986); Munz (1974); Stebbins (1985); Skinner and Pavlik (1994); and Williams (1986).

Sources used to determine the sensitivity status of biological resources include: Plants – CNPS (2000), CDFG (2000), U.S. Fish and Wildlife Service (USFWS 1993 and 1996), CNDDB (2000), and CNPS (Skinner and Pavlik 1994-1999); Wildlife – USFWS (1994 and 1996), CDFG (2000), CNDDB (2000), Williams (1986), and Remsen (1978); and Habitats – CNDDB (2000).

Field Surveys

A general field survey of the Specific Plan Area was conducted by an Impact Sciences botanist and zoologist on January 24, 2001 for the purpose of characterizing on-site habitats and evaluating their potential to support special-status species. This initial visit was also used to assess the need to conduct focused surveys for potentially occurring threatened and endangered animal and plant species. A second survey was conducted on the site on February 6, 2001 for the purpose of mapping vegetation communities. Following these initial surveys, focused surveys for special status plant and wildlife were conducted by qualified biologists under contract to Impact Sciences.

During the initial site visit and subsequent follow-up survey by the botanist and zoologist, direct observations of reptiles, birds, and mammal species were recorded, as were wildlife signs such as scat and tracks. In addition to species observed, detected, or expected use of the site, other wildlife use potential was evaluated from habitat analysis, combined with known habitat preferences of locally occurring wildlife species. Plants and wildlife observed or expected to occur on the Specific Plan Area are discussed further below.

Names used to describe plant communities are based on the nomenclature of R.F. Holland (1986) where applicable. Common plant names are taken from the following sources: J.C. Hickman, (1993); P.A. Munz, (1974); and L. Abrams, (1923 and 1944). References used for the nomenclature of wildlife include the following: M.R. Jennings (1983); the American Ornithologists' Union (1983 and supplemental) for birds; and J.K. Jones *et al.* (1982) for mammals.

ENVIRONMENTAL SETTING

General Site Description

The Specific Plan Area, located on the Oxnard and Saticoy, California USGS 7.5-minute quadrangle maps, consists of, and is surrounded by, a mixture of urban, rural, and industrial development, as well as agricultural use (row crops) and open space, including the Santa Clara River. Greater detail on the characteristics of the Specific Plan Area and surrounding areas is provided in Section 2.0, Environmental Setting, of this Draft EIR.

Topography on the Specific Plan Area is essentially flat, typical of the alluvial deposits of the Oxnard Plain. Elevation within the site ranges from approximately 80 feet to about 105 feet above sea level. The

Specific Plan Area includes a total area of approximately 701 acres. Details of the proposed Specific Plan are provided in Section 3.0, Project Description, of this Draft EIR.

For planning and descriptive purposes for this section, the Specific Plan Area is divided into two planning areas. As illustrated in Section 2.0, the southern portion of the Specific Plan Area, located within the City of Oxnard, is referred to as “RiverPark Area ‘A’” and consists of approximately 269 acres of the proposed Specific Plan Area. The remaining 432 acres of the Specific Plan Area are currently located outside of the City and is referred to as “RiverPark Area ‘B’.” Section 2.0 provides a detailed description of existing land uses. This section focuses on the biological characteristics of each planning area.

RiverPark Area ‘A’ supports no native plant communities within its boundaries. Vegetation within this area is limited to agricultural crops, landscaping associated with existing development, and non-native weedy species in disturbed (ruderal) areas. RiverPark Area ‘B’ includes a sand and gravel mine (which includes scattered patches of disturbed open space), a small amount of active agricultural land and the El Rio Retention Basins No. 1 and 2. The mine site includes mine pits containing exposed groundwater, currently proving resting and limited foraging area for a number of waterfowl and other water-associated bird species. Though not included within the Specific Plan Area, the predominant biological feature in the vicinity is the Santa Clara River, situated immediately north and west of the project area.

General Description of Adjacent River Habitat

In the vicinity of the Specific Plan Area, the Santa Clara River is characterized as relatively open, with scattered mature trees near the outer banks and scattered patches of riparian scrub regrowth along the river bottom that is scoured away during large storm events every few years. During most of the year, in this area, the river exists as one or more small meandering braided channels. After the winter rains, these channels typically narrow into shallow water flows and that are exposed to direct sunlight throughout the day, with subsequent warming of the water, which decreases dissolved oxygen concentrations. Several fish and wildlife species associated with the river are considered to be of special status including southern steelhead, arroyo chub, and tidewater gobi, which have adapted to the seasonal and daily changing conditions of the river.

Common Plant Communities

Due to the intensive agricultural and industrial uses of the site, very few naturally occurring plant communities exist on the RiverPark Specific Plan Area. Agricultural uses in RiverPark Areas ‘A’ and ‘B’ include intense management to maximize crops and control weeds. Vegetation on the mine site has been disturbed by the historical mining activity and by the ongoing reclamation activities.

During the field investigations conducted in January 2001, six primary plant communities were identified and characterized. Only one of these plant assemblages (mule fat scrub) conforms to descriptions for native communities developed by Holland (1986 Plant species nomenclature follows Hickman (1993). Plant communities present on site include: (1) agricultural fields, (2) ruderal, (3) mule fat scrub, (4) curly dock-forb, (5) tree windrows, and (6) southern willow scrub. Although not a plant community, the on-site mine pits also provide habitat values and are also addressed in this section.

The plant communities vary in structure and quality on the site due to disturbance history and edaphic factors (such as topography, soil type, soil moisture, and aspect). Each of the communities are described below. The remaining areas on the Specific Plan Area include existing development, two retention basins, and the three mine pits. The general relationships between these areas are illustrated on Figure 4.4-1.

The following descriptions also include discussion of the biological values for each area. The relative biological values of each of these areas has been evaluated by considering such factors as disturbance history, biological diversity, importance to particular plant and wildlife species, uniqueness or sensitivity, how the community functions in the surrounding ecosystem, and the presence of special-status resources (discussed later in this section).

Agricultural Fields

Approximately 155 acres of agricultural fields occur within Area ‘A’. During the time of the field surveys, a portion of El Rio Retention Basin No. 2 was also under agricultural production as was the property located between Basin No. 2 and Vineyard Avenue. A total of 209 acres of the Specific Plan Area is under cultivation. All of the agricultural fields on site are managed to eliminate deleterious weed and insect species in order to maximize crop production. The resulting produce in the agricultural fields provides forage for some wildlife species, especially small herbivorous mammals and granivorous birds. However, because of the regular exposure to disturbance activities, the near absence of native vegetation, the lack of structure for cover or nesting, and the utilization of chemical products in these areas, the agricultural fields on the Specific Plan Area are considered to be of low biological value.

FIGURE 4.4-1

Vegetation Communities

Ruderal

Approximately 181 acres of ruderal vegetation is present within RiverPark Areas 'A' and 'B'. These areas have been exposed to regular disturbance including mowing and disking for weed abatement. Predominant plant species present are non-native and include brome grasses (*Bromus* spp.), wild oats (*Avena* sp.), filaree (*Erodium* sp.), and short-pod mustard (*Hirschfeldia incana*). Although open disturbed areas such as these do provide a seed base for small rodents and birds, and ultimately foraging for birds of prey (red-tailed hawk, American kestrel, and others identified in the Wildlife Section), this habitat is generally considered to be of low biological value as it provides little to no cover or nesting habitat.

Mule Fat Scrub

Approximately 69 acres of mule fat (*Baccharis salicifolia*) scrub occurs on the project site in RiverPark Area 'B'. The predominant concentrations of mule fat scrub occur on the banks of the mine pits. Additional scattered patches occur in RiverPark Area 'B' on the mine property in areas that have not recently been cleared. This community is typically a tall, semi-woody, and herbaceous riparian scrub with low species diversity. Two somewhat distinct mule fat scrub phases are found on-site; areas that are maintained with frequent mowing around active work sites and areas associated with the shoreline of the mine pits. Mule fat scrub in the more disturbed areas include non-native species such as tree tobacco (*Nicotiana glauca*), short-pod mustard, and scattered brome grasses. The upper shorelines support nearly monotypic stands of mule fat. A patch near the northern property boundary appears to be less frequently maintained and supports a higher native plant species diversity, including blue elderberry (*Sambucus mexicana*) and arroyo willow (*Salix lasiolepis*).

During periods when the vegetation gets relatively tall, some perching and structure for cover is available for small bird species. However, due to the level of disturbance adjacent to this community, as well as the regular removal of most of this vegetation, the mule fat scrub on the site provides limited resources (i.e., nesting, food, cover) for wildlife occurring in the vicinity of the Specific Plan Area. As such, the mule fat scrub on the site is considered to be of relatively low biological value.

Curly dock-Forb

This vegetation association is dominated by a nearly monotypic stand of curly dock (*Rumex crispus*) and occurs along the edges of the mine pits and within a small catchment area south of the Large Woolsey Mine Pit. This community is limited to areas with high moisture content and totals approximately 18 acres. Due to the limited diversity of plant species and structure, in addition to its exposure to regular disturbance associated with mining and pond maintenance activities, this habitat is considered to be of relatively low biological value.

Tree Windrows

Tree windrows occur in three locations within the Specific Plan Area and total approximately 8 acres. A windrow on the boundary of RiverPark Areas 'A' and 'B' consists of non-native eucalyptus (*Eucalyptus* sp.). A small patch of eucalyptus has also been planted as landscaping adjacent to buildings associated with the mine site. In addition, Cottonwood trees (*Populus fremontii*) have been planted as a windrow between the access road to the mine site. Cottonwood trees are most commonly associated with riparian habitat. However, these cottonwoods were planted as a windrow and as such, do not provide quality habitat functions.

Windrows often provide nesting opportunities for a few locally occurring bird species, such as red-tailed hawks. However, because of the linear nature of these trees, the lack of a herbacious understory and cover, and close juxtaposition with development and human activities, the biological value of the windrows present on site is relatively low.

Southern Willow Scrub

Southern willow scrub scattered on the Specific Plan Area total 3 acres. This vegetation community is characterized by cottonwood (*Populus fremontii*) and several species of willow (*Salix* spp.). Once extensive along the major rivers of coastal southern California, this community has been greatly reduced by urban expansion, flood control, and channel improvements. While this community has a potential for high biological value, it has been greatly impacted by adjacent land use. Because of the fragmented and disturbed nature of this community on the site, it is considered to be of low biological value.

Mine Pits

The existing mine pits, occupying approximately 213 acres of the Specific Plan Area were originally excavated to depths of approximately 90 to 100 feet. The slopes of the mine pits are regularly maintained. Maintenance activities include removal of both bank and submerged vegetation.After mining activities concluded and regional groundwater management plans became effective, the pits were partially filled with groundwater. As discussed in more detail in Section 4.5, Water Resources, the level of the water in the mine pits generally corresponds to the level of groundwater in the area, which is the Montalvo Forebay of the Oxnard Aquifer. Water levels fluctuate on a seasonal basis in response to rainfall, artificial recharge, and to a large extent, groundwater pumping patterns. More than 88 percent of annual precipitation falls in November through March. The largest amount of artificial recharge in the Montalvo Forebay also occur within this time frame. As a result, water levels in the vicinity of the Specific Plan Area have risen more than 25 feet during winter and spring months of some wet years. Seasonal water level highs typically occur between February and May, with most highs recorded in April near the RiverPark Specific Plan Area. If local artificial recharge persists into the dry summer months, seasonal highs can occur as late as July. Seasonal water level lows are typically recorded between October and December.

Over the last 20 years, the water table beneath the RiverPark Specific Plan Area has fluctuated more than 120 feet, ranging from a low of approximately –47 feet msl to a high of approximately 76 feet msl. When using an average ground surface elevation of 85 feet msl, the depth to water has varied from less than 10 feet deep to more than 130 feet beneath the project site. Since the beginning of the current wet cycle in 1992-93, water levels within the Specific Plan Area have fluctuated between 40 feet msl and 75 feet msl. The water levels mine pits were between 40 and 50 feet msl in October/November 2000. Based on an average ground surface elevation of 85 feet msl, the water surface at this point in time was approximately 25 to 35 feet below the level of the surrounding ground.

Because the gravel pits have been excavated below the average groundwater elevation in the area, the water table is exposed most of the time in one or more of the three gravel pits. Over the last 20 years, the water table was exposed in some portion of the pits for approximately 86 percent of the time. Only during the dry period from late 1989 to early 1992 was the water table consistently below the lowest elevation of the pits. The uneven topography of the pit bottoms and, to some extent, the slope of the water table, results in a surface area exposure of the water table that varies with water level fluctuations.

Water-associated bird species, ducks (e.g., northern pintail, northern shoveller, lesser scaup), great blue heron, and double-crested cormorant, are attracted to the pits for foraging and resting; several were observed during site surveys. The pits also provide stopover opportunities for migrating waterfowl. Conversely, because the pits are not interconnected with any natural surface water source and because they support little submerged vegetation, only limited habitat is provided to locally occurring aquatic wildlife species. Further, during the site surveys, no animal sign (tracks, scat, etc.) was detected that would indicate the pits serve as a water source to terrestrial species. This is understandable in that the water surface in the pits is 25 to 35 feet below the surface of the surrounding ground. The lack of submerged and shoreline vegetation limits the breeding possibilities for native amphibian species. Based on the existing conditions of the pits, these areas are considered to be of relatively low biological value.

Wildlife

Although the site's plant communities are limited in area and are subjected to chronic human disturbance, they provide some suitable habitat for several locally occurring wildlife species. While a few species of wildlife are entirely dependent on a single plant community, most species require a mosaic of plant communities to provide the necessary shelter, water, food, and other life cycle resources. Though this mosaic is not necessarily developed within the Specific Plan Area, proximity to the Santa Clara River makes it subject to periodic use by local wildlife species.

Common wildlife species observed, detected, or having a high potential to occur within the project boundary and its vicinity, including the Santa Clara River, are discussed in the following text. Special-status wildlife species known to occur, or having a potential for occurrence within or in the immediate vicinity of the project site, are discussed later in this section.

Fish

Due to the artificial nature of the mine pits, and their lack of connectivity to the nearby river, native fish species would not naturally occur in these bodies of water. Employees of Hanson Aggregates have mentioned the presence of fish in the gravel pits. A single small bullhead (*Ameiurus* spp.) or catfish (*Ictalurus* spp.) was observed being captured by a bird during the January 2001 site survey. It is possible that local residents have released sport and/or aquarium fish into these ponds. Fish species most commonly released into impoundments in the region include large mouth bass (*Micropterus salmoides*), sunfish (*Pomoxis* spp.), goldfish (*Carassius auratus*), common carp (*Cyprinus carpio*), bullhead/catfish, and mosquitofish (*Gambusia affinis*). All of these species are introduced into California and have a potential to occur in the pits.

Amphibians and Reptiles

Several common amphibian and reptile species are known to occur in the project vicinity and could potentially utilize on-site resources. Though the mine pits provide a perennial source of water on site, they do not provide high quality habitat for most amphibian species known to occur in the region. Because ongoing maintenance activities include the clearing of vegetation in and around the edges of the ponds, the resulting condition would leave amphibian eggs, larvae, and adults exposed to predation. As such, few are expected to regularly occur in association with the ponds. However, some species have adapted to urban and agricultural setting and could occur in low numbers within the fragmented plant association on the site. These include the black-bellied slender salamander (*Batrachoseps nigriventris*), Pacific chorus frog (*Pseudacris regilla*), California chorus frog (*Pseudacris cadavarina*), and western toad (*Bufo boreas*).

Several commonly found reptile species also have the potential to occur on the Specific Plan Area. Western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), southern alligator lizard (*Elgaria multicarinatus*), gopher snake (*Pituophis melanoleucus*), common kingsnake (*Lampropeltis getulus*), chaparral whipsnake (*Masticophis lateralis lateralis*), and southern Pacific rattlesnake (*Crotalus viridis helleri*) are all common species known to occur in the area. However, overall populations of reptiles are expected to be relatively low throughout the Specific Plan Area due to the high level of existing human disturbance.

Birds

Despite the disturbed nature of the site, a variety of more urban-adapted bird species are expected to occur on the project site, especially because of the variety of habitat adjacent to the site in association with the Santa Clara River. As previously mentioned, several species were observed on the pits. Direct observations of upland avifauna during site surveys include American crow (*Corvus brachyrhynchos*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), blue-gray gnatcatcher (*Polioptila caerulea*), lesser nighthawk (*Chordeiles acutipennis*), white-crowned sparrow (*Zonotrichia leucophrys*), and savannah sparrow (*Passerculus sandwichensis*). Common water-associated species near the mine pits were more numerous and included American coot (*Fulica americana*), Forster's tern (*Sterna forsteri*), pied-billed grebe (*Podilymbus podiceps*), western grebe (*Aechmophorus occidentalis*), northern pintail (*Anas acuta*), northern shoveler (*Anas. clypeata*), lesser scaup (*Aythya affinis*), and bufflehead (*Bucephala albeola*). Great blue heron (*Ardea herodias*) and double-crested cormorant (*Phalacrocorax auritus*) were also observed. These two species are considered to be of special-status by California Department of Fish and Game (CDFG). As such, they are discussed in more detail in the Special-Status Biological Resources portion of this section.

Raptors (birds of prey) are another group of bird species expected to periodically utilize the site. The agricultural fields and other open areas on the site provide a forage base for many raptor species occurring in the region. Turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), and three falcons, peregrine, merlin, and American kestrel (*Falco peregrinus, F. columbarius and F. sparverius,* respectively) were observed soaring and/or foraging over and near the site during the field surveys. Other raptor species including great horned owl (*Bubo virginianus*), barn owl (*Tyto alba*), red-shouldered hawk (*Buteo lineatus*), white-tailed kite (*Elanus leucurus*), and Cooper's hawk (*Accipiter cooperii*) are expected to occur in the area. White-tailed kite and Cooper's hawk are special-status species and are discussed in more detail in the Special-Status Biological Resources portion of this section.

Twenty-two species of birds have been observed nesting or with young on the site (see the RiverPark Bird survey in Appendix 4.4). The mine pits are important for post-breeding and rearing habitat for a number of waterfowl and shorebirds.

Mammals

A variety of mammal species occur in the vicinity of the Specific Plan Area. Several larger species including mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), and possibly common gray fox (*Urocyon cinereoargenteus*) are expected to regularly occur within the Santa Clara River corridor adjacent to the Specific Plan Area. This is also the case with several medium-sized to small mammal species, including Virginia opossum (*Didelphis virginiana*), common raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and long-tailed weasel (*Mustela frenata*). Though most of the site is fenced where it borders the river corridor, each of these species has a potential to periodically occur on the Specific Plan Area while in search of food. However, it is not expected that these animals permanently reside within the boundaries of the Specific Plan Area.

Common mammals either directly observed or for which diagnostic sign was detected during surveys of the Specific Plan Area include California ground squirrel (*Spermophilus beecheyi*), desert cottontail (*Sylvilagus auduboni*), and Botta's pocket gopher (*Thomomys bottae*). Additional small mammals that potentially occur on site include ornate shrew (*Sorex ornatus*), broad-footed mole (*Scapanus latimanus*), western harvest mouse (*Reithrodontomys megalotis*), deer mouse (*Peromyscus maniculatus*), California mouse (*Peromyscus californicus*), brush mouse (*Peromyscus boylii*), and California vole (*Microtus californicus*). Non-native mammal species including house mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), and black rat (*R. rattus*) also commonly occur near agricultural and other areas subject to regular human disturbance and may occur on site.

Common bat species with a potential to forage and temporarily roost on site include western pipistrelle (*Pipistrellus hesperus*), Brazilian free-tailed bat (*Tadarida brasiliensis*), big brown bat (*Eptesicus fuscus*) and California myotis (*Myotis californicus*). Bat species considered to be of special-status potentially occur in the vicinity and are discussed in more detail below.

Special-Status Biological Resources

The following discussion describes plant and wildlife species present or potentially occurring within and immediately adjacent to the Specific Plan Area that have been afforded special recognition by federal, state, and/or local resource agencies or jurisdictions, or recognized resource conservation organizations. Wildlife movement corridors are also discussed.

Special-Status Plant Species

Plant species that are classified as state or federally endangered or threatened, proposed for listing as endangered or threatened, are candidate species for listing, or are considered federal species of concern are considered to be of special status. Plants included on Lists 1 and 2 of the California Native Plant Society (CNPS) inventory are also considered to be of special status. All special-status plant species potentially occurring in the Specific Plan vicinity are listed in Table 4.4-1, Special-Status Plant Species Potentially Occurs within the RiverPark Specific Plan Area. No species listed has a high potential of occurring on site; special-status plant species were identified on the site during the focused plant surveys. A focused study for special-status plant species was conducted by Anuja Parikh and Nathan Gale, for Impact Sciences, during the spring and summer, 2001. No sensitive-status plant species were found or are expected to be found on the site. This report is located in Appendix 4.4.

Special-Status Wildlife Species

Special-status wildlife includes those species that are state or federally listed as Threatened or Endangered, have been proposed or are Candidates Species for listing as Threatened or Endangered, or are considered state Species of Special Concern, CDFG Special Animals, and/or California Fully Protected Species. Species once considered sensitive under a classification system since discarded by USFWS have become known as federal species of concern. Though this is not a legal status and is not meant to imply protection under the Endangered Species Act, potential impacts to these species are still evaluated under CEQA for the purposes of this report.

The potential for special-status wildlife species to occur within the Specific Plan Area is based on documented geographic distribution, suitability of on-site habitats, and occurrence records of species in the project vicinity. All species occurring or potentially occurring, or for which focused survey efforts were conducted on the site, are listed below in Table 4.4-2. Those species observed or with a high potential of occurring are discussed in more detail below.

Table 4.4-1
Special-Status Plant Species Potentially Occurring in the RiverPark Specific Plan Vicinity

Scientific and Common Names	Status			Habitat	Growth Form (Blooming)	Occurrence Potential
	Federal	State	CNPS			
Astragalus pycnostachyus var. *lanosissimus* Ventura marsh milk-vetch	FPE	CE	1B	Coastal salt marsh, near seeps, on sandy bluffs.	PH (July-October)	*Not expected*: Suitable habitat not present on site.
Calochortus plummerae Plummer's mariposa lily	SOC	None	1B	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland/granitic rocky soil	PH (May – July)	*Not expected;* Suitable habitat not present on site
Chaenactis glabriuscula var. *orcuttiana* Orcutt's pincushion	--	--	1B	Coastal bluff scrub (sandy), coastal dunes	AH (January-August)	*Not expected;* Suitable soils not present on site.
Cordylanthus maritimus ssp. *maritimus* Salt marsh bird's-beak	FE	CE	1B	Coastal dunes, marshes and swamps (coastal salt)	AH (h) (May-October)	*Not expected*: Suitable habitat not present on site.
Delphinium parryi ssp. *Blochmaniae* Dune larkspur	SOC	None	1B	Chaparral (maritime), coastal dunes	PH (April – May)	*Not expected;* Suitable habitat not present on site
Dudleya blochmaniae ssp. *blochmaniae* Blachman's dudleya	SOC	None	1B	Coastal bluff scrub, chaparral, coastal scrub, valley and foothill grassland/rocky, often clay or serpentinite	PH (April – June)	*Not expected;* Suitable habitat not present on site
Dudley verityi Verity's dudleya	SOC	None	1B	Chaparral, cismontane woodland, coastal scrub/volcanic	PH (May-June)	*Not expected; Suitable habitat not present on site*
Eriogonum crocatum Conejo buckwheat	SOC	CR	1B	Chaparral, coastal scrub, valley and foothill grassland/Conejo volcanic outcrops, rocky	PH (April – July)	*Not expected;* Suitable habitat not present on site
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	SOC	None	1B	Coastal salt marshes and swamps; playas; vernal pools	AH (February-June)	*Low to Moderate Potential*: Ideal habitat not present, but species known from atypical habitats.
Senecio aphanactis Rayless ragwort	None	None	2	Chaparral, cismontane woodland, coastal scrub/alkaline	AH (January – April)	*Not expected;* Suitable habitat not present on site

Key:
Status:
Federal: FE = Federal Endangered Species; SOC = Species of Concern
State: CE = State Endangered Species; CR = California Rare
CNPS: 1B = Plants rare and endangered in California and elsewhere
Growth Form:
AH = Annual Herb *h = hemi-parasitic*
PH = Perennial Herb
FPE = Federally Proposed Endangered

Table 4.4-2
Special-Status Wildlife Species Observed or Potentially Occurring on the Project Site [1]

Scientific Name [2]	Common Name [2]	Status State/Fed	Occurrence Potential
INVERTEBRATES			
Cicindela hirticollis gravida	Sandy beach tiger beetle	-/-	*Not expected*; suitable habitat not present on site.
Euphydryas editha quino	Monarch butterfly winter roosts	Sensitive Habitat (S3)/--	*Not expected*; suitable habitat not present on site.
FISH			
Catostomus santaanae	Santa Ana sucker	CSC/---	*Not expected;* known to occur adjacent to site in Santa Clara River, but no connectivity with on-site mine pits.
Eucyglobius newberryi	Tidewater gobi	---/FE	*Not expected*; known to occur adjacent to site in Santa Clara River, but no connectivity with on-site mine pits.
Gila orcutti	Arroyo chub	CSC/[FSC]	*Not expected*; known to occur adjacent to site in Santa Clara River, but no connectivity with on-site mine pits.
Oncorhynchus mykiss irideus	Southern Steelhead	---/FE	*Not expected;* known to occur adjacent to site in Santa Clara River, but no connectivity with on-site mine pits.
AMPHIBIANS			
Taricha torosa torosa	Coast range newt	CSC/---	*Not expected*; no suitable habitat present on site.
Bufo microscaphus californicus	Arroyo toad	CSC/FE	*Not expected*; suitable habitat not present on site.
Rana aurora draytonii	California red-legged frog	CSC/FE	*Not expected*; Survey was not conducted but very marginal *Rana* habitat is present in the mine pits, because of highly fluctuating water levels and little to no vegetation in shallow water due to these fluctuations. Also very little organic matter on the bottom of the shallows. No recent documented occurrences in area.
Scaphiopus hammondii	Western spadefoot	CSC/[FSC]	*Not expected*; no suitable habitat present on site.
REPTILES			
Clemmys marmorata pallida	Southwestern pond turtle	CSC/[FSC]	*Low potential*; marginally suitable habitat associated with mine pits, but maintenance practices may preclude presence.
Phrynosoma coronatum blainvillei	San Diego horned lizard	CSC/[FSC]	*Low potential*: known to occur in area, but habitat on site is highly disturbed.
Cnemidophorus tigris multiscutatus	Coastal western whiptail	---/[FSC]	*Not expected*; no suitable habitat present on site.
Salvadora hexalepis virgultea	Coast patch-nosed snake	CSC/[FSC]	*Not expected*; no suitable habitat present on site.
Thamnophis hammondii	Two-striped garter snake	CSC/[FSC]	*Low potential*; specimens may occur, however, there is very limited habitat for prey species associated with mine pits.

Scientific Name [2]	Common Name [2]	Status State/Fed	Occurrence Potential
BIRDS			
Charadrius alexandrinus nivosus	Western snowy plover	CSC /FT	*Not expected*; no suitable nesting or foraging habitat present on site.
Sterna antillarum browni	California least tern	CE/FE	*Not expected*; transient birds may use the site on a limited basis, but no suitable nesting or foraging habitat present on site.
Elanus leucurus	White-tailed kite	CFP /---	*Moderate potential as transients for foraging*; marginal nesting and suitable foraging habitat present
Circus cyaneus	Northern harrier	CSC/---	*Moderate potential*; may forage as transients on site
Accipiter striatus	Sharp-shinned hawk	CSC/---	*Low potential*; may occasionally forage as seasonal migrant
Accipiter cooperii	Cooper's hawk	CSC/---	*Moderate potential as transients for foraging*; no suitable nesting on site, but suitable foraging habitat present
Buteo regalis	Ferruginous hawk (wintering)	CSC/[FSC]	*Low potential*; may occasionally forage as rare seasonal migrant
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	CE/--	*Not expected*; no suitable nesting or foraging habitat present on site.
Speotyto cunicularia	Burrowing owl	CSC/[FSC]	*Low potential*; limited habitat present; no recent records in area.
Empidonax traillii extimus	Southwestern willow flycatcher	CE/FE	*Not expected*: No individuals were observed during the Greaves survey for least Bells vireo and little suitable habitat is present on site
Eremophila alpestris actia	California horned lark	CSC/---	*Not expected*: no suitable habitat on site
Riparia riparia	Bank swallow	CT/--	*Not expected*: no suitable habitat on site
Lanius ludovicianus	Loggerhead shrike	CSC/[FSC]	*Low potential*; very limited nesting habitat on site, possibly occurs as infrequent forager.
Vireo bellii pusillus	Least Bell's vireo	CE/FE	*Not expected*: known to occur within Santa Clara River.
Dendroica petechia	Yellow warbler	CSC/---	*Not expected*: no suitable nesting habitat on site
Icteria virens	Yellow-breasted chat	CSC/---	*Not expected*: no suitable nesting habitat on site
Passerculus sandwichensis beldingi	Belding's savannah sparrow	CE/--	*Not expected*; no suitable nesting or foraging habitat present on site.
Polioptila californica californica	Coastal California gnatcatcher	---/FT	*Not expected*; no suitable nesting or foraging habitat present on site.

Scientific Name [2]	Common Name [2]	Status State/Fed	Occurrence Potential
MAMMALS[3]			
Myotis evotis	Long-eared myotis	---/[FSC]	*Low potential;* may forage over the site, however roost habitat and hibernacula is scarce on the site
Myotis leibii	Small-footed myotis	---/[FSC]	*Low potential;* may forage over the site, however roost habitat and hibernacula is scarce on the site
Myotis thysanodes	Fringed myotis	---/[FSC]	*Low potential;* may forage over the site, however roost habitat and hibernacula is scarce on the site
Myotis yumanensis	Yuma myotis	CSC/[FSC]	*Low potential;* may forage over the site, however roost habitat and hibernacula is scarce on the site
Antrozous pallidus	Pallid bat	CSC/---	*Low potential;* may forage over the site, however roost habitat and hibernacula is scarce on the site
Eumops perotis	Greater western mastiff-bat	CSC/[FSC]	*Low potential;* may forage over the site, however roost habitat and hibernacula is scarce on the site
Lepus californicus	San Diego black-tailed jackrabbit	CSC/[FSC]	*Not expected*: no suitable habitat on site
Neotoma lepida intermedia	San Diego desert woodrat	CSC/[FSC]	*Not expected*: no suitable habitat on site

KEY:

1 Field surveys conducted by Impact Sciences in January and February 2001 at the RiverPark Specific Plan Area.

2 Scientific and common names are American Fisheries Society (Jennings (1983) for amphibians and reptiles, American Ornithologist's Union (1983, plus supplements in 1985, 1987, 1989, and 1993) for birds, and Jones et al. (1992) for mammals.

3 Focused bat surveys were not conducted as suitable roosting habitat and hibernacula were not present on the site. The potential for each species to forage on site is discussed in the table.

Federal

FE: Federally-listed endangered species.
FT: Federally-listed threatened species
[FSC]: Federal Species of Concern

State

CE: State-listed endangered species
CT: State-listed threatened species
CSC: CDFG Species of Special Concern
CFP: CDFG "Fully-protected" species
CSA: CDFG Species List
S3: Restricted Range, Rare in state of California

Special-Status Species Where Surveys Were Conducted

Least Bell's vireo (*Vireo bellii pusillus*); *Federally-Listed Endangered Species, State-Listed Endangered Species.* Least Bell's vireos are most frequently located in riparian vegetation with significant tree cover in conjunction with a well-developed shrub understory. Common understory shrubs and young trees include narrow-leafed willow (*Salix exigua*), mule fat, and young arroyo willow. No least Bell's vireo nests were found on the site. Adults and young were sighted in the river corridor adjacent to the site, approximately 80 to 100 meters west of the existing levee.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*); *Federally-Listed Endangered Species, State-Listed Endangered Species.* The Southwestern willow flycatcher occupies similar habitat to the least Bell's vireo. No southwestern willow flycatchers were detected or observed during the focused surveys conducted for the least Bell's vireo.

Jurisdictional Resources

Regulatory Framework

Direct and indirect impacts on wetland and riparian areas may be subject to the jurisdiction of several state and federal agencies, including the U.S. Army Corps of Engineers (ACOE), the California Department of Fish and Game (CDFG), and the Los Angeles Regional Water Quality Control Board (RWQCB). Areas within the Specific Plan Area potentially under the jurisdiction of these agencies are briefly discussed below.

Summary of Jurisdiction

Waters within the RiverPark Specific Plan Area are confined to existing mine pits that have filled with groundwater and agricultural drainage channels. As discussed above, the water level within the pits reflects the groundwater levels in the forebay. The site is located next to the Santa Clara River, although there is no surface connection to the river. Considerations frequently used for determining ACOE jurisdiction on water bodies in man-made excavations are whether such waters replaced naturally occurring waters or wetlands prior to the mining activity, as determined by historical evidence such as mapped hydric soil, or whether the waters have a connection to, or could be considered "adjacent" to navigable water, including such water's tributaries. The first scenario appears to have been unlikely and the second is a matter for interpretation. The March 9, 2000, issuance of new Corps of Engineers Nationwide Permits (NWP), contains an intent statement issued with NWP #44 Mining Activities states:

> "*District engineers will determine, on a case-by-case basis, whether a specific mined area has been abandoned. In most cases, a mining site where no construction, mining, excavation, processing, and/or reclamation activities have occurred during the last 10 years would be considered abandoned, at the district engineer's discretion. Wetlands and waterbodies within an abandoned mined area would be considered "waters of the United States," if those areas meet the criteria at 33 CFR 328." (Federal Register Vol. 65, No. 47, pages 12860-12861).*

As processing and reclamation activities are presently taking place on site, the above statement implies that if the site is not considered abandoned, then it should not be considered "waters of the United States" from the standpoint of the Clean Water Act and implementing regulations. If not considered "waters of the United States," then the issue of adjacency to navigable waters is not relevant, as the water-filled pits must meet the regulatory definition of waters.

Within agricultural drainage channels that are maintained for normal agricultural practices, the channel may not be regulated as they pertain to "normal agricultural practices." Once removed from agriculture, the ACOE may assume jurisdiction under Section 404.

The California Department of Fish and Game has regulatory authority over a variety of water bodies, pursuant to Section 1600 – 1603 of the Fish and Game Code of California. Jurisdictional waterbodies include rivers, streams, or lakes, designated by the Department "in which there is at any time an existing fish or wildlife resource, or from which these resources derive benefit." CDFG does not take jurisdiction over all water bodies, but has some discretion on the extent of their jurisdiction. The existing mine site has been subject of previous environmental review and has an adopted reclamation plan. CDFG has not indicated that the mine pits are water bodies subject to jurisdiction under Section 1600 – 1603 of the Fish and Game Code.

Wildlife Movement Corridors

Wildlife movement corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, by human disturbance, or by the encroachment of urban development. Movement corridors are important as the combination of topography and other natural factors, in addition to urbanization, have fragmented or separated large open space areas. The fragmentation of natural habitat creates isolated 'islands' of vegetation that may not provide sufficient area to accommodate sustainable populations and can adversely impact genetic and species diversity. Corridors mitigate the effects of this fragmentation by (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished by promoting genetic exchange with separate populations; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fire, flood, or disease) will result in population or species extinction; and (3) serving as travel paths for individual animals as they wander about or disperse from their home ranges in search of food, water, mates, and other needs.

The project site is situated immediately adjacent to the Santa Clara River. The river serves as an important regional wildlife corridor, providing all of the opportunities for movement described above.

As previously described in this report, the Specific Plan Area itself is highly disturbed as a result of development and existing land use practices. Similar development and land use practices occur on all sides of the site except where the river occurs. Though many wildlife species utilizing the river corridor for movement have the potential to periodically forage on the Specific Plan Area, the site itself is not considered a part of this movement corridor. Conversely, the corridor realistically serves as a path of avoidance from the disturbances present within the Specific Plan Area.

PROJECT IMPACTS

Thresholds of Significance

Based on Appendix G of the CEQA *Guidelines*, the City of Oxnard considers the impact of a project on biological resources to be significant if it would:

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

Section 15065(a) of the CEQA *Guidelines* also states that a project may have a significant effect on the environment when the project has the potential to:

- substantially degrade the quality of the environment;
- substantially reduce the habitat of a fish or wildlife species;
- cause a fish or wildlife population to drop below self-sustaining levels;
- threaten to eliminate a plant or animal community; or
- reduce the number or restrict the range of an endangered, rare, or threatened species.

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Impacts are sometimes locally important but not significant according to CEQA, because although they would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of, an important resource on a population-wide, or region-wide, basis.

For the purposes of this impact analysis, the terms “sensitive” and “special-status species” refer to the following: any plant or animal species listed by CDFG or USFWS as a threatened or endangered species, proposed for listing as threatened or endangered, or considered as a candidate for listing as threatened or endangered; those species listed by the USFWS as a federal Species of Concern; those species considered by CDFG as a State Species of Special Concern or as a Fully Protected species; and any plants listed by the CNPS as a List 1 and List 2 species, or to any species otherwise considered rare, threatened, or endangered as defined by Section 15380 of the CEQA *Guidelines*. CNPS List 1 and List 2 species are included in this impact analysis because the CNPS is a recognized authority by CDFG on the status of rare plant populations in California and because the criteria for plant species to be placed on List 1 and List 2 are similar to criteria that CDFG and USFWS use for species considered as candidates for listing or that are already listed as Threatened or Endangered.

Impact Methodology

Direct impacts of a proposed project on biological resources can take several forms (such as the direct loss or mortality of individual plants and animals as a result of grading and construction activities), but typically involve the loss or modification of natural habitat, (i.e., vegetation communities or other naturally occurring areas) which in turn, directly affect plant and wildlife species dependent upon that habitat. The level of significance of potential direct and indirect impacts on biological resources is determined by an evaluation of the overall biological value of a habitat area and/or a specific resource (described below) with respect to significance threshold criteria (described above under Significance Threshold Criteria). The relative value of on-site habitats is measured by such factors as overall parcel size; disturbance history; the surrounding environment; biological diversity and abundance; importance to particular plant and wildlife species; the presence of special-status species; and sensitivity status with local, state, and/or federal agencies.

Direct Impacts

Common Plant Communities

The following text discusses project impacts to common vegetation communities on the site.

Agricultural Fields

All of the agricultural fields (209 acres) occurring on site will be directly impacted by implementation of the RiverPark Project. Although this plant community does provide limited foraging opportunities for wildlife species, it is of relatively low biological value and does not support special-status species. Because the agricultural fields on the project site do not currently support special-status plant or wildlife species, because they are relatively low in overall biological value, and because they are fairly common in the region, the loss of agricultural fields within the Specific Plan Area would not be considered a significant impact.

Ruderal

All of the ruderal habitat present on the Specific Plan Area would be impacted by implementation of the Specific Plan. Although this habitat does provide limited foraging opportunities for common small mammal and bird species, and potentially a few raptors, the loss of 181 acres of this disturbed, non-native vegetation would not substantially reduce the populations of native wildlife or their habitats; therefore, this loss would not be considered a significant impact.

Mule Fat Scrub

Much of the mule fat occurs in association with the mine pits and would be directly impacted during implementation of the slope reconfiguration and stabilization included in the proposed Mine Reclamation Plan. Loss of this native plant assemblage would be considered a significant impact. However, the proposed Mine Reclamation Plan includes a complete restoration plan. A Mule fat community will be restored adjacent to the margins of the pits by seeding the area with species characteristic of this community. As the proposed project includes the restoration of the Mule fat community in the same locations and amounts as what exists, this impact is not significant.

Curly Dock-Forb

This plant community is associated with the water line of the mine pits and is considered to be of relatively low biological value. Because the curly dock-forb community does not support special-status species, is not under resource agency jurisdiction, would not reduce regional wildlife populations, and is of low biological value, the loss of 18 acres of this community would not be considered a significant impact.

Tree Windrows

Although the existing tree windrows provide some nesting opportunities for locally occurring birds, the amount and quality of habitat are limited. Higher quality nesting habitat is present adjacent to the project site in association with the Santa Clara River corridor. The RiverPark Specific Plan includes the preservation of the eucalyptus windrow on the boundary of RiverPark Areas 'A' and 'B' in a new park space. In addition, the Landscape Master Plan in the proposed Specific Plan includes a proposal to create a linear landscaped riparian edge, composed of native vegetation communities, along the western edge of the Specific Plan Area in RiverPark Area 'B'. The goal of this native landscape edge is to create a multi-layered habitat that utilizes native vegetation communities to attract and support a wide range of wildlife species, especially birds. Selected tree species, including Fremont cottonwoods (*Populus fremontii*), black cottonwoods (*Populus balsamifera ssp. trichocarpa*), red willow (*Salix laevigata*) and native sycamores (*Platanus racemosa.*), are proposed to provide foraging habitat for the many species associated with cottonwood-willow woodlands. These woodlands will add a type of native habitat not presently found along this part of the Santa Clara River. While the project will result in the elimination of the two small existing windrows located near the existing buildings on the mine site and along the south side of the access road to the mine, the overall amount and quality of the tree habitat within the Specific Plan Area will be improved by the establishment of a new native woodland community adjacent to the river. Therefore, the loss of the two tree windrows on the project site is less than significant.

Southern Willow Scrub

This plant community provides some habitat for locally occurring birds. However, as previously described, the amount and quality of this habitat is considered low. The scattered and fragmented nature of the vegetation throughout the site offers limited habitat values. The loss of the 3 acres of southern willow scrub on the Specific Plan Area would not be considered a substantial loss of this habitat in the area or reduce any local or regional populations of wildlife. Thus, the loss of this community would not be considered a significant impact.

Mine Pits

As discussed in the project description in Section 3.0 of this DEIR, the existing peninsula in the mine pits and the land bridge between the Brigham and Small Woolsey Pits will be dredged and modified to form one larger pit. As project implementation would not result in any net loss of pond habitat, no significant impacts would occur to this resource.

Common Wildlife Resources

The loss of habitat, and construction and grading activities associated with the proposed project would directly disturb wildlife on the project site. Most species are expected to be displaced to adjacent areas, provided that suitable habitat is available at the onset of construction activity. However, wildlife that emigrates from the site is vulnerable to mortality by predation and unsuccessful competition for food and territory. Species of low mobility (particularly burrowing mammals, amphibians, and reptiles) could be eliminated during site preparation and construction.

Because of the disturbed nature of the habitat within the Specific Plan Area, wildlife species diversity is expected to be relatively low. Total numbers of animals are also expected to be low, as on-site habitats do not provide sufficient resources to support large populations. In addition, any animals that may be inadvertently lost as a result of grading activities are quite common species within the region. As such, project implementation would not reduce local or regional populations to below self-sustaining levels or otherwise substantially affect common fish or wildlife species populations on or adjacent to the project site. Consequently, no significant impacts to common wildlife species are expected to occur.

However, some bird species, particularly raptors, could be adversely affected as a result of the loss of nesting habitat (trees and shrubs) or as a result of construction or other site-preparation activities. Such activities could result in the direct loss of active nests or the abandonment of active nests by adult birds. Bird nests with eggs or young are protected under the Migratory Bird Treaty Act and the California Fish and Game Code. Several species of birds were found to be nesting and with young on the site. Any disturbance to active nests would be considered a significant impact.

Sensitive Biological Resources

Special-Status Plants

No special-status plants were detected on site during focused survey efforts, which were conducted during appropriate blooming periods. Therefore, no loss of special-status plant species is expected to occur.

Special Status Wildlife

Aquatic Wildlife

While not found on the project site, the federally-listed endangered Southern California Evolutionary Significant Unit (ESU) steelhead (*Oncorhynchus mykiss*) utilize the portion of the River adjacent to the site during seasonal high flows to access tributaries where they spawn. Other special-status wildlife species including the arroyo chub (*Gila orcutti*) and southwestern pond turtle (*Clemmys marmorata pallida*) are also known to occur in this portion of the river. No significant impacts are expected to occur to aquatic wildlife as a result of this project.

Least Bell's vireo

Focused surveys have found no habitat for the Least Bell's vireo. There is a potential for the least Bell's vireo to be sighted on the site. However, it is likely that any individuals present on site would be transients between habitats along riparian areas. No significant impact will occur to least Bell's vireo on site.

Southwestern Willow Flycatcher

No willow flycatchers were observed on the site or in the immediate vicinity of the site during the survey's conducted for the least Bell's vireo. Therefore, no impacts are expected to southwestern willow flycatchers as a result of this project.

Wildlife Movement Corridors

Because the project site is not part of a regional habitat linkage that connects large open space areas in the region, the Specific Plan Area itself is not considered a wildlife movement corridor. Due to the site's proximity to the Santa Clara River, which is an important regional movement corridor, there is a potential for indirect impacts including increased lighting and noise, and increased human and domestic animal presence. These potential indirect impacts are addressed below

A linear landscaped riparian edge, composed of native vegetation communities, would be created along the western edge of the Specific Plan Area in RiverPark Area 'B'. The goal of this native landscape edge is to create a multi-layered habitat that utilizes native vegetation communities to attract and support a wide range of wildlife species, especially birds. The addition of this native habitat along the river will likely enhance the quality of this portion of the river as a wildlife corridor. In addition, this riparian corridor will serve as a buffer between the residential uses proposed in RiverPark Area 'B' and the river.

Indirect Impacts

Indirect impacts on biological resources could potentially occur to those habitat areas surrounding the development area, as well as to remaining habitat areas within the proposed development area, both during and after the completion of the proposed project. Potential indirect impacts on biological resources could include the following: (1) increased lighting and glare effects on wildlife species in remaining and adjacent open space areas, particularly the Santa Clara River; (2) potential increase in pesticides, herbicides, and pollutants into the Santa Clara River and into groundwater as a result of stormwater runoff; (3) increased runoff of pollutants; (4) an increase in non-native plant species that are adapted to more urban environments that can out compete native species for available resources, thus reducing the distribution and population of native species; (5) increases in domestic animal presence that can disturb natural habitat areas and displace wildlife populations; and (6) construction and grading activities that can temporarily displace and disturb wildlife species associated with the Santa Clara River and degrade nearby plant communities. Each of these potential indirect impacts are addressed below:

Increased Lighting and Glare

Night time illumination is known to impact some species of animals in natural areas. Night time light can disturb resting and foraging behavior and can potentially alter breeding cycles and nesting behavior. Project implementation would increase the number of elevated night time light sources within the Specific Plan Area. Residential uses would be established in RiverPark Area 'B'. The existing levee, the proposed native woodland along the western edge of the residential area and a street planned between the new native woodland and the residential uses would provide a substantial buffer between the river and these uses. Immediately south of the residential uses, parka and school uses are proposed. These areas will not be lit for use at nighttime. In the southwest corner of the Specific Plan Area, new office buildings would be allowed immediately south of the existing State Compensation Fund Insurance Building. Parking areas, with typical parking lot security lighting, would be located around new buildings in this portion of the Specific Plan Area. Lights in these parking areas would be oriented away from the river and towards the parking areas. Given the arrangement and orientation of the proposed land uses, the increased elevation of the existing levee and the proposed landscaping along the edge of the residential area, the potential for impacts is minimal, but potentially significant.

Runoff Quality and Quantity

Changing upland areas, even ruderal fields, from porous substrates to urban "hardscape" may alter water table recharge values, cause greater amounts of direct runoff that can convey chemical pollutants directly into the aquatic habitat, and lower natural nutrient inflows. Section 4.5, Water Resources, addresses water quantity and quality issues associated with the RiverPark Project in detail. The analysis of groundwater shows a net increase in groundwater due to diversions of surface water and elimination of onsite groundwater pumping.

Untreated runoff can exacerbate the effects of pesticides, herbicides and other pollutants on the biota of the Santa Clara River, and adversely affect plants that may absorb contaminated groundwater. The RiverPark Specific Plan includes a water quality treatment system designed to treat runoff from the new land uses proposed within the Specific Plan Area and off-site areas that presently drain to the Specific Plan Area. Stormwater flows will be treated by passing through a system of water quality detention basins and/or dry grassy swales, before being discharged to the Santa Clara River through existing drain outlets, or the mine pits, depending upon the magnitude of the rainfall event and location of the individual drainage area. This system includes dry swales, water quality detention basins, and "Best Management Practices" mechanical treatment features designed into the storm drain system. The dry swales will be grass lined channels overlying a permeable soil layer. The detention basins will be lined with a low permeability or impermeable material. This system has been designed to provide greater treatment of runoff from smaller storm events that will contain the greatest concentration of pollutants. This system has been designed to detain and treat runoff from up to a 10-year storm event. Runoff from all storms larger than a 10 year event from off-site areas and a majority of RiverPark Area 'B' will be routed into the mine pits.

The water quality treatment system proposed will be sufficient to trap and remove pollutants and urban sediments to the degree necessary to ensure high water quality levels. Therefore, impacts to biological resources in the Santa Clara River as a result of stormwater runoff into the River are not significant. Please refer to Section 4.5, Water Resources, of this Draft EIR for a detailed analysis of surface water quality.

Aquatic species in the Santa Clara River would be most sensitive to changes in runoff quality. Toxicity levels for fish and projected concentrations of metals in runoff from the Specific Plan Area are presented below in Table 4.4-3. The toxicity levels for fish were determined and presented in Water Quality Criteria (McKee & Wolf, 1963). The projected metal concentrations are from Section 4.5, Water Resources.

As indicated by the concentrations in Table 4.4-3, the concentrations of the minerals and metals from runoff entering the River would be below levels known to be toxic to fish. In all cases, the project water quality treatment system reduces the concentrations of these constituents compared to existing runoff. Therefore, no significant impact to aquatic species will result from changes in runoff quality.

Table 4.4-3
Projected Discharge of Selected Chemical Constituents and Toxicity Levels for Fish

Chemical Constituent	Toxicity Level for Fish (mg/l)	Projected Maximum Concentration (mg/l) that may be discharged to the River
Beryllium	0.15	0.0005
Boron	2000.0	.06
Chromium	5.0	.009
Copper	0.1	.016
Lead	0.1	.007
Manganese	1.0	.03
Nickel	0.8	.01
Zinc	0.3	.083

As described in Section 4.11.1, Stormwater Drainage, the proposed storm drain and water quality treatment system will reroute and detain storm flows to allow for treatment. Overall, the project will result in an increase in total volume discharged to the river of 23.9 ac-ft (Q100) and an increase in peak flow of 149 cfs (Q100). This increase of 0.075% is negligible when compared to the total flows in Santa Clara River of 200,000 cfs (Q100). No change to the existing storm drain outlets to the river are proposed. The change in runoff quantities are small in magnitude and will not impact the amount or quality of habitat in the Santa Clara River.

Increase in Non-native Plants

After project completion, a number of non-native plant species that are more adapted to urban environments will be introduced into the Specific Plan Area. Plants typical of an urban environment already occur to some degree in the region, due to the presence of development in the immediate vicinity. The RiverPark Specific Plan also includes the use of native plant species in key locations, including the slopes of the mine pits and along the western edge of RiverPark Area 'B', where a riparian woodland of native species will be established.

However, because non-native and exotic plants are commonly included in landscaping plans of both common areas and on private lots of new development projects, it can be reasonably concluded that the project could result in identifiable increases in non-native and/or exotic plant populations. In particular, these plant species are often more adapted to a wider variety of growing conditions and can out-compete native plant populations for available nutrients, prime growing locations, and other resources. Because these plants reproduce so quickly and in such large amounts, these species can quickly replace many native plant populations, resulting in lower species diversity, loss of suitable breeding and/or nesting habitat for common and special-status wildlife species, changes to the adjacent riparian ecosystem, and overall reductions in habitat values. Therefore, the impact on native biological resources of the adjacent riparian corridors a result of increased non-native plant species is considered a significant impact.

Increase in Domestic Animals

Increased use of the site by domestic animals can disturb nesting or roosting sites and disrupt the normal foraging activities of wildlife in adjacent habitat areas. Should this activity occur frequently, and over a long time period, these disturbances may have a long-term effect on the behavior of both common and special-status animals and can result in their extirpation from the area. Feral cats, as well as house cats, can cause substantial damage to the species composition of natural areas through predation on wildlife species, including populations of special-status species. The levee, its associated fences, and the proposed landscaping will form an effective barrier between the residential areas proposed in RiverPark Area 'B' and the river corridor that will minimize the potential for domestic animals to access the river. The increase in the number of domestic animals on the site will, therefore, not result in a significant impact on biological resources in the area.

Construction and Grading Activities

The primary phase of construction will occur over a 12-month period as the site is graded, the primary streets and associated utilities in RiverPark Area 'A' are built, the remedial earthwork identified in the proposed Mine Reclamation Plan is completed and the water quality treatment system is constructed. The levee forms an effective noise barrier between construction that will occur during this period along the western edge of the Specific Plan Area and the Santa Clara River. Standard required dust control measures will minimize fugitive dust that could accumulate in adjacent habitat in the River. For these reasons, construction activities will not result in significant impacts.

MITIGATION MEASURES

The following discussion describes measures proposed to avoid, minimize, or reduce significant and potentially significant impacts on biological resources. These measures, if successfully implemented, would reduce the degree of these impacts to a level that is less than significant. These measures are intended to address state and federal laws and regulations protecting certain plant and animal species.

Direct Impacts

Common and Special-Status Bird Nests

4.4-1 Prior to issuance of a grading permit for the project site, and within 15 days prior to construction or site preparation activities that would occur during the nesting/breeding season of native bird species potentially nesting on the site (February through July), the applicant shall retain the services of a qualified biologist. The biologist must, at a minimum, have a degree in biology or related field, and five years field experience in identification of flora and fauna in the southern California region, and be recognized as qualified by appropriate regulatory agencies. The biologist shall conduct on-site surveys to determine if active nests of special-status and common bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code, are present within 100 feet of the construction zone. If active nests are found on or immediately adjacent to the site, a minimum 100-foot buffer area (300 feet for raptors) shall be temporarily fenced around the nest site. No construction activities shall be permitted within this nest zone until the young birds have fledged, as determined by the biologist.

Indirect Impacts

Light and Glare

4.4-2 All lighting adjacent to the Santa Clara River and berm, particularly street lamps, shall be downcast luminaries and shall be shielded and oriented in a manner that will prevent spillage or glare (greater than one-half foot candle illumination at ground level) into the remaining natural and open space areas. Final lighting orientation and design shall be approved by the City of Oxnard Community Development Department.

Non-Native Plant Species

4.4-3 Certain ornamental plants are known to escape from planted areas and invade into native plant communities. In order to protect native plant communities established within the Specific Plan Area and located in the adjacent Santa Clara River Corridor, the plants listed below in Table 4.4-4 shall not be planted within the common landscaped areas of the proposed site plan. This list shall also be distributed to new homeowners and included within the CC&Rs. The landscaping plans within common areas of the project shall be reviewed by a qualified botanist who shall recommend appropriate provisions to prevent other invasive plant species from colonizing remaining natural areas. These provisions may include the following: (a) review and screening of proposed plant palette and planting plans to identify and avoid the use of invasive species; (b) weed removal during the initial planting of landscaped areas; and (c) the monitoring for and removal of weeds and other invasive plant species as part of ongoing landscape maintenance activities. The frequency and method of monitoring for invasive species shall be determined by a qualified botanist.

Table 4.4-4
Ornamentals to be Prohibited from the Project Site

Scientific Name	Common Name
Acacia spp.	Acacia
Ailanthus altissima	Tree of Heaven
Arundo donax	Giant cane, giant reeds
Bromus tectorum	Cheat grass
Carpobrotus sp.	Ice plant
Chrysanthemum coronarium	Annual chrysanthemum
Cortaderia sp.	Pampas grass
Cytisus sp.	Scotch, Spanish, and Portuguese Broom
Eucalyptus sp.	Eucalyptus, Gum trees
Foeniculum vulgare	Fennel
Genista monspessulana	French broom
Hedera helix	English ivy
Lepidium latifolium	Perennial pepperweed
Lobularia maritima	Sweet alyssum
Myoporum laetum	Myoporum
Tropaeolum majus	Nasturtium
Pennisetum clandestinum	Kikuyu grass
Pennisetum setaceum	Fountain grass
Phalaris aquatica	Harding grass
Rhus lancea	African sumac
Ricinus communis	Castor bean
Rubus discolor	Himalayan blackberry
Schinus sp.	Pepper tree
Senecio mikanioides	German-ivy
Taeniatherum caput-medusae	Medusa-head
Tamarix sp.	Tamarisk
Vinca minor	Periwinkle

CUMULATIVE IMPACTS

Because of the current intensive resource extraction and agricultural uses of the site, many of the biological impacts often associated with development in this region will not occur on this site. No substantial losses of native, healthy wildlife habitat will occur, and no loss of special-status species habitat will occur. No significant impacts from on site runoff into the adjacent Santa Clara River have been identified. Related projects proposed or under construction in the area include new commercial development in established commercial areas located south of the Ventura Freeway, a small residential project on a vacant site in the El Rio West residential neighborhood located immediately east of the Specific Plan Area and the Ventura County Juvenile Justice Center on an agricultural parcel located to the east of the Large Woolsey Mine Pit. As none of the sites for these related projects contain native habitat, no cumulative impacts to biological resources in the area will result

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant impacts to biological resources will result from the RiverPark Project.

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INTRODUCTION

This section of the EIR describes existing surface water and groundwater resources in the area, and evaluates the potential impacts of the project on groundwater quantity and surface water and groundwater water quality. Evaluation of the impact of the project on domestic water supply and distribution is addressed in ***Section 4.11.2, Water Supply and Distribution****.*

ENVIRONMENTAL SETTING

Existing Conditions

Santa Clara-Calleguas Groundwater Basin

The RiverPark Specific Plan Area is situated in the Montalvo Forebay (also referred to as the Oxnard Forebay or the Montalvo basin), a subbasin of the larger Santa Clara-Calleguas groundwater basin (Figure 4.5-1). Over the last 15 years, the U.S. Geological Survey (USGS), in cooperation with UWCD, has studied the hydrogeology of the Santa Clara-Calleguas groundwater basin as part of the Southern California Regional Aquifer System Analysis (RASA) Program.[1] The USGS work included the reevaluation of the basin hydrogeology, a data collection program including the installation and sampling of 23 new wells, and the construction of a regional numerical groundwater flow model to evaluate the regional groundwater resources. The findings of their investigation along with the documentation of the numerical groundwater flow model have been compiled in a 1998 draft report, *Simulation of Ground-Water/Surface-Water Flow in the Santa Clara-Calleguas Basin, Ventura County, California*[2] currently under agency review. The USGS report, along with other cited references, serves as the basis for the following discussion on regional groundwater conditions.

The Santa Clara-Calleguas groundwater basin was formed by a series of northeast-trending anticlinal mountains and synclinal valleys in the Transverse Range of southern California. The basin lies within the 2,000-square mile watershed of the Santa Clara River, Calleguas Creek, and associated tributaries.[3] Almost 90 percent of the drainage area is characterized by rugged topography with the

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1 Martin, Peter. *Southern California Alluvial Basins Regional Aquifer-System Study, in Sun, R.J., Regional Aquifer-System Analysis Program of the U.S. Geological Survey – Summary of Projects, 1978 – 84: U.S. Geological Survey Circular 1002.* 1986. p. 245 – 247.

2 U.S. Geological Survey (R. T. Hanson). *Preliminary Draft, Simulation of Ground-Water/Surface-Water Flow in the Santa Clara-Calleguas Basin, Ventura County, California.* 1998.

3 U.S. Geological Survey (R. T. Hanson). *Preliminary Draft, Simulation of Ground-Water/Surface-Water Flow in the Santa Clara-Calleguas Basin, Ventura County, California.* 1998.

remaining area consisting of valley floor and coastal plain where most of the usable groundwater occurs.[4] The groundwater basin continues offshore where it is dissected by submarine canyons and truncated by submarine cliffs.[5]

The basin can be divided into 12 subbasins based primarily on geologic or hydrogeologic features affecting groundwater levels and/or groundwater flow. Subbasins were first delineated by the California Department of Water Resources in 1933 and the California State Water Resources Board in 1953, and further modified by Mann.[6] Recent work by UWCD has refined the northwestern boundary of the Montalvo Forebay north of the Santa Clara River.

The RiverPark Specific Plan Area is located in the south-central portion of the Montalvo Forebay along the south bank of the Santa Clara River. The Piru, Fillmore, and Santa Paula subbasins are upstream of the Montalvo Forebay in the Santa Clara River valley. Three subbasins in the Los Posas Valley (South, East, and West Los Posas), along with the Santa Rosa, North Pleasant Valley, and South Pleasant Valley subbasins ultimately drain into the Oxnard Plain along the coast.[7]

The Mound subbasin and Oxnard Plain bound the Montalvo Forebay on the northwest and southwest. The Oak Ridge fault forms the basin boundary between the Santa Paula/Mound subbasins and the Montalvo Forebay[8] and partially limits subbasin crossflow. The delineation between the Montalvo Forebay and downgradient Oxnard Plain is based on the zone where shallow sands transition into shallow clay deposits beneath the Oxnard Plain, which result in a change from unconfined groundwater beneath the Forebay to confined groundwater conditions beneath the plain.

Hydrostratigraphy

Aquifers

The unconsolidated sediments beneath the Montalvo Forebay and the project site are composed of both continental and marine deposits of Tertiary and Quaternary age. They contain multiple aquifers of coarse grain sediments with intervening fine grain aquitards. Aquifers have been grouped into an Upper Aquifer System (UAS) and a Lower Aquifer System (LAS) based on changes in geologic structure and

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4 Mann, John F. Jr. and Associates. *A Plan for Ground Water Management (prepared for United Water Conservation District).* 1959.

5 U.S. Geological Survey (R. T. Hanson). *Preliminary Draft, Simulation of Ground-Water/Surface-Water Flow in the Santa Clara-Calleguas Basin, Ventura County, California.* 1998.

6 Mann, John F. Jr. and Associates.

7 U.S. Geological Survey (R. T. Hanson).

8 United Water Conservation District. *Surface and Groundwater Conditions Report, Water Year 1998.* July 1999.

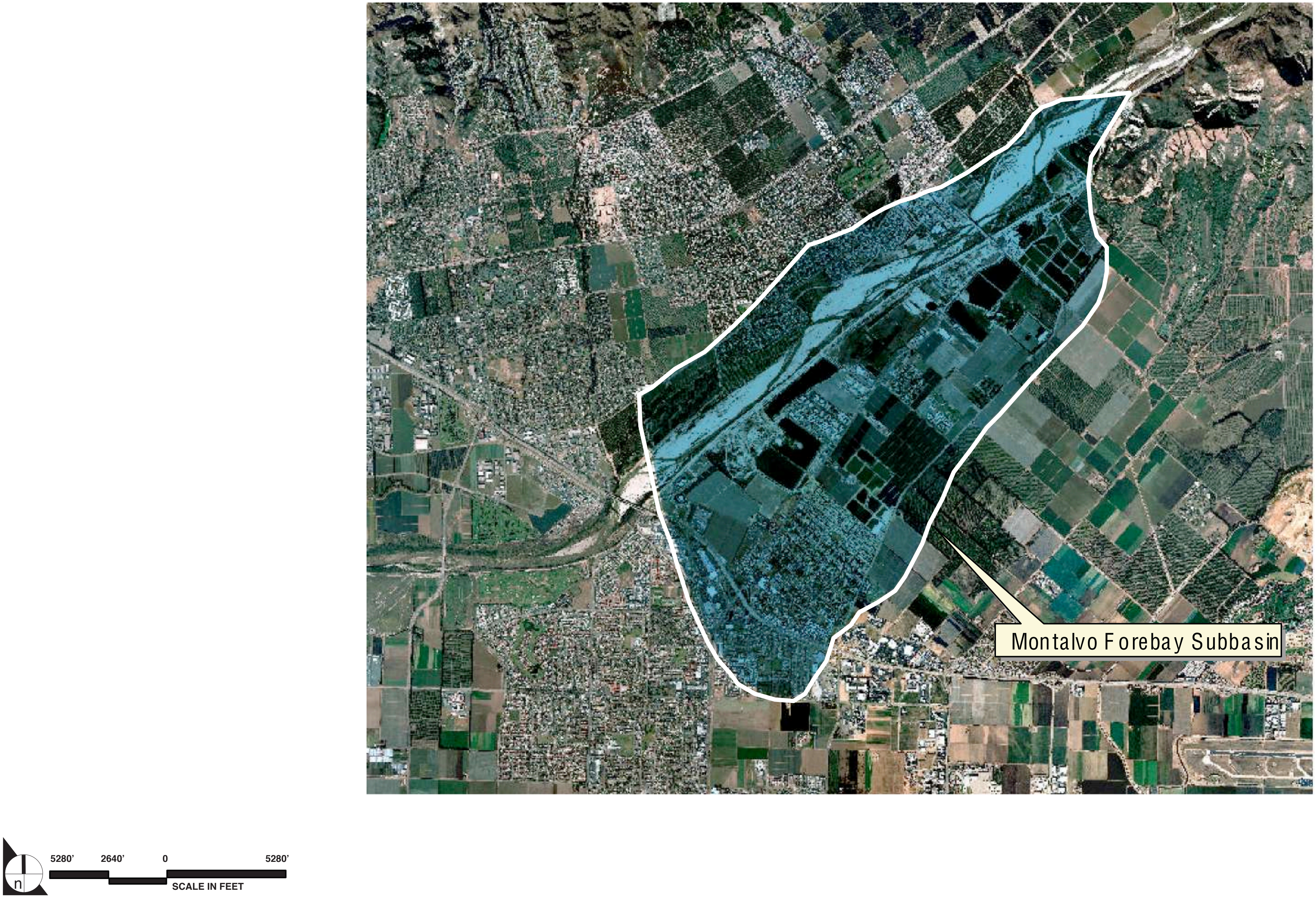

FIGURE 4.5-1

Montalvo Forebay Location

separated in many areas by regional layers of low permeability clay. The sediments in the LAS are more structurally complex resulting from folding and faulting. The UAS sediments are relatively flat lying and extend to approximately 400 feet beneath the project site.

The UAS and the LAS have been subdivided into separate aquifer layers in some parts of the basin. Various investigators have delineated at least three distinct LAS aquifers beneath the Oxnard Plain including the Grimes Canyon, Fox Canyon, and Hueneme aquifers. Two UAS coarse grain layers of Pleistocene age and Holocene age are referred to as the Mugu aquifer and the Oxnard aquifer, respectively. Separate aquifers within the LAS and UAS are less easily delineated beneath the Montalvo Forebay subbasin, where continuous clay layers used to define the aquifer lenses are generally absent.

Confining Layers

In the Montalvo Forebay, alluvial sediments in the subsurface are predominantly coarse grain sands and gravels. Fine grain sediments such as silts and clays that act as confining layers in the groundwater system are generally absent or discontinuous.[9] This condition allows for direct recharge of the UAS from the surface and some recharge of the LAS from the UAS in the subsurface.

On the Oxnard Plain, more continuous fine grain layers of silts and clays are present in the subsurface. These fine grain layers retard the vertical movement of groundwater and limit direct surface recharge of deeper aquifers. As such, subsurface inflow from upstream basins including the Montalvo Forebay provides an important source of recharge to the Oxnard Plain.

Aquifer Parameters

Aquifer parameters estimated by Mann[10] and others were compiled by USGS for incorporation into a groundwater flow model.[11] These parameters are used to describe the subsurface soil conditions in relation to their ability to conduct groundwater flow. Beneath the project site, the calibrated model used effective porosity values between 10 percent and 15 percent for the UAS.[12] Estimated transmissivity (T) values used in the groundwater model range from 46,000 square feet per day (ft^2/day) to 74,000 ft^2/day.[13] Assuming an average UAS thickness of 400 feet, an average hydraulic conductivity

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9 United Water Conservation District. *Surface and Groundwater Conditions Report, Water Year 1998.* July 1999.
10 Mann, John F. Jr. and Associates.
11 U.S. Geological Survey (R. T. Hanson).
12 U.S. Geological Survey (R. T. Hanson).
13 U.S. Geological Survey (R. T. Hanson).

(K) value for the Montalvo Forebay UAS is estimated at 150 ft/day. In the northern portions of the Oxnard Plain subbasin, immediately downgradient of the project site, clay content appears to increase in the UAS and estimated average K values decrease slightly to 75 ft/day with an effective porosity ranging from 5 percent to 10 percent.[14]

Groundwater Levels

Approximately 50 wells in a database compiled by UWCD contain sufficient water level records to characterize water level trends and fluctuations in the Montalvo Forebay. Fifteen of these wells, referred to in this section as "key wells," have been selected as representative of groundwater conditions based on having water level records for a minimum of 8-years and being spatially distributed around the RiverPark Specific Plan Area. Hydrographs showing changing water levels in these wells over time were plotted at consistent scales and used to examine groundwater trends and fluctuations. Summary data for the key wells are presented in Table 4.5-1. The fifteen key well locations used for water level data are shown in Figure 4.5-2 along with additional key wells selected for water quality data. Key well hydrographs covering water level data over the last 20 years are included in Appendix 4.5-1.

Table 4.5-1
Key Wells

State Well ID No.	ID Short	Year Constructed	Aquifer Location	Well Use
Level Data Wells				
02N22W12A01S	12A1	1931	Upper	Test
02N22W22H01S	22H1	1940	Upper	Irrigation
02N22W22R01S	22R1	1927	Upper	UWCD Record
Quality Data Wells				
02N21W06P01S	6P1	1930	Upper	Irrigation
02N22W12B04S	12B4	1970	Upper	Domestic
02N22W23B01S	23B1	1955	Upper	Municipal
02N22W12J02S	12J2	1992	Upper	Monitoring
Level and Quality Data Wells				
02N22W12R01S	12R1	1931	Upper	Irrigation
02N22W14P02S	14P2	1955	Upper	Municipal
02N22W23C01S	23C1	1955	Upper	Municipal
02N22W23B02S	23B2	1955	Upper	Municipal
02N22W23C02S	23C2	1955	Upper	Municipal
02N22W23B04S	23B4	1990	Lower	Monitoring
02N22W23B05S	23B5	1990	Lower	Monitoring
02N22W23B03S	23B3	1990	Lower	Monitoring
02N22W23G02S	23G2	1955	Upper	Municipal
02N22W23K05S	23K5	1968	Upper	Municipal
02N22W22M04S	22M4	1953	Upper	Domestic

Data Source: UWCD well database.

14 U.S. Geological Survey (R. T. Hanson).

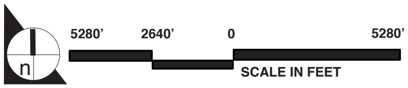


FIGURE 4.5-2

Key Well Locations

39-22•11/01

Wells near the project site indicate that groundwater occurs beneath the central portion of the RiverPark Specific Plan Area at an average elevation of 33 feet mean sea level (msl). The average ground surface elevation on the unexcavated portions of the site is approximately 85 feet msl, resulting in an average depth to water of 52 feet. Groundwater is often exposed in the open pits, which have been excavated below sea level in some areas.

Water levels beneath the Montalvo Forebay fluctuate primarily in response to precipitation, artificial recharge in nearby spreading basins, and agricultural and municipal pumping. Typically, water levels rise during years of high precipitation and fall during years of low precipitation. Over the last 20 years, the water table beneath the RiverPark Specific Plan Area has fluctuated more than 120 feet, ranging from a low of approximately –47 feet msl to a high of approximately 76 feet msl. When using an average ground surface elevation of 85 feet msl, the depth to water has varied from less than 10 feet deep to more than 130 feet beneath the project site.

Historical Trends

Water level data from State Well No. 2N/22W-22R1, located approximately 300 feet southeast of the RiverPark Specific Plan Area, were plotted over a 70-year period to examine historic trends and fluctuations (Figure 4.5-3). The fluctuating water levels illustrate portions of five wet and dry periods since 1930. Since the mid-1960's, three drought periods have resulted in water level declines to below –30 feet msl. During wet periods, water levels rise above 60 feet msl resulting in water level changes of more than 90 feet over the 70-year period.

Over the last 20 years, water levels have fallen from near historic water level highs in the early 1980s to historic lows during a drought in the late 1980s/early 1990s and rebounded back to record water level highs in the mid to late 1990s. Both the historic high water level (71.7 feet msl in 1996) and the historic low water level (-36.4 feet msl in 1991) have occurred during the last 10 years in well 2N/22W-22R1 (Figure 4.5-3). These water level measurements are based on discrete monitoring well measurements conducted approximately monthly. The observed water level changes generally correlate to precipitation amounts measured at the nearby El Rio station as shown on graphs of annual precipitation and water levels in nearby well 2N/22W-22H1 (Figure 4.5-4). Well 2N/22W-22H1 is located on the south central portion of the RiverPark Specific Plan Area (Figure 4.5-2).

Higher rainfall amounts result in increased water levels not only from direct infiltration (which is expected to be relatively minor), but also from an increased supply of water for artificial recharge. During recent consecutive years of high precipitation and recharge events, water levels have reached historic highs near 75 feet msl beneath the central portion of the site as seen in well 2N/22W-22H1 (Figure 4.5-4). This level translates to water level elevations above 80 feet msl beneath the northern portion of the RiverPark Specific Plan Area. According to UWCD analysis of historic storage conditions in the basin, historic high water levels achieved in 1998 represent a full basin.[15] UWCD's recharge operations are typically limited by localized groundwater mounding at the recharge site that reduce the percolation rate of the recharge water. If recharge operations could be increased, leakage from the Montalvo Forebay to the Oxnard Plain Basin would increase, benefiting the downgradient aquifer and it would also provide additional supplies to users on the Oxnard Plain.

Seasonal Fluctuations

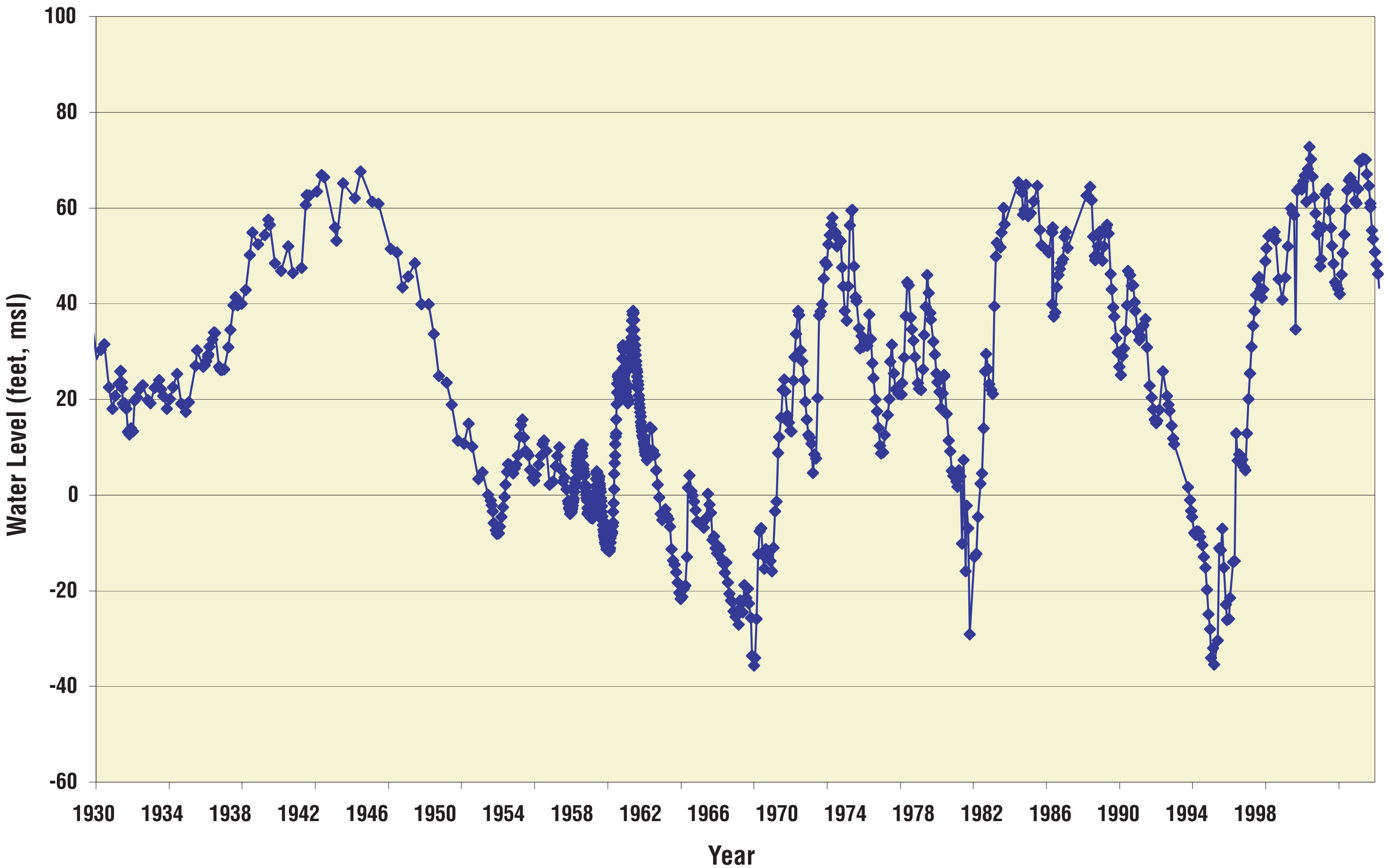
Water levels also fluctuate on a seasonal basis in response to rainfall, artificial recharge, and to a large extent, pumping patterns. Average monthly precipitation data available from the El Rio station indicate that more than 88 percent of annual precipitation falls in November through March. The largest streamflow diversions for artificial recharge in the Montalvo Forebay also occur within this time frame. As a result, water levels in the vicinity of the project site have risen more than 25 feet during winter and spring months of some wet years. Seasonal water level highs typically occur between February and May, with most highs recorded in April near the RiverPark Specific Plan Area. If local artificial recharge persists into the dry summer months, seasonal highs can occur as late as July. Seasonal water level lows are typically recorded between October and December.

Current Levels

Since the beginning of the current wet cycle in 1992-93, water levels have fluctuated between 40 feet msl and 75 feet msl beneath the central portion of the site based on measurements in well 2N/22W-22H1 (Figure 4.5-4). Water levels in nearby wells and the onsite pits were between 40 and 50 feet msl in October/November 2000.[16]

Because the mine pits have been excavated below the average groundwater elevation in the area, the water table is exposed most of the time in one or more of the four mine pits. Over the last 20 years, the water table was exposed in some portion of the pits for 86 percent of the time (206 months out of 240 months). Only during the dry period from late 1989 to early 1992 was the water table consistently below the lowest elevation of the pits. The uneven topography of the pit bottoms and, to some extent, the slope of the water table, results in a surface area exposure of the water table that varies with

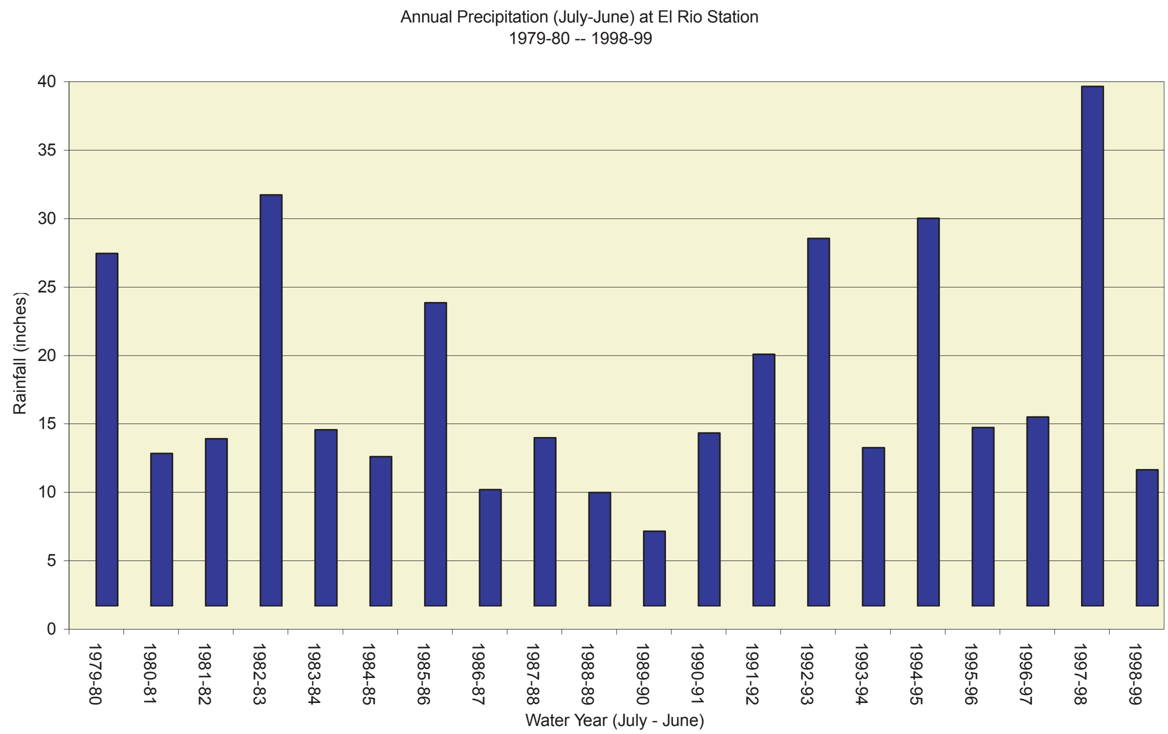
15 United Water Conservation District. *Surface and Groundwater Conditions Report, Water Year 1998.* July 1999.
16 WM Holdings, Inc. *Water Level Elevations S.P. Milling Company.* October 27, 2000.

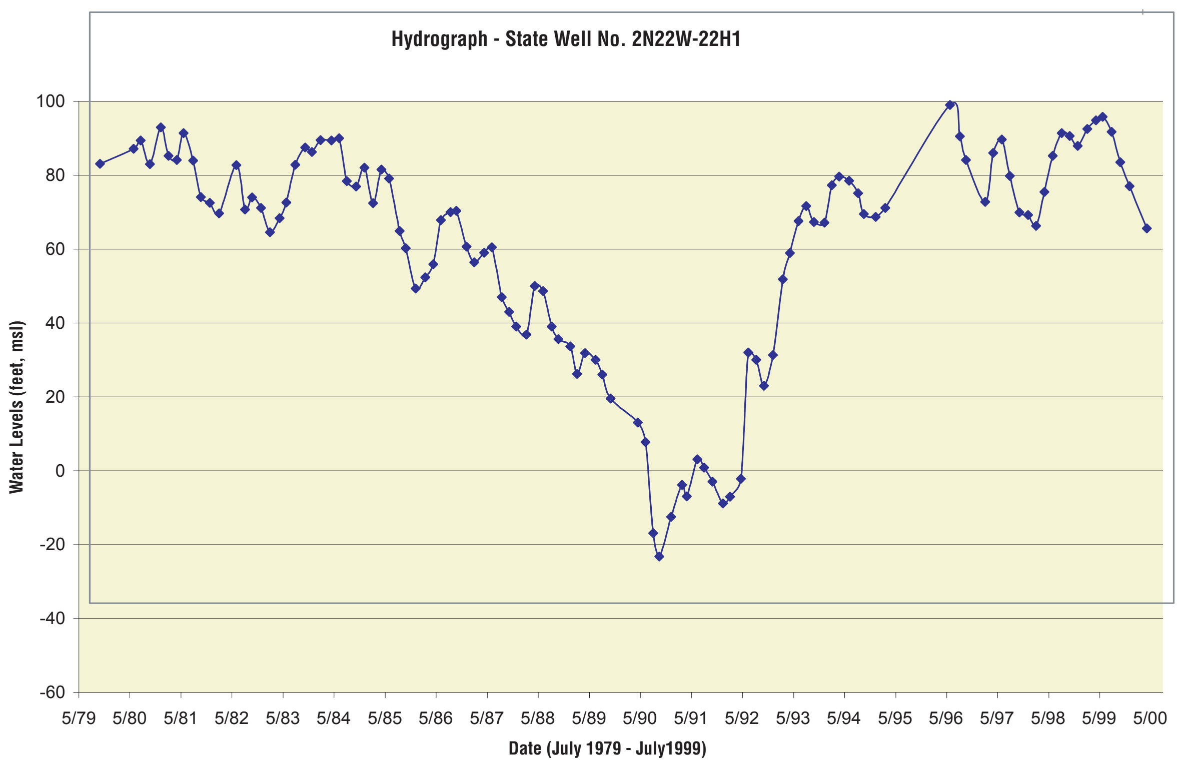


SOURCE: Kennedy/Jenks Consultants, September 2001.

FIGURE **4.5-3**

Hydrograph 2N/22w-22R1





SOURCE: Kennedy/Jenks Consultants, September 2001.

FIGURE **4.5-4**

Annual Precipitation and Water Levels in Well 2N/22w-22H1

water level fluctuations. For example, when water levels are above 65 feet msl in the central portion of the site, the water table is exposed over approximately 150 acres in the pits. When water levels drop to 15 feet msl, the exposure of the water table in the pits covers less than 45 acres.

The elevation of the exposed water surface has been recorded at various times in the pits and compared to water levels in surrounding wells. Some of these comparisons are complicated by the addition of process water into the pits and/or surface water runoff from adjacent properties. In general, pit water levels appear to correlate to levels measured in nearby wells and respond similarly to water level changes over time.[17] Pit levels surveyed on October 27, 2000 ranged from 41.8 feet msl in the Brigham pit to 46.7 feet msl in the Large Woolsey pit.[18] A well close to the pits (2N/22W-15R2) had a water level measurement of 46.6 feet msl a few days later on November 1, 2000.

Groundwater Flow

Regional and Local Groundwater Flow Directions

Regionally, groundwater flows south and southwest beneath the Montalvo Forebay and enters the adjacent Oxnard Plain as subsurface inflow. Groundwater also moves downward under vertical gradients and recharges the LAS, which also contributes to subsurface outflow from the Montalvo Forebay into the Oxnard Plain. Local groundwater flow direction varies within the Montalvo Forebay, controlled by groundwater pumping and artificial recharge.

Groundwater elevation contour maps that cover the Montalvo Forebay are prepared by UWCD on a semiannual basis. Twenty-two contour maps from fall 1985 through spring 1998 were used to analyze groundwater flow directions beneath the RiverPark Specific Plan Area under a variety of hydrologic conditions. In general, the maps indicate a relatively consistent groundwater flow regime for the Montalvo Forebay over time. During this time period, the predominant groundwater flow direction beneath the RiverPark Specific Plan Area was southwest (azimuth 230° to 250°). Flow shifted to the south and southeast during several fall periods (azimuth 110° to 185°), apparently influenced by local groundwater pumping at the nearby El Rio spreading grounds. Southerly to southeasterly flow likely persisted only for a few months because the corresponding spring maps indicate a shift back to the southwest.

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[17] Fugro West, Inc. *Letter from David A. Gardner to Gary Dymesich regarding Saticoy Groundwater Monitoring Program, County of Ventura CUP No. 4843.* October 7, 1997.

[18] WM Holdings, Inc. *Water Level Elevations S.P. Milling Company.* October 27, 2000.

Groundwater Flow Model

To simulate groundwater flow in response to pumping from wells and recharge within the Study Area, the USGS regional model was reduced and focused on the RiverPark Specific Plan Area. This process involved:

- reduction of the USGS regional model domain from approximately 1500 square miles to 40 square miles;
- refinement of the regional USGS finite-difference model grid from 60 rows and 100 columns (0.25 square miles per cell) to 52 rows and 60 columns (0.013 square miles per cell) for enhanced resolution;
- relocation of select river cells in the USGS regional model to more accurately represent the location of the Santa Clara River; and
- calibration of the RiverPark model to steady-state conditions representing fall and spring conditions.

All other components of the USGS regional model, as documented by USGS[19] were maintained in the RiverPark model without revisions. Details of model revisions and application are summarized in Appendix 4.5-2.

Baseline Conditions

The RiverPark Specific Plan Area is roughly bounded by the Santa Clara River levee to the west, the Ventura Freeway to the south, Vineyard Avenue to the east, and Central Avenue to the north. The Specific Plan area currently consists of a mix of commercial and industrial buildings, agriculture, an aggregate mining operation, and drainage basins. The existing land uses constitute the baseline conditions for comparison with the proposed project and other project alternatives. The following paragraphs describe the pertinent water resource related facilities of the baseline condition.

Stormwater Drainage

The Specific Plan Area is currently occupied by primarily vacant, mining pit and agricultural land uses. The slope of the site is generally less than 0.5 percent, running roughly parallel to the Santa Clara River sloping towards the southwest.

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19 U.S. Geological Survey (R. T. Hanson). *Preliminary Draft, Simulation of Ground-Water/Surface-Water Flow in the Santa Clara-Calleguas Basin, Ventura County, California.* 1998.

Figure 4.5.5 shows the existing drainage facilities and the drainage areas within, and currently draining to, the Specific Plan Area. The existing drainage areas within the Specific Plan Area and off-site areas that currently drain to the Specific Plan Area are described below.

Drainage Area 1

This drainage area includes RiverPark Area 'A', bounded by the Ventura Freeway, the Santa Clara River, Vineyard Avenue, and the City limits. This area currently consists of agricultural and commercial uses. The two office buildings and streets existing in the southwestern corner of the Specific Plan Area were built in conformance with the City's Oxnard Town Center Specific Plan. Ventura Road and a portion of Town Center Drive were built to support development of these buildings. A large 10-foot wide by 9-foot high reinforced concrete box storm drain was also built at the time Ventura Road and Town Center Drive were built. This facility is commonly referred to as the "Stroube Drain" and currently discharges through the levee to the Santa Clara River approximately 600 feet north of the US 101 Santa Clara River Bridge. As shown on Figure 4.5-5, the Stroube Drain currently extends from the western edge of the Specific Plan Area to the end of Town Center Drive. Ventura Road also contains a storm drain that contributes runoff to the Stroube Drain. These facilities drain the existing development in this area.

Most of Drainage Area 1 consists of agricultural fields at this time. Runoff from this agricultural land ponds onsite and eventually percolates or enters the Stroube Drain. An open earth drainage ditch located along the north side of El Rio Drive collects runoff and conveys it to the end of Town Center Drive to the Stroube Drain. There is also an existing storm drain system on the north and west edges of the County El Rio Maintenance Yard that drains to an existing Caltrans drain on the north side of the Ventura Freeway. The small portion of Drainage Area 1 located between the Ventura Freeway, Myrtle Street and Vineyard Avenue drains to Vineyard Avenue.

Drainage Area 2

This drainage area consists of RiverPark Area 'B'. The existing sand and gravel mine occupies the majority of this area. The existing Large Woolsey, Small Woolsey, Brigham and Vickers mine pits occupy the northern and eastern portions of the mine site. The plant and stockpile areas occupy make up the remainder of the mine site. The land uses in this area may be characterized as vacant/open and groundwater-filled mining pits. There are existing drains to the Santa Clara River at the southwest corner of the mine site and at the northwest corner of the mine plant area. An open earth drainage channel along the boundary of River Park Areas 'A' and 'drains to a 48-inch outlet through the levee to the river. At the northwest corner of the plant area there are 48-inch and 36-inch drain outlets through the levee. The topography in this portion of the mine site is varied due to the historic mining operations of cutting, filling, and disposal of tailings. A minor amount of the storm flows from this area drain to the west towards the earth drainage ditch located on the boundary of River Park Areas 'A' and 'B' and discharges to the Santa Clara River. The majority of the flows from these areas flow towards and into the existing Brigham/Vickers mine pit via an earthen ditch and pipe.

Drainage Area 3

Drainage Area 3 is an off-site agricultural and industrial drainage area comprised of the Beedy Street, Lambert Street, Montgomery Street and Carnegie Street areas. Each street's existing stormwater collection system is comprised of minor pipe and overland drainage systems. Stormwater from each separate collection system currently discharges directly to the adjacent Large Woolsey and Small Woolsey mine pits.

Drainage Area 4

This drainage area consists of the agricultural land located east of Vineyard Avenue, north of the El Rio Community and south of Central Avenue. The majority of the northern and western portion of this area currently drains across Vineyard Avenue to El Rio Retention Basins No. 1 and 2. El Rio Retention Basin No. 1 is an approximate 10-acre basin. El Rio Retention Basin No. 2 is an approximate 65-acre retention basin. Drainage from this area is collected in a 78-inch drain located in the vicinity of Lemar Avenue and Vineyard Avenue which discharges into El Rio Retention Basin No. 1. There is an 84-inch outlet from this basin that connects to El Rio Retention Basin No. 2, where the majority of high flow events are stored. These combined basins have 100-year storm storage capacities. Flows are retained in these basins and percolate into the aquifer and/or evaporate into the atmosphere. Any excess runoff from El Rio Retention Basin No. 2 is discharged into the existing earth drainage ditch along the boundary of RiverPark Areas 'A' and 'B' that drains to the Santa Clara River.

Groundwater Recharge and Water Balance

Two types of existing water balances were examined. A water balance is an accounting of water inflows and outflows to determine whether resources and uses are in balance. If outflows exceed inflows, then the balance is negative and if the inflows exceed the outflows, then the balance is positive. If inflows equal outflows, then the balance is in equilibrium. One water balance type is regional, covering the Montalvo Forebay, and provides the regional context for the site analysis; the second type is site-specific, accounting for how existing land use on the RiverPark Specific Plan Area affects groundwater. Both types of water balances estimate inflow and outflow components of the groundwater system over a 20-year period covering water years 1979-80 through 1998-99. Due to data collection frequency for groundwater pumping, a water year is defined as July 1 through June 30 for the purposes of these water

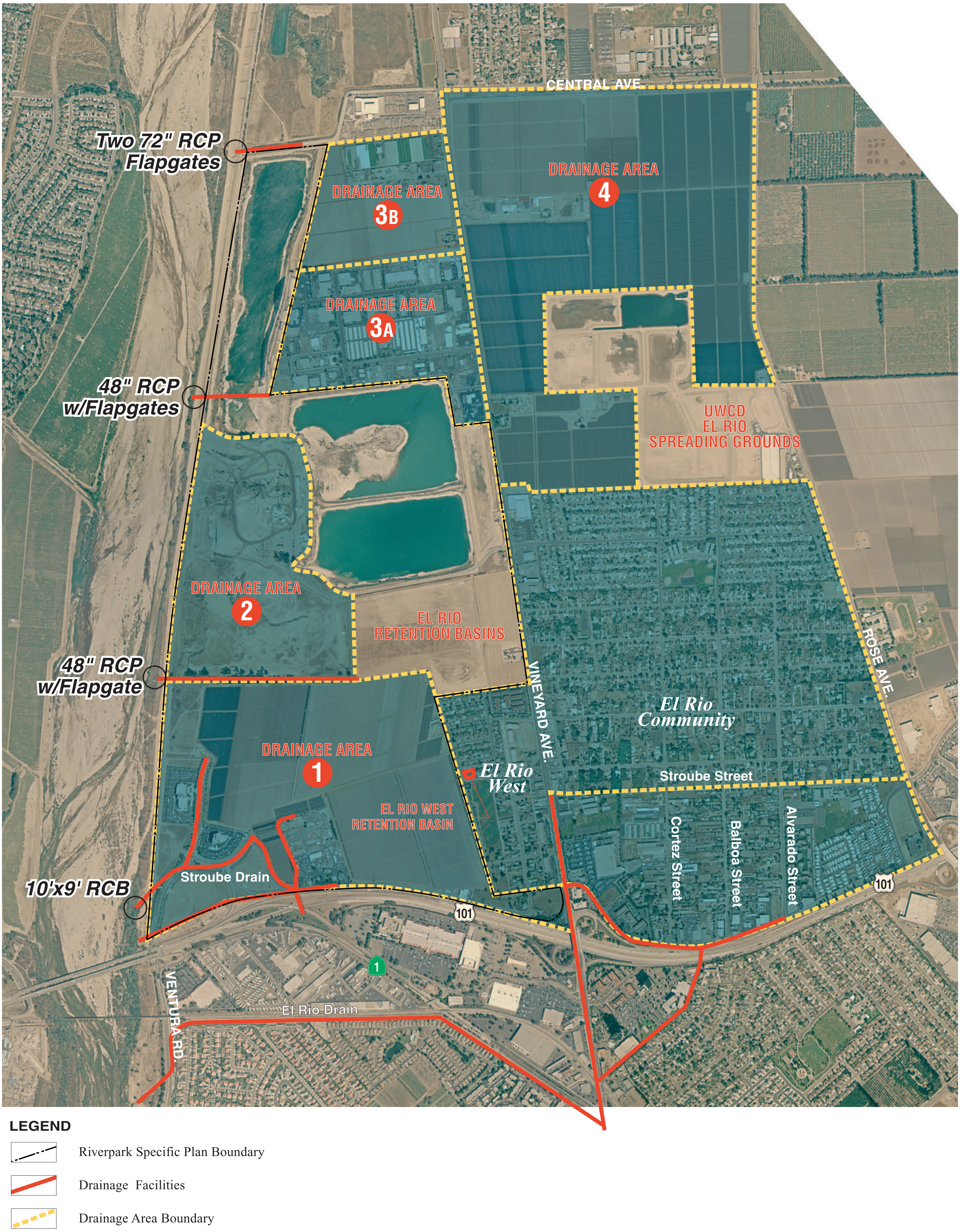

FIGURE 4.5-5

Existing Drainage Characteristics

balances. This definition is consistent with methodology used by UWCD in their annual water balances covering six subbasins including the Montalvo Forebay.[20]

Regional Water Balance

The regional water balance addresses approximately 5,761 acres of the subbasin surrounding the RiverPark Specific Plan Area. The total acreage of the Montalvo Forebay (approximately 6,461 acres) has been adjusted for the regional water balance to exclude the 701 acres of the RiverPark Specific Plan Area, which were examined separately in the site-specific water balances.

The result of inflows minus outflows, as defined in this regional water balance, represents the annual change in storage in the Montalvo Forebay plus subsurface outflow into the adjacent Oxnard Plain subbasin. The balance estimates the regional amount of water moving through the Montalvo Forebay to compare to the local gains and losses beneath the RiverPark Specific Plan Area. The regional water balance is summarized in Table 4.5-2 and discussed in more detail below.

Methodology

The regional water balance analysis is based upon the methodology outlined by UWCD.[21] This methodology is used to develop an annual groundwater conditions report that is submitted to the State annually. The balance incorporates precipitation, natural recharge, artificial recharge and return flow as inflow or recharge components and groundwater extraction and phreatophyte consumptive use as outflow or discharge components.[22] Slight departures from the UWCD methodology involve two components: infiltration from rainfall for the entire water balance and infiltration from the Santa Clara River for water years prior to 1992-93, both discussed in more detail below.

Inflow components incorporated into the Montalvo Forebay water balance include the following:

- Infiltration from precipitation;
- Infiltration from streamflow; and
- Artificial recharge in the Saticoy, El Rio, and Noble pit spreading grounds.

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[20] United Water Conservation District. *Surface and Groundwater Conditions Report, Water Year 1998.* July 1999.

[21] United Water Conservation District. *Annual Investigation and Report of Groundwater Conditions within United Water Conservation District, A Summary of Findings for the Previous Water Year (1997-98), Current Water Year (1998-99), and Ensuing Water Year (1999-2000).* March 1999.

[22] United Water Conservation District. *Annual Investigation and Report of Groundwater Conditions within United Water Conservation District, A Summary of Findings for the Previous Water Year (1997-98), Current Water Year (1998-99), and Ensuing Water Year (1999-2000).* March 1999.

Table 4.5-2
Regional Water Balance - Montalvo Forebay

Water Year*	Inflow Components			Outflow Components		Forebay Balance
	Precipitation Infiltration (AFY)	Streamflow Infiltration (AFY)	Artificial Recharge (AFY)	Adjusted Pumping** (less return flows) (AFY)	Phreat. Uptake (AFY)	Change in Storage & Subsurface Outflow (AFY)
1979-1980	1,237	21,544	81,416	20,394	224	83,578
1980-1981	0	1,079	77,071	20,629	224	57,297
1981-1982	294	2,605	65,178	20,229	224	47,623
1982-1983	3,607	27,549	61,686	19,562	224	73,056
1983-1984	309	3,500	71,232	21,105	224	53,712
1984-1985	0	771	63,205	21,503	224	42,249
1985-1986	1,064	16,505	54,597	21,207	224	50,735
1986-1987	0	0	35,634	22,176	224	13,234
1987-1988	295	2,703	50,752	21,839	224	31,687
1988-1989	0	0	18,017	22,451	224	-4,658
1989-1990	0	0	10,611	23,074	224	-12,688
1990-1991	303	3,178	32,769	21,660	224	14,367
1991-1992	441	11,227	63,255	12,664	224	62,036
1992-1993	2,320	8,082	93,458	19,655	224	83,981
1993-1994	0	7,100	72,670	21,298	224	58,248
1994-1995	2,449	26,878	76,635	18,172	224	87,566
1995-1996	313	1,632	77,148	12,967	224	65,903
1996-1997	332	6,002	56,477	18,554	224	44,032
1997-1998	4,557	46,298	84,126	22,651	224	112,106
1998-1999	0	539	80,546	22,459	224	58,402
Minimum	0	0	10,611	12,664	224	-12,688
Maximum	4,557	46,298	93,458	23,074	224	112,106
20-Year Ave	876	9,360	61,324	20,212	224	51,123

* Water Year is July – June.
** Total pumping in the Montalvo Forebay has been adjusted to reflect return flows from non-exported pumpage. Return flows assumed to be 35 percent of non-exported pumpage. Does not include pumpage from the RiverPark site.
Additional Notes:
Water Balance covers 5,760 acres [Approximate Montalvo Forebay area of 6,461 acres (UWCD, GIS, 2000) less RiverPark area of 701 acres].

Infiltration from precipitation. Precipitation infiltration is the amount of rainfall that percolates through the soil column to recharge groundwater. In general only a small percentage of rainfall (generally less than 25 percent) is available for groundwater recharge due to other processes such as evaporation and runoff. Infiltration is dependent on the amount of rainfall and the amount of moisture in the surficial soils. Water from small rainfall events onto dry soils may be held through capillary forces in the upper soil zone and evaporated. Conversely, large amounts of rainfall onto moist soils may result in a larger percentage of rainfall recharge. For the regional water balance, the estimated amount of rainfall infiltration is allocated on a percentage of precipitation basis from 0 percent recharge for less than 12 inches of annual rainfall to 25 percent recharge for 30 inches or more of annual rainfall.

Annual precipitation data (Figure 4.5-4) from the nearby El Rio station were provided by UWCD and used for both the regional water balance and the site-specific water balances. Over the 20-year period, estimates of precipitation infiltration ranged from a minimum of 0 acre-feet per year (AFY) during several years of low precipitation to 4,557 AFY in 1998 when annual precipitation exceeded 35 inches (Table 4.5-2).

Infiltration from streamflow. Under certain flow and water level conditions, streamflow along the Santa Clara River recharges groundwater in the Montalvo Forebay. A lack of historic streamflow data at the upstream boundary of the Montalvo Forebay complicates the estimation of this water balance component. UWCD conducted detailed calculations of the upstream flow for their water balances from water year 1992-93 through water year 1998-99, which were used in this study. To estimate streamflow infiltration amounts for years prior to 1992-93, a simple regression analysis relating streamflow infiltration to precipitation was conducted. This resulted in highly variable infiltration amounts over time, which is consistent with the UWCD calculations. It is recognized that this analysis does not account for antecedent water level conditions and contains uncertainty due to its simplicity. However since the Montalvo Forebay water balance is used only for regional context, it is considered sufficient for the purposes of this analysis. Estimates of streamflow infiltration over the 20-year period ranged from 0 AFY during several years of low precipitation to 46,298 AFY in 1998 (Table 4.5-2).

Artificial recharge. Surface water diversions and recharge amounts at the Saticoy, El Rio, and Noble spreading grounds are measured directly by UWCD and were provided. Historical artificial recharge for the 20-year period is shown graphically on Figure 4.5-6. Artificial recharge represents the largest inflow component in the water balance and ranges from 10,611 AFY in 1989-90 to 93,458 AFY in 1992-93 (Table 4.5-2).

Other potential inflows. Additional inflow to the groundwater system includes return flows, which is the amount of water pumped from the basin that is not consumed by users and allowed to infiltrate back into the basin. Examples of return flows include irrigation water that is not consumed by crops or wastewater that is allowed to percolate from septic systems. The Montalvo Forebay water balance accounts for return flows by reducing the reported pumping amounts that are not exported out of the basin by 35 percent. This methodology is consistent with consumptive use estimates used by UWCD in their annual water balance calculations.[23]

Subsurface inflow from adjacent subbasins and bedrock areas are not considered in the water balance. These quantities are difficult to estimate and are likely small compared to the major water balance

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23 United Water Conservation District. *Annual Investigation and Report of Groundwater Conditions within United Water Conservation District, A Summary of Findings for the Previous Water Year (1997-98), Current Water Year (1998-99), and Ensuing Water Year (1999-2000).* March 1999.

components. Since the Montalvo Forebay water balance is used only for regional context, ignoring these additional inflows is considered adequate for this analysis.

Outflows. Outflow components of the regional water balance include the following:

- Groundwater pumping; and
- Phreatophyte uptake.

Groundwater pumping. Groundwater is pumped from the Montalvo Forebay for agriculture and municipal use. Pumping is metered and reported to UWCD on a semi-annual basis. Both UWCD and Fox Canyon GMA provided electronic databases of pumping amounts for use in this analysis. These data are summarized on a water-year basis on Figure 4.5-7.

During the 20-year study period, pumping has ranged from 17,485 AFY to 29,354 AFY (Figure 4.5-7). Approximately one-half of the pumping is used locally and one-half is exported from the Montalvo Forebay to provide water supply to users in areas affected by seawater intrusion. Pumpage for export occurs from 8 wells located at the El Rio spreading grounds.

With the exception of the El Rio pumping, all water is assumed to be used within the Montalvo Forebay and, to some extent, subject to return flows. As previously stated, 65 percent of non-exported pumping is assumed to be consumed and 35 percent is assumed to be returned to the basin, consistent with UWCD methodology. In addition, pumpage on the RiverPark Specific Plan Area has been removed from the regional balance and accounted for separately on the site-specific water balances. Accounting for these adjustments, the pumping outflow component used in the regional water balance ranged from 12,664 AFY in 1991-92 to 23,074 AFY in 1989-90 (Table 4.5-2).

Phreatophyte uptake. Phreatophyte uptake is the amount of water consumed by deep-root plants primarily located along the Santa Clara River. This outflow component is estimated by UWCD to be 3.5 AFY per acre along the Santa Clara River channel.[24] Assuming 64 acres of phreatophyte acreage in the Montalvo Forebay subbasin,[25] the phreatophyte uptake is estimated at 224 AFY in each year of the balance (Table 4.5-2).

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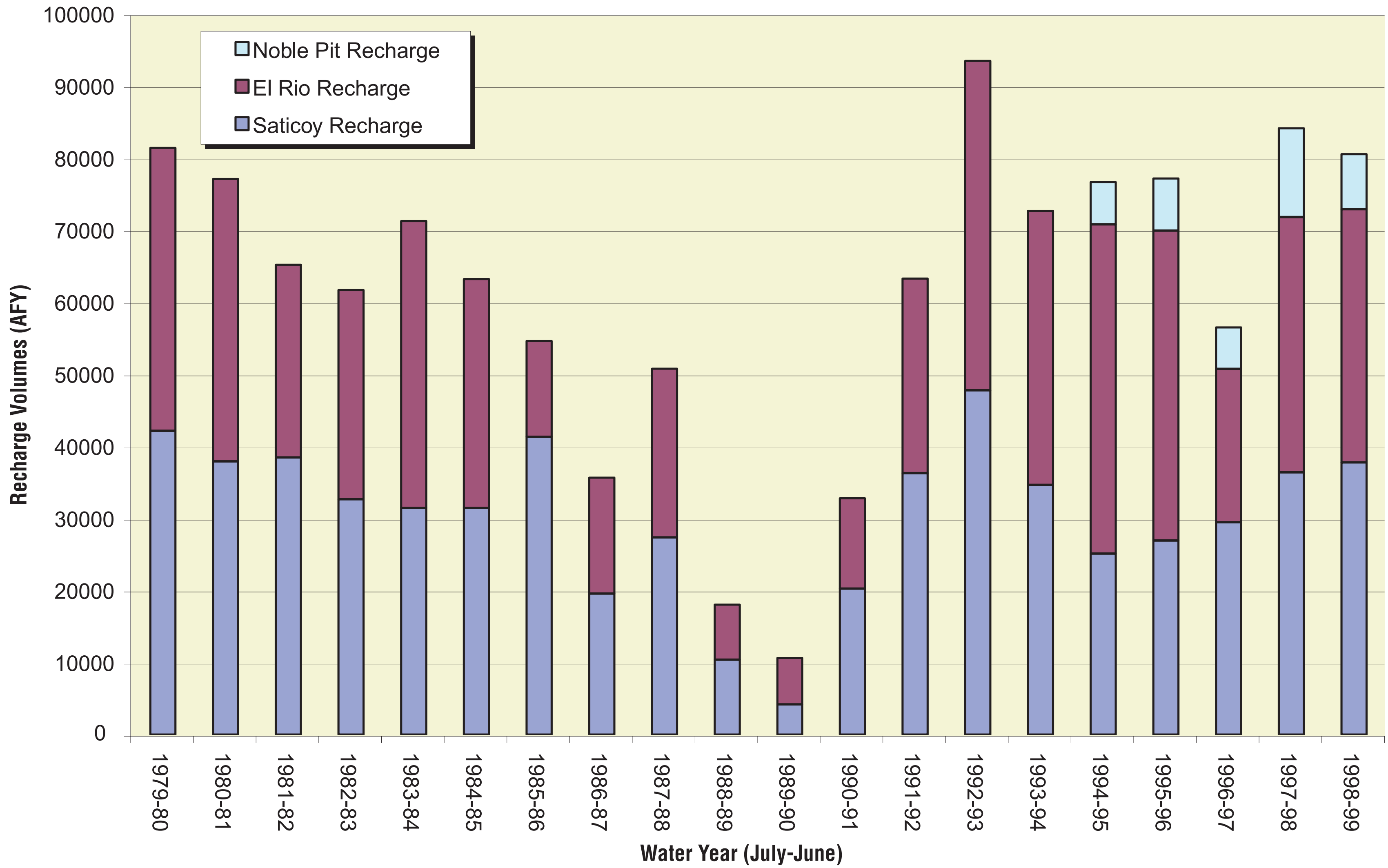
24 United Water Conservation District. *Annual Investigation and Report of Groundwater Conditions within United Water Conservation District, A Summary of Findings for the Previous Water Year (1997-98), Current Water Year (1998-99), and Ensuing Water Year (1999-2000).* March 1999.

25 United Water Conservation District. *Annual Investigation and Report of Groundwater Conditions within United Water Conservation District, A Summary of Findings for the Previous Water Year (1997-98), Current Water Year (1998-99), and Ensuing Water Year (1999-2000).* March 1999.



SOURCE: Kennedy/Jenks Consultants, September 2001.

FIGURE **4.5-6**

Artificial Recharge Montalvo Forebay

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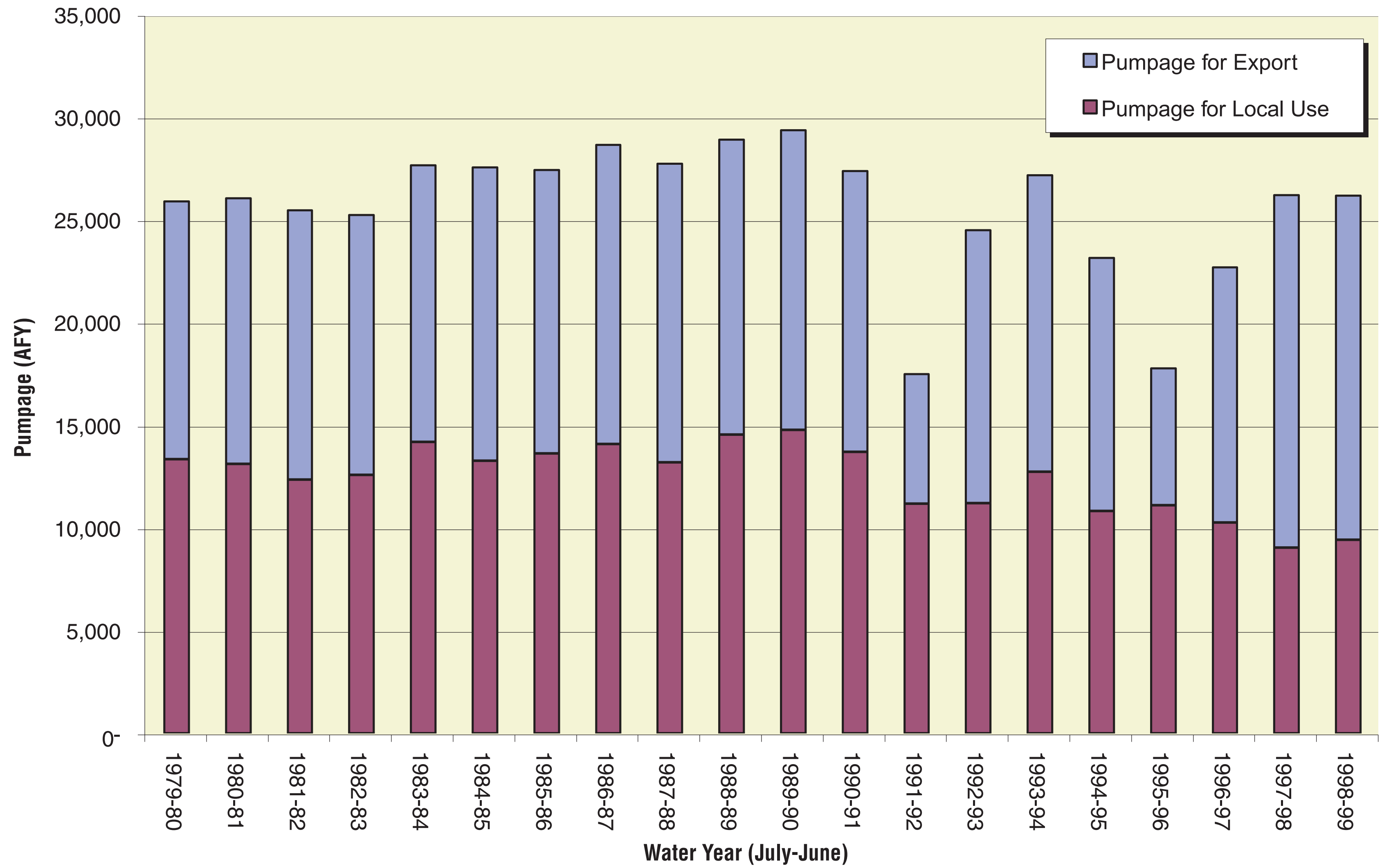

FIGURE 4.5-7

Total Pumpage Montalvo Forebay

39-22•11/01

Based on these data and assumptions, the regional water balance for the Montalvo Forebay has been summarized for the last 20 years (Table 4.5-2). Because subsurface outflow to the Oxnard Plain has not been incorporated as a separate outflow component, the difference between the inflows and outflows represents any change in storage in the Montalvo Forebay as well as subsurface outflow to the Oxnard Plain. Positive numbers reflect water level rises and increased outflow into the Oxnard Plain, and negative results reflect water level declines in the Montalvo Forebay and decreased outflow to the Oxnard Plain.

As shown on Table 4.5-2, the water balance indicates a range of storage change (plus subsurface outflows) from –12,688 AFY in 1989-90 when outflow exceeded inflow to 112,106 AFY in 1997-98 when large volumes of artificial and natural recharge occurred due to increased rainfall. The 20-year average storage change plus subsurface outflow is 51,123 AFY. Because water levels are similar at both the beginning and end of the period, no net storage change has apparently occurred over the 20-year period. Therefore, it is assumed that the average result from the water balance, 51,123 AFY, represents an average annual subsurface outflow from the Montalvo Forebay into the Oxnard Plain.

RiverPark Specific Plan Area Water Balance

Site-specific water balances were conducted on the existing conditions to determine the site's interaction with the groundwater system to compare to the project water balances. The result of inflows minus outflows in the existing conditions balances represent the net loss or gain to the groundwater beneath the 701-acre RiverPark Specific Plan Area resulting from existing conditions. The existing conditions at the site involve the current physical setting as required by CEQA.

Four separate water balances were performed over the 20-year period for portions of the RiverPark Specific Plan Area based on existing land use conditions. These land uses are illustrated by a schematic cross-section on Figure 4.5-8 and summarized below:

- Undeveloped open space – 209.5 acres;
- Agricultural acreage – 208.0 acres (includes 154.5 acres in RiverPark Area 'A', 2.8 acres in RiverPark Area 'B', 15.7 acres adjacent to El Rio Drainage Basin No. 2 in RiverPark Area 'B', and 350 acres in El Rio Drainage Basin No. 2 in RiverPark Area 'B');
- Stormwater detention basins – 29.3 acres (includes 64.3 acres of detention basins less 35 acres of agriculture covering a portion of one detention basin);
- Existing mine pits – 213.1 acres (includes the Large Woolsey, Small Woolsey, Vickers, and Brigham mine pits).

In addition, an estimate of onsite industrial pumping that is lost from the groundwater system was also incorporated into the site's existing conditions analysis.

The water balance covers 660 acres of the 701-acre RiverPark Specific Plan Area, with the remaining 41 acres containing existing offices that will be unchanged by the RiverPark Specific Plan. The water balances estimate the net groundwater gain or loss on a monthly basis over the 20-year period 1979-80 through 1998-99, the same period as the Montalvo Forebay water balance. The net impact to groundwater for each of the balances is then combined for the total existing conditions impact to groundwater beneath the site. Similar project balances have also been prepared for comparison to the existing conditions balances to estimate the impact of the project on groundwater quantity.

The purpose of the 20-year analysis is to examine existing conditions under a wide variety of hydrologic conditions rather than to re-create historic conditions. As such, current conditions of the mine pits and site drainage configuration were held constant over the 20 years, with the progression of mining over time purposefully excluded. Consistent with this approach, current conditions at the Ventura County stormwater detention basins, including current agricultural activities inside the basins, were assumed constant for the entire period, even though the stormwater detention basins were not constructed until 1997 and agricultural activity was not present in the detention basins until June 2000.[26] Historical hydrological data were incorporated including 20 years of monthly precipitation, evaporation, groundwater pumping, and water levels. Assumptions, data, and methodology incorporated into each of the four site water balances are summarized below. Complete existing conditions water balance calculations are included as Attachments 1 through 4 in Appendix 4.5-3.

Methodology

With the exception of the Agricultural Acreage water balance, each site water balance evaluates changing soil moisture conditions with varying precipitation, evaporation, and surface water runoff in order to estimate recharge to groundwater. Specific data and sources used in the balances are summarized below:

- Monthly precipitation data measured at El Rio Precipitation Station 239E;
- Monthly pan evaporation data from El Rio Station 1985-1999 (monthly averages are used for 1979-1985 in the absence of time-specific data); and
- Soil moisture holding capacities on the RiverPark Specific Plan Area from the Ventura County Soil Survey.[27]

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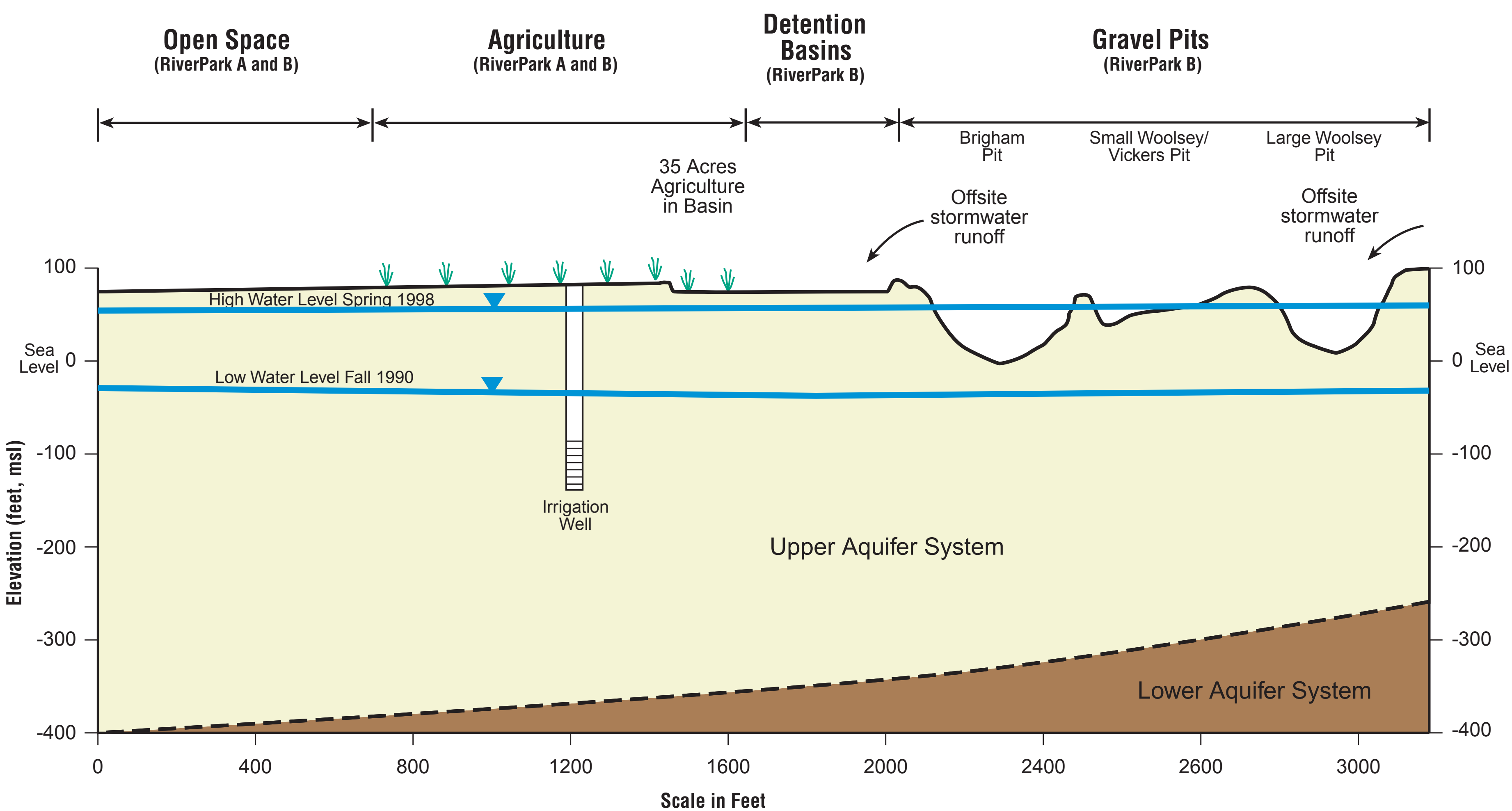
26 Keith Filegar, Ventura County. Personal communication. February 6, 2000.

27 United States Department of Agriculture, Soil Conservation Service (in cooperation with University of California, Agricultural Experiment Station. *Soil Survey, Ventura Area, California.* April 1970.



SOURCE: Todd Engineers, September 2001.

FIGURE **4.5-8**

Riverpark Pre-Project Water Balances

The Agriculture Acreage water balance incorporates a more simplistic approach that assumes an irrigation efficiency of 80 percent and applies 20 percent of irrigation pumping to groundwater recharge as return flow, consistent with methodology applied by the County of Ventura. Since irrigation pumping is from onsite wells, and 20 percent is assumed to be recharge from return flows, it follows that 80 percent of the pumpage is the amount lost from the system as a result of agricultural activities or runoff.

Additional assumptions and methodology for each of the existing conditions site water balances are presented below.

Existing Mine Pits

The current pit configuration covering 213.1 acres of pit walls, bottoms, and perimeter drainage areas was used in the existing mine pits water balance. A 1997 topographic map was the most reliable source available for the current limits of excavation, but the map was judged unreliable for pit bottom topography since the pit bottoms were under water during the time of mapping. A 1992 topographic map was judged to be the most reliable of the pit bottoms because water levels were lower in 1992 and the pit bottoms were exposed. Therefore, acreages from the two maps were combined, using the 1997 map for elevations above 60 feet msl, the 1992 map for elevations below 50 feet msl, and a linear interpolation for elevations between 50 and 60 feet msl. Specific acreages for the total pit area as well as acreages associated with certain pit elevations were calculated by TetraTech ASL Consulting Engineers using electronic versions of the two topographic maps.

The area within certain pit elevations was used to estimate the area of groundwater exposed in the pits during each month of the 20-year period. Water levels were estimated in each of the four pits by adjusting water levels measured in nearby well 2N/22W-22H1. To estimate evaporative loss from the water surface or soil zone, pan evaporation data were adjusted with a typical lake factor of 0.75 when the water table was exposed, or a typical dry soil factor of 0.35 when the water level was completely below the pit bottom. These factors are commonly applied to account for lower site-specific evaporative conditions than measured in a shallow pan.[28]

Surface water runoff combines with precipitation as an additional source of water into the pits. Currently, runoff from an adjacent property is diverted onto the RiverPark Specific Plan Area and into the mine pits. Runoff from about 170 acres of industrial area flows onsite through several storm drains.

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28 Dunne, Thomas and Leopold, Luna B. *Water in Environmental Planning*. 1978.

Monthly runoff volumes were calculated by applying a runoff factor to precipitation based on the amount of impervious acreage and consistent with Ventura County methodology. Precipitation that falls within the 213.1 acres of the pits is conserved within the balance; no runoff is assumed to flow away from the pit area.

The Existing Mine Pits water balance is included in Appendix 4.5-3 as Attachment 1. Water balance results estimate net gains and net losses on an annual basis to the groundwater system. Net gains representing recharge to groundwater in and below the existing mine pits are as high as about 372 AFY. Net losses, (represented in the water balance by a negative number), result predominantly from evaporation of exposed groundwater and were as much as –416 AFY. Water balance results are summarized on Table 4.5-3.

Table 4.5-3
RiverPark Site Water Balances - Existing Conditions Analysis

	Individual Site Water Balances and Industrial Use - Existing Conditions					Water Balance
Water Year	Existing Gravel Pits (AFY)	Drainage Basins (AFY)	Open Space (AFY)	Agricultural Acreage (AFY)	Industrial Use (AFY)	Existing* Conditions(AFY)
1979-1980	33	212	159	-57	-132	216
1980-1981	-320	84	14	-107	-132	-461
1981-1982	-228	84	0	-604	-132	-880
1982-1983	214	256	175	-928	-132	-414
1983-1984	-282	86	11	-1,172	-132	-1,489
1984-1985	-291	69	0	-805	-132	-1,160
1985-1986	80	180	99	-682	-132	-455
1986-1987	-202	45	0	-896	-132	-1,185
1987-1988	-77	79	0	-655	-132	-785
1988-1989	-35	49	0	-550	-132	-668
1989-1990	10	20	0	-481	-132	-583
1990-1991	198	100	63	-745	-132	-516
1991-1992	306	155	113	-469	-132	-28
1992-1993	358	228	205	-523	-132	136
1993-1994	-161	76	13	-648	-132	-852
1994-1995	275	239	214	-497	-132	99
1995-1996	-218	99	47	-576	-132	-780
1996-1997	-236	112	58	-669	-132	-867
1997-1998	372	340	280	-516	-132	343
1998-1999	-416	58	0	-640	-132	-1,130
Minimum	-416	20	0	-1,172	-132	-1,489
Maximum	372	340	280	-57	-132	343
20-Year Ave	-31	129	73	-611	-132	-573

* Existing Conditions = Sum of the water balances and industrial use.

Stormwater Drainage Basins

Ventura County operates El Rio Drainage Basins No. 1 and 2 covering 64.3 acres on the RiverPark property. Approximately 35 acres of the 64.3 acres are used for agriculture (strawberries), leaving 29.3

acres designated as dedicated drainage basin land use. The basins hold and recharge diverted stormwater runoff from an offsite, adjacent 330-acre agricultural property for flood control. The drainage basins are generally above 75 feet msl. Groundwater elevations from a nearby well reach a high of 74.9 feet msl indicating that the water table may have risen close to the basin bottom for a brief period, but it is not predicted to remain exposed for a length of time that would substantially impact the water balance. Therefore, for the purposes of this analysis, a simplifying assumption was made that groundwater levels do not rise above the drainage basin bottom, and changing acreages of groundwater exposure do not complicate the water balance. The basins were originally sized to handle a 100-year storm, and as such, it is assumed that the basins do not overflow, conserving precipitation and other water sources within the balance. Water balance results are summarized on Table 4.5-3.

Precipitation and adjusted pan evaporation data used in the other balances are also used in the Drainage Basins water balance. Surface water runoff into the basins was calculated as a factor of precipitation based on the amount of impervious acreage on the adjacent property where the runoff is generated. A soil moisture holding capacity was used from the Ventura County Soil Survey,[29] which was consistent with observed infiltration rates at the detention basins by County personnel.[30]

The Drainage Basins water balance is included in Appendix 4.5-3 as Attachment 2. During the 20-year period, annual groundwater recharge beneath the basin ranges from 20 AFY during the drought year 1989-90 up to 340 AFY during the high precipitation events of 1997-98.

Undeveloped Open Space

The existing conditions water balance for the existing open space on the site is a more straightforward application of a soil moisture balance without the complicating factors of exposed water tables or diverted surface water runoff. Precipitation and evaporation data are the same as used in previous balances. Also consistent with the other balances, a dry soil evaporation factor of 0.35 was applied to the pan evaporation data to account for the rapid infiltration and lower evaporation than occurs in a shallow pan. A soil moisture holding capacity was applied from the Ventura County Soil Survey.[31] For simplicity, one soil permeability value was applied to the entire open space area, and the presence of lower permeability fill material was not incorporated. This is considered conservative, given that

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29 United States Department of Agriculture, Soil Conservation Service (in cooperation with University of California, Agricultural Experiment Station. *Soil Survey, Ventura Area, California*. April 1970.

30 Hugh Clabaugh, Ventura County Flood Control District. Personal communication. June 13, 2000.

31 United States Department of Agriculture, Soil Conservation Service (in cooperation with University of California, Agricultural Experiment Station. *Soil Survey, Ventura Area, California*. April 1970.

the use of a higher permeability overstates the amount of recharge to groundwater from existing conditions.

Surface water runoff from the Open Space balance was estimated by applying a runoff factor to precipitation that incorporates the pervious nature of the site's open space and is consistent with methodology applied by Ventura County. Calculated runoff was subtracted from precipitation to remove runoff volumes from the water balance so that groundwater recharge could be estimated.

The Open Space water balance is included in Appendix 4.5-3 as Attachment 3. During the 20-year period, annual groundwater recharge beneath the basin ranges from no recharge during several years when annual precipitation was generally below 12 inches up to 280 AFY during the high precipitation events of 1997-98.

Agricultural Acreage

Agricultural acreage on the RiverPark Specific Plan Area includes four strawberry fields:

- 154.5 acres on RiverPark Area 'A';
- 2.8 acres on RiverPark Area 'B' along Vineyard Avenue;
- 35.0 acres in El Rio Drainage Basin No. 2 in RiverPark Area 'B'; and
- 15.7 acres adjacent to El Rio Drainage Basin No. 2 in RiverPark Area 'B'.

Each of the four parcels is irrigated by onsite wells.

For the 154.5-acre and 2.8-acre parcels, the Agricultural Acreage water balance is based on irrigation pumping records and an assumed irrigation efficiency to estimate an annual groundwater recharge. UWCD and Fox Canyon GMA provided irrigation well data. An irrigation efficiency of 80 percent (return flows of 20 percent) was used, consistent with efficiencies applied to other projects by Ventura County.[32] Irrigation efficiency of 80 percent means that 80 percent of the water pumped for irrigation is consumed and lost from the system. Therefore, 80 percent of the pumping totals from irrigation wells (represented as a negative number to indicate a loss) represents the annual balance for these two parcels.

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[32] Lowell Preston. Ventura County Public Works Agency, Water Resources Division. Personal communication. May 22, 2000.

For the 35.0-acre and 15.7-acre parcels, the Agricultural Acreage water balance is based on annual applied irrigation rates (AF/acre) for the 154.5-acre and 2.8-acre parcels and the assumed 80 percent irrigation efficiency to estimate an annual groundwater recharge. Historical irrigation data for the 35.0 and 15.7-acre parcels were not available, because agricultural activity did not exist on these parcels until June 2000.

The simple application of return flows into the water balance provides an estimate of annual net losses from the agricultural acreage considered adequate for the purposes of estimating the existing condition.

A table summarizing the consumptive use of the existing RiverPark agricultural acreage to compare to the other site water balances is included in Appendix 4.5-3 as Attachment 4. Combined groundwater usage on the agricultural acreage is also summarized on Table 4.5-3. Groundwater losses from irrigation (less return flows) change with annual reported irrigation and range from -57 AFY to –1,172 AFY (Attachment 4 and Table 4.5-3).

Onsite Pumping

Onsite industrial pumping associated with sand and gravel mining is also considered in the existing condition. In the recent past, onsite pumping was used for sand and gravel washing, which required large pumping volumes. However, most of the water associated with the washing process flowed back into the mine pits or onsite ponds, with only a small percentage lost from the groundwater system. However, current pumping onsite is used only for dust control and concrete production, requiring about 147 AFY of pumped water. A large percentage of the current pumping is typically consumed by concrete production and is assumed to be lost from the system for this reason. As previously stated, the purpose of estimating the existing water balance is not to re-create historic conditions but rather to analyze existing conditions under a wide variety of hydrologic conditions. Therefore, for purposes of the 20-year water balance, current pumping is incorporated into the combined site balance at a constant rate and is assumed to be 90 percent consumed by the concrete making process. This represents a loss of -132 AFY from the groundwater system, based on recent pumping records (Table 4.5-3).

Existing Conditions Analysis

Annual results from the four site water balances - Existing Mine Pits, Drainage Basins, Open Space, and Agricultural Acreage - are summarized in Table 4.5-3. Positive numbers indicate a net increase in groundwater recharge; negative numbers indicate a net loss of groundwater (from evaporation and/or crop consumption). The table also includes the industrial use pumping that is consumed by the concrete production and lost from the groundwater system. As noted in the text, current pumping is maintained for the entire 20-year period.

When the four water balances and industrial use are combined, the changes to the groundwater system from the existing conditions on the site can be estimated.

As summarized in Table 4.5-3, Existing Conditions indicates that the site results in a net loss from the groundwater system during most of the 20-year period (16 of 20 years). Annual gains and losses range from –1,489 AFY net loss to 343 AFY groundwater recharge. The –1,489 AFY represents a net loss from the groundwater system predominantly due to mine pit evaporation and consumptive use from agriculture and industrial water supply. The net recharge of 343 AFY occurs during times of high precipitation, low evaporation, and relatively low agricultural pumping such as during water year 1997-98. The 20-year average impact to groundwater from Existing Conditions is –573 AFY. As seen on Table 4.5-3, the Existing Conditions analysis indicates that the site is a net consumer of groundwater under average conditions.

When compared to the average regional water balance for the Montalvo Forebay, the RiverPark Specific Plan Area consumes approximately 1.1 percent of the average annual change in subsurface outflow to the Oxnard Plain under Existing Conditions (-573 AFY, Table 4.5-3 compared to 51,123 AFY, Table 4.5-2).

REGULATORY SETTING

Water quality is addressed by a variety of federal, state and local laws, plans, regulations and policies. An overview of this regulatory setting is provided below.

Federal Water Quality Planning

Federal Pollution Control Act

The Federal Pollution Control Act, commonly known as the Clean Water Act (CWA), was originally enacted in 1948. The Act was amended by the Federal Water Pollution Control Act Amendments in 1972 with the primary purpose of restoring and maintaining the chemical, physical, and biological integrity of the nation's water, to achieve a level of water quality which provides for recreation in and on the water, and for the propagation of fish and wildlife. Section 208 of CWA and the requirements of the Code of Federal Regulations (CFRs) specify general designation procedures, time constraints, grant funding criteria, and minimum content requirements for local water management plans. Preparation of these water management plans has been delegated to the individual states by the U.S. EPA, which is charged with implementing the CWA.

EPA California Toxics Rule

The U.S. Environmental Protection Agency has developed water quality criteria for priority toxic pollutants and other provisions for water quality standards to be applied to inland surface waters, enclosed bays, and estuaries in the State of California. This rule was developed to address a gap in California's water quality standards that was created when the state's water quality control plans containing water quality criteria for priority toxic pollutants was overturned in 1994. The established numerical standards were deemed necessary to protect human health and the environment. The rule includes ambient aquatic life criteria for 23 priority toxic pollutants, ambient human health criteria for 57 priority toxics, and a compliance schedule.

Safe Drinking Water Act of 1974

The passage of the federal Safe Drinking Water Act (SDWA) of 1974 established mandatory nationwide minimum standards to be established and enforced by the US EPA. California adopted its own Safe Drinking Water Act in 1976 that gave California Department of Health Services (DHS) the responsibility for the administration of the federal SDWA in California. Under this program, the US EPA has delegated primary responsibility for setting and enforcing drinking water standards to the DHS. DHS has two approaches to standards for drinking water quality. The first approach is to safeguard public welfare by limiting the level of specific contaminants that can impact public health. These limits are identified as Primary Maximum Contaminant Levels (MCLs) and are specific concentrations that cannot be exceeded for a given constituent. The second approach is a treatment technique that is based on distribution system sampling in comparison to an action level. If the action level is exceeded in more than 10 percent of the samples, then additional treatment is required of the water supplier. Currently, treatment technique limits apply only to copper and lead. DHS also has established Secondary Maximum Contaminant Levels (SMCLs) that regulate constituents that affect water quality aesthetics (such as taste, odor, or color). Generally, DHS uses the SMCL as guidelines. A summary of the MCLs and SMCLs are presented below in Tables 4.5-4 and 4.5-5, respectively.

Table 4.5-4
Primary Drinking Water Standards

Constituent	MCL (mg/L)	Constituent	MCL (mg/L)
Inorganic Chemicals		Organic Chemicals	
Antimony	0.006	Acrylamide	(b)
Arsenic	0.05	Alachlor	0.002
Asbsetos	7 million fibers per liter	Atrazine	0.003
Barium	2	Benzene	0.005
Beryllium	0.004	Benzo(a)pyrene	0.0002
Cadmium	0.005	Carbofuran	0.04
Total Chromium	0.1	Carbon tetrachloride	0.005
Copper	1.3 (a)	Chlordane	0.002
Cyanide (as free cyanide)	0.2	Chlorobenzene	0.1
Fluoride	4	2,4,-D	0.07
Lead	0.015 (a)	Dalapon	0.2
Inorganic mercury	0.002	1,2-Dibromo-3-chloropropane (DBCP)	0.0002
Nitrate (as N)	10	o-Dichlorobenzene	0.6
Nitrite (as N)	1	p-Dichlorobenzene	0.075
Selenium	0.05	1,2-Dichloroethane	0.005
Thallium	0.0005	1,1-Dichloroethylene	0.007
Radionuclides		cis-1,2-Dichloroethylene	0.07
Beta particles and photon emitters	4 millirems per year	trans-1,2-Dichloroethylene	0.1
Gross alpha particle activity	15 pCi/L	Dichloromethane	0.005
Radium 226 and Radium 228	5 pCi/L	1,2-Dichloropropane	0.005
Microorganisms		Di(2-ethylhexyl)adiapate	0.4
Giardia lamblia	3-log removal	Di(2-ethylhexl)phthalate	0.006
Heterotrophic plate count	< 500 bacterial colonies per milliliter	Dinoseb	0.007
		Dioxin (2,3,7,8-TCDD)	0.00000003
Total Coliform	<5% pos/month	Diquat	0.02
Fecal Coliform	None detected	Endothall	0.1
Turbidity	< 5 NTU	Endrin	0.002
Virus (enteric)	4-log removal	Epichlorohydrin	(b)
		Ethylbenzene	0.7
		Ethylene dibromide	0.00005
		Glyphosate	0.7
		Heptachlor	0.0004
		Heptachlor epoxide	0.0002
		Hexachlorobenzene	0.001
		Hexachlorocyclopentadiene	0.05
		Lindane	0.0002
		Methoxychlor	0.04
		Oxamyl (Vydate)	0.2
		Polychlorinated biphenyls (PCBs)	0.0005
		Pentachlorophenol	0.001
		Picloram	0.5
		Simazine	0.004
		Styrene	0.1
		Tetrachloroethylene	0.005
		Toluene	1
		Total trihalomethanes (TTHMs)	0.1
		Toxaphene	0.003
		2,4,5-TP (Silvex)	0.05
		1,2,4-Trichlorobenzene	0.07
		1,1,1-Trichloroethane	0.2
		1,1,2-Trichloroethane	0.005
		Trichloroethylene	0.005
		Vinyl chloride	0.002
		Xylenes (total)	10

(a) Action level not to be exceeded in more than 10 percent of samples.

(b) Each water system must certify, in writing, to the state (using third-party or manufacturer's certification) that when acrylamide and epichlorohydrin are used in drinking water systems, the combination (or product) of dose and monomer level does not exceed the following levels: Acrylamide – 0.05 percent dosed at 1 mg/L (or equivalent); Epichlorohydrin – 0.01 percent dosed at 20 mg/L (or equivalent).

Table 4.5-5
Secondary Drinking Water Standards

Constituent	Secondary Standard (mg/L)	Constituent	Secondary Standard (mg/L)
Aluminum	0.05 to 0.2	Manganese	0.05
Chloride	250	Odor, threshold odor number	3
Color, color units	15	pH	6.5 – 8.5
Copper	1	Silver	0.1
Corrosivity	Noncorrosive	Sulfate	250
Fluoride	2	Total Dissolved Solids	500
Foaming Agents	0.5	Zinc	5
Iron	0.3		

State Water Quality Planning

California Porter-Cologne Act

The California Porter-Cologne Act of 1970 is largely responsible for creating the State's extensive regulatory program for water pollution control. As discussed above, preparation of water management plans has been delegated to the individual states by the U.S. EPA. Pursuant to the Porter-Cologne Act, the responsibility for protection of water quality in California rests with the State Water Resources Control Board (SWRCB), which has been divided into nine Regional Water Quality Control Boards (RWQCBs) to regulate the nine hydrologic basins in the state. The Porter-Cologne Act gives the SWRCB and RWQCBs broad powers to protect water quality by regulating waste discharges to water and land, and requiring cleanup of hazardous conditions.

As required by Federal CWA and the California Porter-Cologne Act, water quality control plans have been prepared for each of the state's hydrologic basins. These water quality control plans have been prepared in order to regulate discharges that could affect the quality of State waters. Policies for water quality control adopted by the SWRCB serve as guidelines for the regional boards in the preparation of regional water quality control plans. Together, the policies of the SWRCB and the nine regional water quality control plans form the California Water Plan. The Oxnard Plain is within the Santa Clara River Basin (4A) and falls under the jurisdiction of the Los Angeles Regional Water Quality Control Board (LARWQCB). The water quality control plan for the Santa Clara River Basin is discussed below.

In addition to the responsibilities assigned to the SWRCB and the RWQCBs with respect to discharges into State waters, the Porter-Cologne Act gives the regional boards specific authority to regulate discharges of waste to land, including the management of waste disposal sites. Each regional board is required to adopt classification and waste discharge requirements for each waste management facility under its jurisdiction. Persons operating hazardous waste disposal facilities are also subject to detailed regulations governing water quality monitoring and closure. Further, the SWRCB and the RWQCBs have authority to take a variety of steps to investigate, halt, or order the clean up of waste discharges. These agencies may also obtain court relief or take actions themselves to clean up discharges.

State Antidegradation Policy

The SWRCB adopted the Statement of Policy with Respect to Maintaining High Quality Water in California (Resolution No. 68-16) on October 28, 1968. This policy is generally referred to as the "Antidegradation Policy" and it protects surface water and groundwater where existing water quality is higher than the standards set by the Basin Plan to protect beneficial use of the waters. Under the Antidegradation Policy, any action that can adversely affect water quality in surface water or groundwater:

- Must be consistent with the maximum benefit to the people of the state;
- Must not unreasonably affect present and anticipated beneficial use of such water; and
- Must not result in water quality less than that prescribed in water quality plans and policies.

Safe Drinking Water Act in 1976

California adopted its own Safe Drinking Water Act in 1976 that gave California Department of Health Services (DHS) the responsibility for the administration of the federal SDWA in California. The first approach is to safeguard public welfare by limiting the level of specific contaminants that can impact public health. These limits are identified as Primary Maximum Contaminant Levels (MCLs) and are specific concentrations that cannot be exceeded for a given constituent. The second approach is a treatment technique that is based on distribution system sampling in comparison to an action level. If the action level is exceeded in more than 10 percent of the samples, then additional treatment is required of the water supplier. Currently, treatment technique limits apply only to copper and lead. DHS also has established Secondary Maximum Contaminant Levels (SMCLs) that regulate constituents that affect water quality aesthetics (such as taste, odor, or color). Generally, DHS uses the SMCL as guidelines. A summary of the MCLs and SMCLs are presented in Tables 4.5-4 and 4.5-5, respectively.

Los Angeles Region Water Quality Control Plan

The Basin Plan for the Santa Clara River Basin was adopted on March 3, 1975 by the LARWQCB and approved on March 20, 1975 by the SWRCB. An updated version of the Basin Plan, *Water Quality Control Plan, Los Angeles Region (4)*, prepared by the LARWQCB, was approved in June of 1994. The objective of the *Water Quality Control Plan*, or Basin Plan, is to preserve and enhance water quality, protect the beneficial uses of all regional waters, and implement the CWA. Specifically, the plan designates beneficial uses for surface water and groundwater, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and to conform to the State's anti-degradation policy, and describes implementation programs to protect all waters in the Region. In order to be considered consistent with the Basin Plan, the proposed project must be in compliance with water quality objectives and may not cause a deterioration of beneficial uses.

The surface water flows of the Santa Clara River, located on the north side of the proposed project, have been designated with the following beneficial uses in the Basin Plan:

- Potential municipal supply;
- Existing agricultural supply;
- Existing industrial process supply;
- Existing industrial service supply;
- Existing groundwater recharge source;
- Existing freshwater replenishment source;
- Existing water contact recreation;
- Existing non-contact water recreation;
- Existing warm freshwater habitat;
- Existing cold freshwater habitat;
- Existing wildlife habitat;
- Existing rare, threatened, or endangered species habitat;
- Existing migration of aquatic organisms; and
- Existing wetlands.

The LARWQCB previously proposed to remove the potential municipal supply designation for surface water flows associated with the Santa Clara River. This proposal was not successful and the LARWQCB staff is working to develop an alternative designation, perhaps using some other standard such as the California Toxics Rule to develop numerical criteria.

The groundwater of the Oxnard Forebay (Montalvo Forebay in this document) has been designated with the following beneficial uses:

- Potential municipal supply;
- Existing agricultural supply;
- Existing industrial process supply; and
- Existing industrial service supply.

The Basin Plan standards for surface waters in the Santa Clara River Watershed between the Freeman Diversion Structure near Saticoy and the Ventura Freeway Bridge are listed in Table 4.5-6. The Basin Plan standards for groundwater in the Montalvo Forebay are listed in Table 4.5-7.

Table 4.5-6
Basin Plan Surface Water Quality Objectives

Constituent	Water Quality Objective
TDS, mg/L	1,200
Sulfate, mg/L	600
Chloride, mg/L	150
Boron, mg/L	1.5
Nitrate, mg/L	45
Ammonia, mg/L	1.30 (1)
Oil and Grease, mg/L	10 (2)

Notes:
(1) Ammonia objective estimated for a temperature of 15C and a pH of 8.1 for waters designated as COLD.
(2) Oil and Grease objective is qualitatively called out as "a visible film or coating on the surface of the water or on objects that cause nuisance, or that otherwise adversely affect beneficial uses." This objective has been conservatively estimated at 10 mg/L.

Table 4.5-7
Basin Plan Groundwater Quality Objectives

Constituent	Water Quality Objective
TDS, mg/L	1,200
Sulfate, mg/L	600
Chloride, mg/L	150
Boron, mg/L	1.0
Arsenic, mg/L	0.05
Beryllium, mg/L	0.004
Cadmium, mg/L	0.005
Chromium (total), mg/L	0.05
Mercury, mg/L	0.002
Nickel, mg/L	0.1
Selenium, mg/L	0.005

Waste Load Allocations

In addition to the development of its Basin Plan, each RWQCB is responsible for the development of Total Maximum Daily Loads (TMDLs) for each "impaired" surface water body within the region's boundaries. CWA Section 303(d)(1)(A) requires states to identify impaired surface waters within their boundaries where numeric or narrative water quality objectives are not being maintained and/or beneficial uses are not fully protected after application of technology-based controls. Each state is also required to establish a priority ranking for such waters, considering the severity of the pollution and the beneficial uses of the waters. For those surface water bodies identified and prioritized in the aforementioned list, Section 303(d)(1)(C) requires that each state establish TMDLs for those pollutants identified under CWA Section 304(a)(2) as suitable for TMDL development correlated with the achievement of water quality objectives.

A TMDL is a numeric target intended to result in the attainment of water quality standards. The TMDL includes allocations (e.g., allowable pollutant loading) for both point and nonpoint sources. The loadings are established with consideration given to seasonal variations of pollutant loadings and a margin of safety, which considers any lack of knowledge concerning the relationship between effluent limitations and water quality. Each TMDL is first developed by the governing RWQCB, and then implemented through National Pollutant Discharge Elimination System (NPDES) permits (for point sources) and/or through a wider range of authorities and programs (for nonpoint sources), including the use of applicable State enforcement authorities (e.g., California Toxics Rule, water quality-based effluent limitations). TMDLs are formalized via their adoption as amendments to a RWQCB's Basin Plan.

The Santa Clara River Estuary is a 303(d) listed impaired surface water body downstream the RiverPark Specific Plan Area. The Estuary is listed as impaired for coliform, ChemA (a class of historically-used chlorinated pesticides, including aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, HCH, endosulfan and toxaphene) and toxaphene. The RWQCB is in the process of developing TMDLs for each of the Estuary's listed impairment. These TMDLs are expected to be completed by 2006/07.[33] Once finalized, waste load allocations for each targeted pollutant will be distributed among point and nonpoint dischargers upstream of the impairment.

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[33] Los Angeles Regional Water Quality Control Board (LA RWQCB). Watershed Management Initiative Chapter. 2000.

Local Water Quality Planning

Ventura County Municipal Stormwater NPDES Permit

The Ventura Countywide Stormwater Quality Management Program encompasses the Ventura County Flood Control District, the County of Ventura, and the Cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura, Santa Paula, Simi Valley, and Thousand Oaks. These co-permittees are jointly covered by California Regional Water Quality Control Board, Los Angeles Region Order No. 00-108 (NPDES Permit No. CAS004002), Waste Discharge Requirements for Municipal Stormwater and Urban Runoff Discharges within Ventura County Flood Control District, County of Ventura, and the Cities of Ventura County. The permit covers all areas within the boundaries of the cities as well as the unincorporated areas of Ventura County defined as urban by the U.S. Census Bureau. Discharges to the Santa Clara River fall under the coverage of the permit. The Permit incorporates the Stormwater Quality Urban Impact Mitigation Plan (SQUIMP), which includes a series of provisions that are intended to effectively prohibit non-stormwater discharges and reduce the discharge of pollutants from stormwater conveyance systems to the maximum extent possible.

Additionally, amendments to the Basin Plan intended to implement TMDLs developed by the RWQCB, once promulgated, will establish waste load allocations to point and nonpoint source dischargers tributary to 303(d)-listed impaired surface water bodies. The Santa Clara River Estuary, downstream of the RiverPark Specific Plan location, is listed as impaired for coliform, ChemA and toxaphene. These TMDLs are expected to be completed by 2006/07.[34] Once finalized, these waste load allocations, developed for each targeted pollutant, will be distributed among point and nonpoint dischargers upstream of the listed impairment. These allocations are then applied to dischargers within the watershed via NPDES permits, revised to be consistent with the approved TMDL.

As part of an investigation for a recent Basin Plan amendment, Resolution No. 99-13 (El Rio Septic Prohibition), the LARWQCB conducted a regional water quality study of the mine pits and nearby groundwaters. As a result of this investigation, the pits may become eligible for listing in the 2002 revised 303(d) list of impaired surface waters. Should the pits become listed, TMDLs would be determined for listed impairments, and waste load allocations would be developed for all dischargers tributary to the pits. According to the proposed RiverPark stormwater management program, these dischargers would include the uses proposed in RiverPark Areas ‘A’ and ‘B’ as well as the off-site industrial and agricultural areas.

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34 Los Angeles Regional Water Quality Control Board (LA RWQCB). Watershed Management Initiative Chapter. 2000.

United Water Conservation District Resolution No. 2000-19

The Board of Directors of the UWCD adopted Resolution No. 2000-19 in December 2000 containing recommendations for the use and management of the existing mine pits in the Specific Plan Area to protect local groundwater quality. Specifically this resolution addresses water quality issues associated with storm runoff entering the pits. This resolution recommends that any stormwater treatment system for runoff that will enter the pits be designed to accommodate flows from up to a 10-year storm event. In addition, this resolution recommends that any runoff entering the pits contain concentrations of chemical contaminants below the lower of State and Federal primary drinking water standards or the ambient levels in the underlying groundwater. To ensure removal of pathogens in the runoff, this resolution recommends that runoff water flow either vertically through an unsaturated zone at least 10 feet above historic high water level, through a mechanical filter, or horizontally in the aquifer if the horizontal filtration distance is equivalent to a 10-foot vadose zone.

Fox Canyon Groundwater Management Agency Resolution No. 01-01

In April 2001, the Board of Directors of the Fox Canyon Groundwater Management Agency (FCGMA) adopted a resolution similar to the UWCD Resolution described above. The FCGMA Resolution addresses the use and management of water bodies, deep pits and excavations in the forebay. This resolution also recommends that any stormwater treatment system for runoff that will enter water bodies in the forebay be designed to accommodate flows from up to a 10-year storm event and that any runoff entering the pits from storms up to a 10-year storm event be treated to meet State and Federal Drinking Water Standards or the ambient levels in the forebay, whichever is lower. In addition, the FCGMA recommends that any water bodies in the forebay be managed by a public agency.

Water Quality

Groundwater Quality

UWCD maintains an extensive database of water quality in the Montalvo Forebay and Oxnard Plain Subbasins. The database covers both surface water and groundwater quality and represents an aggregation of sources – California Department of Health Services, California Department of Water Resources, City of Oxnard, U.S. Geological Survey, Ventura Regional Sanitation District, Ventura County Water Resource Agency, and private well owners - in addition to UWCD's own sampling program. The database provides information on general minerals, trace organics, trace inorganics, and limited microbial constituents. Although the majority of the data is from the past two decades, some records date from the mid-1920s. This database represents the bulk of the information used in the analysis of ambient water quality.

The available groundwater data was reviewed to develop a profile of the existing groundwater in the vicinity of the project site. Because existing runoff influences localized groundwater quality in the mine pits, use of on-site well data was not deemed appropriate to characterize the ambient groundwater quality. Due to the impact that UWCD's El Rio Spreading Ground operations exert on local groundwater quality, it was decided that ambient quality is best characterized by wells from the El Rio facilities screened in the UAS. These include wells 2N22W14P2, 2N22W23B1, 2N22W23B2, 2N22W23C1, 2N22W23C2, 2N22W23G2, 2N22W23G3, 2N22W23K1, and 2N22W23K5. Since the water from these wells is used for domestic consumption and there is sufficient data to establish trends, this approach was deemed conservative. By way of comparison, a water quality profile was also derived for the Saticoy Spreading Grounds, upgradient of the project, based on data for well 2N22W12J1. Figure 4.5-9 shows the location of these wells relative to the site and Table 4.5-8 summarizes the ambient water quality data for both sets of wells.

This groundwater quality review examines water quality in three areas - the Saticoy spreading basin portion of the Montalvo Forebay, the El Rio spreading basin portion of the Montalvo Forebay, and the production drinking water wells near or at the City of Oxnard Yard. The Saticoy spreading basin portion is located upstream of the project site and is more reflective of the background water quality. The El Rio spreading basins, located closer to the project but downstream of the Saticoy Spreading Grounds, have substantial groundwater extraction wells and the water quality from these wells is generally more reflective of the recharged water quality. City of Oxnard wells were also reviewed, as they are the largest municipal water supplier downstream of the project.

Water quality data were reviewed from 1979 to 1999. Since groundwater quality is affected by the amount of recharge, the review period was divided into a "dry" period (January 1987 to December 1990) and a "wet" period (January 1998 to December 1998). The groundwater levels were very responsive to the amount of water recharged and based on this observation, the groundwater quality analysis did not require a study period adjustment to account for recharge and mixing.

Review of the groundwater data from the Montalvo Forebay indicated that all of the major cations and anions except nitrate behave in the same manner as total dissolved solids (TDS), e.g., the ratio of calcium to TDS on a weight basis is relatively constant and when TDS rises, the calcium rises proportionately. This trend is also true for sodium, magnesium, chloride, sulfate, and alkalinity. As a result, TDS was used to describe the general baseline water quality for the groundwater. Chloride, sulfate, boron, and nitrate are regulated by the RWQCB's Basin Plan and are discussed separately in this analysis. Similarly trace organics and metals, covered by the SDWA, are also discussed separately.

LEGEND

El Rio Well

Saticoy Well

3640' 1320' 0 2640'
SCALE IN FEET

FIGURE 4.5-9

Ambient Water Quality Well Locations

39-22•11/01

Table 4.5-8
Ambient Groundwater Quality Range

Constituent	Units	El Rio Wells (1)	Saticoy Wells (2)
TSS	mg/l	NA	NA
MINERALS			
Sulfate	mg/l	255 - 740	330 - 560
Chloride	mg/l	21 - 102	36 - 54
TDS	mg/l	572 - 1710	926 - 954
Boron	mg/l	0.4 - 1.0	0.5 - 0.7
NUTRIENTS			
Nitrate	mg/l	0.4 - 140	2 - 27
Ammonia	mg/l	NA	NA
METALS			
Arsenic	mg/l	<0.0005 - <0.05 (3)	NA
Beryllium	mg/l	<0.0002 - <0.001 (3)	NA
Cadmium	mg/l	<0.0002 - <0.001 (3)	NA
Chromium, total	mg/l	<0.001 - <0.01 (3)	NA
Chromium VI (5)	mg/l	<0.0005 - <0.005	NA
Copper	mg/l	<0.01 - <0.05 (3)	<0.05
Iron	mg/l	<0.05 - 0.13	<0.05 - 0.42
Lead	mg/l	<0.0002 - <0.005 (3)	NA
Manganese	mg/l	<0.01 - 0.03	<0.030
Mercury	mg/l	<0.00001 - <0.001 (3)	NA
Nickel	mg/l	<0.001 - 0.003	NA
Selenium	mg/l	0.002 - 0.009	NA
Silver	mg/l	<0.0005 - 0.01	NA
Zinc	mg/l	<0.02 - 0.05	<0.050
PESTICIDES			
ChemA	mg/l	NA	NA
Lannate	mg/l	<0.005	NA
HYDROCARBONS			
Oil/Grease	mg/l	NA	NA
MTBE	mg/l	<0.005	NA
MICROORGANISMS			
Total Coliform	MPN/100 ml	<1.1 - 9.2 (4)	NA
Fecal Coliform	MPN/100 ml	<1.1 - <2 (4)	NA
Fecal Streptococci	MPN/100 ml	NA	NA
Giardia (6)	Cysts/100 L	<1.6	NA
Cryptosporidium (6)	Oocysts/100 L	<1.6	NA

Notes:
NS - No Standard
NA - Not available
(1) El Rio water quality is based on data from wells nos. 2N22W14P2, 2N22W23B1, 2N22W23B2, 2N22W23C1, 2N22W23C2, 2N22W23G2, 2N22W23G3, 2N22W23K1, and 2N22W23K5 from 1991 to 1999
(2) Saticoy water quality is based on data from well no. 2N22W12J1 from 1991 to 1999.
(3) Upper end of range is an older non-detect result. This occurs as a result of historic sampling which utilized analytical procedures and equipment having higher detection limits than are currently achievable.
(4) Pathogen Indicator Data for Ambient Groundwater: For Total Coliform, 2 samples were determined to have ">23 MPN/100ml" present; as a conservative approach, these are not included in the range because of their rare occurrence. For Fecal Coliform, all data were reported as non-detect with detection limits of 1.1 and 2, except for a single multi-sampling episode on March 23, 2000 which determined a maximum of 9.2 MPN/100 ml; as a conservative approach, these are not included in the range because of their rare occurrence. Also for Fecal Coliform, the upper end of the constituent range is defined as the detection limit. This occurs as a result of historic sampling which utilized analytical procedures and equipment having higher method detection limits than are currently achievable.
(5) Ambient groundwater concentrations for chromium VI are not available, but are assumed to be 50 percent of the total chromium concentration.
(6) Giardia and Cryptosporidium concentrations are based on samples collected from wells 2N22W21H2 and 2N22W22G1.

The Montalvo Forebay groundwater quality is highly influenced by the water quality of UWCD recharge water. Santa Clara River water quality data from the Freeman Diversion was used to characterize the water that was recharged using the Saticoy and El Rio spreading basins.

Because the City of Oxnard wells are far from the recharge area of the Montalvo Forebay, their water quality parameters appear to behave in a different manner. These wells were analyzed as a separate group of wells in this baseline analysis.

Baseline TDS

Table 4.5-9 summarizes the maximum, minimum and average concentrations for TDS at the Freeman Diversion, the Saticoy and El Rio spreading basins, and the City of Oxnard Wells. The reported concentrations are divided into three time frames - the overall study period (1979-1999), a "dry" cycle (1987 – 1990), and a "wet" cycle (1998). Currently, TDS levels occasionally exceed Basin Plan Groundwater Objectives at each location under the various hydrologic conditions analyzed.

Table 4.5-9
Summary of Existing Total Dissolved Solids Conditions

	Total Dissolved Solids, mg/L									
	Basin Plan Limit	Study Period 1979 – 1999			"Dry" Cycle 1987 - 1990			"Wet" Cycle 1998		
Location		Max	Min	Ave	Max	Min	Ave	Max	Min	Ave
Freeman Diversion	1,200	1,680	722	1,219	1,620	1,040	1,461	1,070	791	931
Saticoy		2,110	564	1,070	1,850	664	1,137	1,400	700	1,014
El Rio		2,460	530	1,034	1,680	908	1,213	1,030	760	913
City of Oxnard Wells		1,800	352	976	1,200	352	888	1,500	960	1,213

The Freeman Diversion values are generally lower than the two spreading basins. From a TDS perspective, the Saticoy and El Rio basins are relatively similar. The TDS trends follow a more conventional analysis. During "dry" cycles, the average TDS increased when compared with the "wet" cycle. This trend was observed at the Freeman Diversion and at the Saticoy and El Rio spreading basins.

The City of Oxnard wells were generally lower in TDS and appeared to behave differently. The average TDS during the "dry" cycle was much lower than the "wet" cycle, which was the opposite of the trend observed in the Montalvo Forebay. A possible explanation is that during the "dry" cycle, the water levels are lower than the upper zones that contain more dissolved minerals (higher TDS) resulting in a lower observed TDS for the City's wells. During a "wet" year, the higher groundwater levels may rise into these shallower zones that were previously unsaturated during a "dry" cycle. Based on a mass balance analysis, it is unlikely that the lower TDS observed during the "dry" cycle could be from recharging lower TDS water in the Montalvo Forebay.

Baseline Chloride

The baseline conditions for chloride are summarized in Table 4.5-10. All the chloride levels in the Freeman Diversion samples, including the maximum values for the study period, were below Basin Plan limits. The averages for the "dry" cycle were higher than the "wet" cycle for all four locations, in contrast to higher "wet" cycle TDS values in the City of Oxnard wells. Based on these data, the chloride parameter appears to be behaving slightly differently than TDS downgradient of the Montalvo Forebay.

Table 4.5-10
Summary of Existing Chloride Conditions

	Chloride, mg/L									
	Basin Plan Limit	Study Period			"Dry" Cycle			"Wet" Cycle		
		1979 – 1999			1987 - 1990			1998		
Location		Max	Min	Ave	Max	Min	Ave	Max	Min	Ave
Freeman Diversion	150	136	5	55	106	49	87	58	9	37
Saticoy Area Wells		200	23	59	104	41	68	71	27	49
El Rio Area Wells		468	1	56	84	47	64	49	30	40
City of Oxnard Wells		112	43	63	104	48	69	69	43	56

Baseline Sulfate

The baseline conditions for sulfate are summarized in Table 4.5-11. In some samples from the Freeman Diversion, maximum sulfate levels were above Basin Plan limits. The average concentration for the Freeman Diversion samples were all below Basin Plan limits except during the "dry" cycle. However, the nearby wells of both spreading basins had average sulfate concentrations during the "dry" cycle below the Freeman Diversion and Basin Plan limits indicating that there was no immediate impact of higher average sulfate concentrations in the surface water. Averages for the "dry" cycle were higher than the "wet" cycle except at the City of Oxnard wells where average sulfate concentrations behaved similar to the TDS with higher "wet" cycle values. Because sulfate is such a large component of TDS (between 40-50 percent), its behavior has a strong influence on the TDS. It is likely that the behavior of sulfate in the upper zones during the "wet" and "dry" cycle is one of the causes for TDS behavior.

Table 4.5-11
Summary of Existing Sulfate Conditions

Location	Sulfate, mg/L									
	Basin Plan Limit	Study Period 1979 – 1999			"Dry" Cycle 1987 - 1990			"Wet" Cycle 1998		
		Max	Min	Ave	Max	Min	Ave	Max	Min	Ave
Freeman Diversion	600	763	227	487	722	440	640	560	250	394
Saticoy Area Wells		1,140	180	505	813	180	525	649	310	468
El Rio Area Wells		1,000	48	470	797	411	525	477	342	409
City of Oxnard Wells		990	55	496	483	55	328	710	440	573

Baseline Nitrate

The baseline nitrate data were partitioned in the same manner as the TDS data to characterize the "wet" and "dry" cycles over the study period as indicated in Table 4.5-12. The nitrate data have a larger range between maximum and minimum. Nitrate concentrations from the Saticoy and El Rio area wells, measured under the various hydrologic conditions, have occasionally exceeded Basin Plan groundwater quality objectives (which are equivalent to federal primary drinking water standards). The water from the Freeman Diversion that is being spread in the two areas is lower in nitrate than in the Montalvo Forebay. The average nitrate concentrations in the Saticoy spreading basins area do not change between "dry" and "wet" periods unlike in the El Rio spreading basin. During the "dry" cycle average nitrate concentrations in the El Rio spreading basin were higher than the Saticoy area wells. The City of Oxnard wells do not exhibit the same wide range between nitrate maxima and minima as groundwater from the spreading basins. This is likely a result of longer travel and mixing times for the recharge water to blend, causing a dilution effect.

Table 4.5-12
Summary of Existing Nitrate Conditions

Location	Nitrate, mg/L									
	Basin Plan Limit	Study Period 1979 – 1999			"Dry" Cycle 1987 - 1990			"Wet" Cycle 1998		
		Max	Min	Ave	Max	Min	Ave	Max	Min	Ave
Freeman Diversion	45	23	0.2	7	20	6	13	8.7	2.8	5
Saticoy Area Wells		288	0.05	16	288	0.1	15	130	0.8	13
El Rio Area Wells		306	0.1	27	306	6	31	43	1.6	13
City of Oxnard Wells		51	1	15.9	16	1	8.2	24	11	17

The same trend of lower "dry" cycle when compared the "wet" cycle that was observed for TDS was also observed for nitrate in the City of Oxnard wells. The same potential explanation to describe the TDS behavior can be used to explain the nitrate behavior.

Baseline Boron

The baseline conditions for boron are summarized in Table 4.5-13. All the boron levels, except for the maximum values for the study period and "dry" cycle in the surface samples from the Freeman Diversion, were below Basin Plan limits. Boron data was not available for all of the groundwater wells during the "dry" cycle. The average for the "dry" cycle was higher than the "wet" cycle at the Freeman Diversion location. Because there was no groundwater data available during the "dry" cycle, a comparison with the "wet" cycle cannot be made. Generally, all the averages for boron are below Basin Plan limits and were similar. The average boron level for City of Oxnard wells was slightly higher than the Freeman Diversion and the recharge basin wells. These data suggest that the native geological formation may be responsible for a small increase in the boron concentration as water travels from the Montalvo Forebay to the City's wells.

Table 4.5-13
Summary of Existing Boron Conditions

Location	Boron, mg/L									
	Basin Plan Limit	Study Period 1979 – 1999			"Dry" Cycle 1987 - 1990			"Wet" Cycle 1998		
		Max	Min	Ave	Max	Min	Ave	Max	Min	Ave
Freeman Diversion	1	1.3	0.2	0.8	1.3	0.7	1	0.6	0.3	0.5
Saticoy Area Wells		0.7	0.5	0.6	–	–	–	0.6	0.5	0.5
El Rio Area Wells		0.7	0.5	0.6	–	–	–	0.6	0.5	0.6
City of Oxnard Wells		0.9	0.6	0.8	–	–	–	0.9	0.6	0.8

– Indicates no data available.

Baseline Trace Organics

There were no trace organics data for the Freeman Diversion sample location. No comparison can be made at this time with the Santa Clara River and the groundwater basin due to the lack of this data. Generally, the Montalvo Forebay is free of trace organics. Trace organics were detected in only four of the 78 wells tested. Two parameters were found, 1,1,1-trichloroethane (1,1,1-TCA) in one well and total trihalomethanes (THMs) in three wells. All levels were below the MCL for their respective chemical. The well with 1,1,1-TCA was north of the Santa Clara River and is outside the project study area. THMs are a disinfection byproduct and are typically formed when chlorinating drinking water. The three wells with detectable amounts of THMs were drinking water wells and the samples are reflective of having sampled treated (chlorinated) water rather than untreated water.

The City of Oxnard wells did not have any trace organics other than THMs. There were 21 samples out of 31 (~68 percent) that contained one or more of the THMs. All the total THM levels were below the MCL of 80 µg/L. In fact, the highest total THM value detected was 41 µg/L. These wells are also drinking water wells and the positive THM samples are also reflective of sampling treated water.

Baseline Metals

The metals sampled for at the Freeman Diversion are summarized in Table 4.5-14. Of the metals tested, only four were positive. These four metals have secondary SMCLs indicating that there are only aesthetic concerns when these levels are exceeded, rather than human health concerns. Maximum and average iron and manganese levels exceeded their respective SMCLs. Typically, these metals would be in the oxidized form in surface runoff and would be removed by sedimentation in the recharge basin or removed by filtration through the unsaturated zones as the water percolates to groundwater. Generally, metal concentrations in wells within the Montalvo Forebay are below the respective MCLs. Metals were detected above the respective MCLs in only one of 31 wells tested from the Montalvo Forebay. This potable supply well was located near the El Rio spreading basin and had one sample exceeding the MCL for aluminum, lead, and cadmium. This sporadic occurrence for each metal was equivalent to an exceedance frequency of 10 to 15 percent.

Table 4.5-14
Summary of Existing Metal Concentrations at Freeman Diversion

Metal (1)	Units	SMCL	Max	Min	Number of Samples	Number of Samples Above Detection Limit	Percentage with Detectable Result
Copper	mg/L	1	0.1	<0.050	60	2	3%
Iron	mg/L	0.3	12.5	<0.050	59	48	81%
Manganese	mg/L	0.05	0.56	<0.030	59	32	54%
Zinc	mg/L	5	0.11	<0.050	60	6	10%

(1) Metals sampled at the Freeman Diversion are limited to the listed metals.

Table 4.5-15 below summarizes the metals data for the City's wells. No average metal concentration exceeds the corresponding MCL or SMCL. Selenium (exceeds MCL) and iron (exceeds SMCL) are the only parameters whose observed maximum concentrations exceeded their corresponding regulatory limits. Although manganese is not included in the City well testing results, it may be also be above the SMCL because manganese concentrations in groundwater are often elevated when iron concentrations are elevated. For all the other metals, even the maxima are below the MCL.

Table 4.5-15
Summary of Existing Metal Conditions for City of Oxnard Wells

Metal	Units	MCL or SMCL	Concentration (1)		Number of Samples	Number of Samples Above Detection Limit	Percentage with Detectable Result
			Minimum	Maximum			
Aluminum	mg/L	1	0.01	0.5	19	10	53%
Arsenic	mg/L	0.05	0.002	0.005 / <0.030	23	4	17%
Barium	mg/L	1	<0.02	0.19	23	11	48%
Cadmium	mg/L	0.01	<0.001	0.005	23	1	4%
Chromium (Total)	mg/L	0.05	0.002	0.003 / <0.030	23	5	22%
Copper	mg/L	*1*	0.004	0.009 / <0.050	75	5	7%
Iron	mg/L	*0.3*	<0.05	1.8	68	26	38%
Lead	mg/L	0.05	0.00004	0.001 / <0.030	32	8	25%
Nickel	µg/L	-	0.003	0.006	5	5	100%
Combined Radium 226 and Radium 228	pCi/L	5	0.1	1	19	8	42%
Selenium	mg/L	0.01	0.002	0.022	106	82	77%
Uranium	µg/L	-	3	17	18	18	100%
Zinc	mg/L	5	<0.050	0.35	4	3	75%

Notes:
(1) Because detection limits have decreased over time, some of the older data reports non-detects at detection levels higher than either the reported minima or maxima of more recent data. In cases where non-detects exceeded reported minimum values, the minimum detected value is reported. In cases where non-detects have exceeded the maximum reported concentration, both values are reported.

Surface Water Quality

Baseline Santa Clara River Quality

Tables 4.5-9 through 4.5-14 include water quality sampling summaries for the Santa Clara River at the Freeman Diversion. Data from this sampling is available for many of the general minerals including TDS, chloride, sulfate, nitrate, and boron, and some metals including, copper, iron, manganese and zinc. TDS has exceeded Basin Plan surface water quality objectives for reach 2 of the Santa Clara River

(Freeman Diversion to the Ventura Freeway). Iron and manganese have exceeded their respective Secondary Maximum Contaminant Levels, on occasion.

Baseline Project Stormwater

Runoff sampling has not been conducted for stormwater drainage from the agricultural and urban areas immediately north of the Ventura Freeway that drain to the Santa Clara River via the Stroube Drain. However, based on estimates of stormwater quality, existing runoff from agricultural and urban sources likely exceed Basin Plan Surface Water Quality objectives for fecal coliform (an impairment to downstream reaches of the River) and ammonia. Additionally, copper, mercury, and selenium—likely exceed California Toxics Rule maximum freshwater criteria. Furthermore, although applicable water quality criteria do not exist for total coliform and fecal streptococci, runoff concentrations likely exceed their respective maximum ambient River concentrations.

Water Quality Influences from Surrounding Uses

Currently, untreated stormwater from areas located to the northeast of the Specific Plan Area. Tributary flow to the pits consists of runoff from industrial and agricultural land uses in Drainage Area No. 3. Untreated runoff from these areas drains to the Large Woolsey and Small Woolsey Mine Pits.

A preliminary assessment of these surface runoff discharges was prepared in December 1999[35] for Hanson Aggregates, the owner of the mine site. This assessment noted that a number of the industrial facilities located in the area that drains to the pits store and use hazardous materials, generate hazardous waste or operate underground storage tanks. Surface runoff from these industrial storage yards and other operations currently enters the existing storm drain systems, which discharges into the pits.

All industrial sites in this area are using private septic systems for discharge of sanitary and industrial wastewater. No evidence was found of pre-treatment systems in place to separate oils or solids from waste streams generated. Any improper discharge of contaminants to these private septic systems could create a potential for their migration via groundwater into the pits, impacting water quality.

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35 West Coast Environmental and Engineering. *Surface Drainage and Industrial/Agricultural Discharge Study, Hanson Aggregates/S.P. Milling Co. – El Rio Facility, Oxnard, California.* December 14, 1999.

This study also identified several leaking underground storage tank sites under investigation in the area. As of October 25, 2001, there are three known active leaking underground storage tank sites in the industrial areas to the north of the Specific Plan Area. These sites consist of:

- Poole Oil Company, 3885 E. Vineyard Avenue. Contamination from this site has reached groundwater and the extent of the contamination is being characterized. Originally contamination on this site was thought to be from an leaking underground storage tank. Further assessments determined that while the tanks were not leaking some onsite gas pumps had leaked. Elevated levels Benzene and MTBE have been found in groundwater samples on the site. The County is requiring monitoring wells be installed off-site to the southwest to determine the extent of groundwater contamination. Active remediation with a pump and treat system has also been approved and will begin in the next 60 days.[36]

- Ventura Oil, 3815 E. Vineyard Avenue. Contamination from this site has been limited to the soil and is being actively remediated.

- Sparkletts/McKesson, 210 Beedy Street. Contamination from this site has been limited to the soil and a preliminary site assessment is underway.

Attempts to characterize the runoff from the adjacent industrial area resulted in the preparation of a runoff sampling program by Hanson Aggregates and verbal approval of the program by the LARWQCB. Two rounds of runoff sampling were conducted, one in January 2000 and one in April 2000. Additionally, the City of Oxnard initiated a water quality sampling program in 1997 that has been continued by the UWCD to sample water directly in the pits. The location of the sampling points for these programs is presented in Figure 4.5-10. The range of the sampling results is presented below in Table 4.5-16. The sampling results indicate that pit water quality is similar to that of the unexposed groundwater in the area, although it is unclear how representative these samples are due to the uncertainty in the timing of sample collection relative to the duration of the sampled storm event. Sampling conducted in the pits has indicated that sulfate levels have consistently exceeded the Basin Plan groundwater quality objectives and the SMCL, but fall within the ambient ranges established by the El Rio wells; total dissolved solids has consistently exceeded the SMCL and on one occasion exceeded the Basin Plan objective, but also fall within the ambient range established by the El Rio wells; iron exceeded the SMCL two times out of 30 samples; and manganese has exceeded the SMCL once out of 30 samples.

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36 Craig Kline. Ventura County Environmental Health Department, LUFT Program. Personal communication. November 19, 2001.

Because of the limited runoff sampling data, several other sources of runoff data were also reviewed. These include data from UWCD,[37] Santa Monica,[38] Los Angeles County,[39] Fresno,[40] and Ventura County.[41] Based on these sources, profiles of probable runoff water quality characteristics for each major land use type (agricultural, industrial, commercial, and residential) were developed with preference given to local, analogous data. The runoff from the different sources were combined on a volume-weighted basis to develop a composite runoff profile for an average storm. A quality profile corresponding to a larger storm event (greater than 10-year return frequency) was also developed to support analysis of the project as proposed. This profile reflects the inverse relationship between concentration and storm event magnitude. The land use-based stormwater quality profiles are presented below in Tables 4.5-17 and 4.5-18.

Based on the stormwater quality profiles developed, existing stormwater discharges (consisting entirely of industrial discharges) to the pits for storms with less than a 10-year return frequency are anticipated to exceed secondary drinking water standards for iron and manganese; and ambient groundwater concentrations for cadmium, iron, lead, manganese, nickel, zinc, and all bacterial indicator classes.

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37 United Water Conservation District. *Runoff Sampling Results for Jones Strawberry Fields for April 6, May 24, June 11, and November 1, 1999.* 1999.

38 Woodward-Clyde. *Santa Monica Bay Area Municipal Stormwater/Urban Runoff Pilot Project – Evaluation of Potential Catch Basin Retrofits. Prepared for Santa Monica Cities Consortium.* 1998.

39 Los Angeles County Department of Public Works. *Los Angeles County 1994 to 2000 Integrated Receiving Water Impacts Report.* 2000.

40 Oltmann, R.N. and Shulters, M.V. *Rainfall and Runoff Quantity and Quality Characteristics of Four Urban Land-Use Catchments in Fresno, California October 1981 to April 1983. U.S. Geological Survey Water-Supply Paper 2335.* 1989.

41 Ventura Countywide Stormwater Quality Management Program. *Ventura Countywide Stormwater Quality Management Plan: Application for Reissuance of Waste Discharge Requirements and National Pollutant Discharge Elimination System Permit.* 1999.

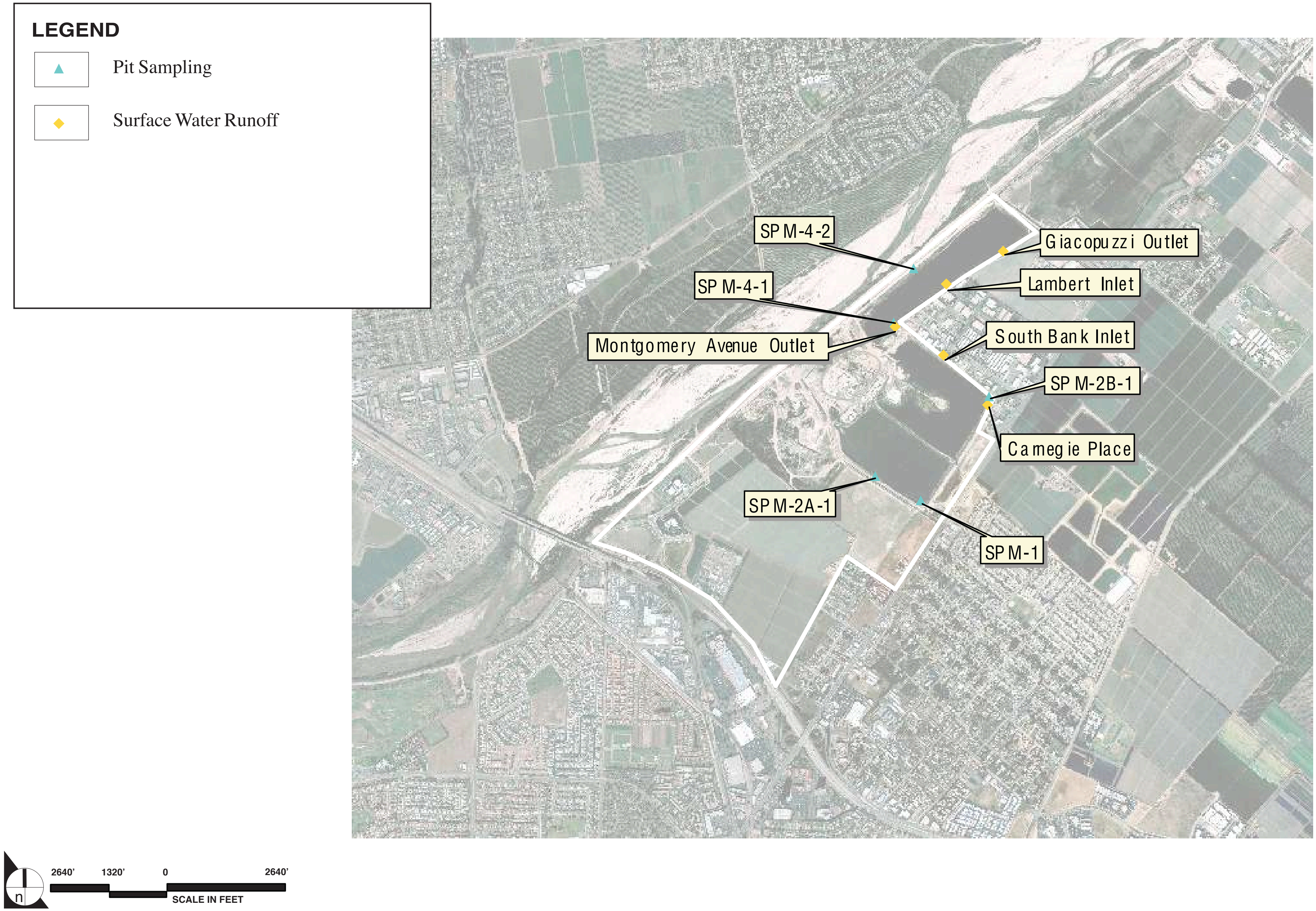

FIGURE **4.5-10**

Surface Water Runoff and Pit Sampling Locations

Table 4.5-16
Pit Water and Stormwater Runoff Quality

		Pit Water (a)			Storm Water Runoff (b)				
Constituent	Units	SPM-2A-1	SPM-2B-1	SPM-4-1 & 4-2	Montgomery Outlet	South Bank Inlet	Lambert Inlet	Giacopuzzi Outlet	Carnegie Place
Total Hardness (CaCO3)	mg/L	464 - 540	482 - 610	470 - 590	19 - 106	5 - 117	10 - 116	165 - 428	7
Calcium	mg/L	97 - 120	99 - 150	106 - 150	6 - 31	2 - 37	4 - 35	53 -104	3
Magnesium	mg/L	52 - 62	55 - 64	45 - 57	1 - 7	<1 - 6	<1 - 7	8 - 41	<1
Potassium	mg/L	5 - 7	5 - 6	5 - 7	1 - 9	<1 - 7	<1 - 16	11 - 23	1
Sodium	mg/L	100 - 124	108 - 123	100 - 130	1 - 28	<1 - 21	<1 - 50	11 - 80	<1
Total Cations	meq/L	14.2 - 16.3	14.9 - 17.3	14.2 - 17.2	0.5 - 3.6	0.1 - 3.4	0.2 - 4.9	4.1 - 12.6	0.2
Total Alkalinity	mg/L	79 - 170	110 - 210	130 - 220	10 - 50	10 - 50	10 -100	20 - 100	10
Hydoxide	mg/L	<10	<10	<10	<10	<10	<10	<10	<10
Carbonate	mg/L	20 - 30	<1 - 20	20	<10	<10	<10	<10	<10
Bicarbonate	mg/L	52 - 190	94 - 260	120 - 260	20 - 60	20 - 60	10 - 120	30 - 120	20
Sulfate	mg/L	483 - 631	500 - 625	477 - 601	4 - 58	5 - 46	1 - 87	127 - 378	15
Chloride	mg/L	56 - 79	59 - 84	49 - 61	<1 - 23	<1 -30	<1 - 24	5 - 39	<1
Nitrate	mg/L	2.4 - 21	3.6 - 42.1	3.9 - 21	0.8 - 9.8	0.6 - 20.1	0.4 - 5.5	15.5 - 85.8	0.9
Nitrite	mg/L	<0.3	<0.3	0.3	<0.3 - 0.7	<0.3 - 1	<0.3 - 0.7	<0.3 - 0.3	<0.3
Nitrate as N	mg/L	2 - 4.7	5.3 - 9.5	1.8 - 4.7	0.2 - 2.2	0.1 - 4.5	0.1 - 1.2	3.5 - 19.4	0.2
Nitrite as N	mg/L	<0.1	<0.1	0.1	<0.1 - 0.2	<0.1 - 0.3	<0.1 - 0.2	<0.1 - 0.1	<0.1
Ammonia as N	mg/L	<1	<1	<1	0.3 - 1.6	<0.2 - 1.6	<0.2 - 2.6	<0.2 - 0.7	<0.2
Phosphate	mg/L	<0.3	<0.3	<0.3	NS	NS	NS	NS	NS
Fluoride	mg/L	0.5 - 1.2	0.5 - 1.9	0.4 - 1.1	<0.1 - 0.5	<0.1 - 0.2	<0.1 - 0.5	<0.1 - 1.1	<0.1
Total Anions	meq/L	15 - 17.2	15.5 - 18.2	14.9 - 17.3	0.4 - 3.0	0.4 - 3.1	0.2 - 4.6	3.5 - 12.4	0.7
Aggressiveness Index		12.3 - 13.2	12.5 - 13.1	12.8 - 13.4	10.6 - 11.2	9.2 - 11.4	9.9 - 11.5	11.4 - 12.2	10.9
Langlier Index (Corrosivity)		0.3 - 1.3	0.6 - 1.2	0.9 - 1.5	-0.7 - -1.2	-0.5 - -2.5	-0.3 - -1.8	-0.4 - 0.3	-0.9
pH		7.7 - 8.8	7.8 - 8.5	8.0 - 8.6	7.6 - 8.4	7.5 - 7.7	7.6 - 7.9	7.8 - 8.0	9
E.C.	umhos/cm	1,340 - 1,520	1,400 - 1,600	1,320 -1,530	48 - 357	34 - 361	24 - 492	366 -1,190	29
TDS (residue @ 180 C)	mg/L	990 - 1,150	1,030 - 1,300	956 - 1,300	60 - 370	<40 - 360	<40 - 380	280 - 890	70
TDS by summation	mg/L	1,020 - 1,120	1,110 - 1,230	1,010 - 1,160	34 - 227	28 - 228	15 - 346	260 - 872	40
MBAS	mg/L	<0.1	<0.1	<0.1	<0.1 - 1	<0.1 - <1	<0.1 - 1	<0.1 - <0.2	0.2
Antimony	mg/L	NS	NS	NS	<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	mg/L	NS	NS	NS	<0.01	<0.01	<0.01	<0.01	<0.01
Barium	mg/L	NS	NS	NS	0.043 - 0.088	0.017 - 0.080	0.035 - 0.193	0.037 - 0.224	0.016
Beryllium	mg/L	NS	NS	NS	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	mg/L	0.5 - 0.8	0.5 - 0.8	0.5 - 0.7	<0.1 - 0.5	<0.1 - 0.2	<0.1 - 0.4	0.1 - 0.4	<0.1
Cadmium	mg/L	NS	NS	NS	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium	mg/L	NS	NS	NS	<0.01	<0.01	<0.01 - 0.01	<0.01 - 0.03	<0.01
Cobalt	mg/L	NS	NS	NS	<0.01	<0.01	<0.01	<0.01 - 0.01	<0.01
Copper	µg/L	<50	<50	<10	<10 - 40	<10 - 30	<10 - 90	30 - 40	<10
Iron	µg/L	70 - 1,300	90 - 390	50 - 150	1,470 - 3,220	350 - 2,880	810 - 3,270	930 - 3,890	340
Lead	mg/L	NS	NS	NS	<0.01 - 0.02	<0.01 - 0.01	<0.01 - 0.03	<0.01 - 0.03	<0.01
Manganese	µg/L	<30	10 - 60	<10	60 - 140	20 - 170	40 - 140	120 -330	20
Mercury	mg/L	NS	NS	NS	<0.00001 - 0.00002	<0.00001 - 0.00002	<0.00001 - 0.00004	<0.00001 - 0.00004	<0.00001
Molybdenum	mg/L	NS	NS	NS	<0.01	<0.01	<0.01	<0.01	<0.01

Constituent	Units	Pit Water (a)			Storm Water Runoff (b)				
		SPM-2A-1	SPM-2B-1	SPM-4-1 & 4-2	Montgomery Outlet	South Bank Inlet	Lambert Inlet	Giacopuzzi Outlet	Carnegie Place
Nickel	mg/L	NS	NS	NS	<0.01	<0.01	<0.01 - 0.02	<0.01	<0.01
Selenium	mg/L	NS	NS	NS	<0.01	<0.01	<0.01	<0.01	<0.01
Silver	mg/L	NS	NS	NS	<0.01	<0.01	<0.01	<0.01	<0.01
Thallium	mg/L	NS	NS	NS	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	mg/L	NS	NS	NS	0.01 - 0.03	<0.01 - 0.03	<0.01 - 0.03	<0.01 - 0.06	<0.01
Zinc	µg/L	<50	<50	<50	50 - 420	70 - 360	80 - 980	150 - 620	40
Total Organic Carbon	mg/L	NS	NS	NS	5.2	3.6	2.8 - 70	9.6 - 24	2.9
TPH - Gas	mg/L	NS	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
TPH - Diesel	mg/L	NS	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
DBCP	µg/L	NS	NS	NS	<0.2	<0.2	<0.2	<0.2	<0.2
EDB	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Lindane	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor Epoxide	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin Aldehyde	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
p,p-DDT	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	µg/L	NS	NS	NS	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Beta BHC	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Delta BHC	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Chlordane	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
p,p-DDE	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
p,p-DDD	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan Sulfate	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Toxaphene	µg/L	NS	NS	NS	<2	<2	<2	<2	<2
PCB 1016	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
PCB 1221	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
PCB 1232	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
PCB 1242	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
PCB 1248	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
PCB 1254	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
PCB 1260	µg/L	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05

Notes:
NS - not sampled
(a) Range reported for samples collected from 6/12/97 - 1/18/00
(b) Range reported for samples collected on 1/17/00 and 4/17/00, with the exception of the Carnegie Place sampling site, which was only sampled on 4/17/00.

Table 4.5-17
Anticipated Stormwater Constituent Concentrations vs. Land-Use For Storms Smaller Than 10-Year Event

Pollutant	Units	Stormwater Quality by Land-Use							
		Industrial		Agricultural		Residential		Commercial	
		Stormwater Concentration	Data Source	Stormwater Concentration	Data Source	Stormwater Concentration	Data Source	Stormwater Concentration	Data Source
TSS	mg/l	436	Ventura	1,144	Ventura	156	Ventura	403	Ventura
MINERALS									
Sulfate	mg/l	31	Hanson	402	United	6	LA	34	LA
Chloride	mg/l	24	Ventura	36	United	20	Ventura	48	LA
TDS	mg/l	148	Ventura	930	United	122	Ventura	75	Ventura
Boron	mg/l	0.21	Hanson	0.53	United	0.19	LA	0.18	LA
NUTRIENTS									
Nitrate	mg/l as NO3	5	Hanson	60.3	Ventura	8.1	Ventura	1.9	Ventura
Ammonia	mg/l as NH3	1.16	Hanson	2.79	Ventura	0.83	Ventura	0.57	Ventura
METALS									
Arsenic	mg/l	0.01	Hanson	0.016	Ventura	0.003	Ventura	0.004	Ventura
Beryllium	mg/l	0.001	Hanson	0.001	Hanson	0.002	Santa Mon	0.002	Santa Mon
Cadmium	mg/l	0.005	Hanson	0.005	Ventura	0.001	Ventura	0.002	Ventura
Chromium, total	mg/l	0.016	Ventura	0.131	Ventura	0.01	Ventura	0.016	Ventura
Chromium VI (1)	mg/l	0.008	See Note 1	0.066	See Note 1	0.005	See Note 1	0.008	See Note 1
Copper	mg/l	0.037	Ventura	0.093	Ventura	0.029	Ventura	0.06	Ventura
Iron	mg/l	1.763	Hanson	3.58	Hanson	2.051	LA	5.319	LA
Lead	mg/l	0.017	Ventura	0.032	Ventura	0.026	Ventura	0.029	Ventura
Manganese	mg/l	0.084	Hanson	0.225	Hanson	0.065	LA	0.115	Santa Monica
Mercury	mg/l	0.00024	Ventura	0.00011	Ventura	0.00014	Ventura	0.0002	Fresno
Nickel	mg/l	0.032	Ventura	0.095	Ventura	0.02	Ventura	0.026	Ventura
Selenium	mg/l	0.01	Hanson	0.01	Hanson	0.001	Ventura	0.001	Ventura
Silver	mg/l	0.01	Hanson	0.01	Hanson	0.002	Ventura	0.001	Ventura
Zinc	mg/l	0.275	Hanson	0.385	Hanson	0.168	Ventura	0.332	Ventura
PESTICIDES									
ChemA	mg/l	ND	Hanson	ND	Hanson	NA	NA	NA	NA
Lannate	mg/l	ND	Kennedy/ Jenks	NA	Kennedy/ Jenks	ND	Kennedy/ Jenks	ND	Kennedy/ Jenks
HYDROCARBONS									
Oil/Grease	mg/l	35	Hanson	3	Hanson	3	Ventura	6	Ventura
MTBE	mg/l	0.002	USGS	ND	Kennedy/ Jenks	ND	Kennedy/ Jenks	ND	Kennedy/ Jenks
MICROORGANISMS									
Total Coliform	MPN/100ml	39,300	Ventura	261,800	Ventura	65,800	Ventura	107,000	Ventura
Fecal Coliform	MPN/100ml	13,500	Ventura	32,700	Ventura	17,200	Ventura	4,530	Ventura
Fecal Streptococci	MPN/100ml	20,200	Ventura	82,800	Ventura	48,300	Ventura	32,530	Ventura
Giardia	cysts/100L	NA	--	NA	--	NA	--	NA	--
Cryptosporidium	oocysts/100L	NA	--	NA	--	NA	--	NA	--

NA: Data not available.
ND: Levels not detectable.
(1) Chromium VI concentration is based on 50 percent of the total chromium concentration.
(2) MTBE concentrations are based on USGS data (http://ca.water.usgs.gov/mtbe) indicating that California urban storm runoff samples have generally been less than 2 μg/L. MTBE is only expected to be found in the industrial drainage area.

Table 4.5-18
Anticipated Stormwater Constituent Concentrations vs. Land-Use For Storms Greater Than 10-Year Event

		Stormwater Quality by Land-Use							
		Industrial		Agricultural		Residential		Commercial	
Pollutant	Units	Stormwater Concentration	Data Source	Stormwater Concentration	Data Source	Stormwater Concentration	Data Source	Stormwater Concentration	Data Source
TSS	mg/l	67	Hanson	50	United	38	Santa Mon	52	Santa Mon
MINERALS									
Sulfate	mg/l	31	Hanson	253	Hanson	6	LA	34	LA
Chloride	mg/l	12	Hanson	17	Ventura	3	LA	48	LA
TDS	mg/l	131	Hanson	530	Ventura	50	LA	75	Ventura
Boron	mg/l	0.21	Hanson	0.25	Hanson	0.19	LA	0.18	LA
NUTRIENTS									
Nitrate	mg/l as NO3	5	Ventura	8.5	United	2.2	LA	1.9	Ventura
Ammonia	mg/l as NH3	0.64	Ventura	0.45	Hanson	0.6	LA	0.57	Ventura
METALS									
Arsenic	mg/l	0.006	Ventura	0.004	United	0.003	Ventura	0.004	Ventura
Beryllium	mg/l	0.001	Hanson	0.0002	United	0.002	Santa Mon	0.002	Santa Mon
Cadmium	mg/l	0.002	Ventura	0.001	United	0.001	Ventura	0.002	Ventura
Chromium, total	mg/l	0.01	Hanson	0.003	United	0.007	Santa Mon	0.007	Santa Mon
Chromium VI	mg/l	0.005	See Note 1	0.002	See Note 1	0.004	See Note 1	0.004	See Note 1
Copper	mg/l	0.029	Hanson	0.04	United	0.02	LA	0.027	LA
Iron	mg/l	1.763	Hanson	1.407	United	0.224	Santa Mon	0.357	Santa Mon
Lead	mg/l	0.014	Hanson	0.008	United	0.009	Santa Mon	0.015	LA
Manganese	mg/l	0.084	Hanson	0.205	United	0.065	LA	0.115	Santa Mon
Mercury	mg/l	0.000017	Hanson	0.00002	United	0.00014	Ventura	0.0002	Fresno
Nickel	mg/l	0.011	Hanson	0.009	United	0.02	Ventura	0.011	LA
Selenium	mg/l	0.001	Ventura	0.001	Ventura	0.001	Ventura	0.001	Ventura
Silver	mg/l	0.001	Ventura	0.001	United	0.002	Ventura	0.001	Ventura
Zinc	mg/l	0.205	Ventura	0.083	United	0.168	Ventura	0.241	LA
PESTICIDES									
ChemA	mg/l	ND	Hanson	ND	United	NA	NA	NA	NA
Lannate	mg/l	ND	Kennedy/ Jenks	NA	Kennedy/ Jenks	ND	Kennedy/ Jenks	ND	Kennedy/Jen ks
HYDROCARBONS									
Oil/Grease	mg/l	3	Ventura	1	Ventura	3	Ventura	3	LA
MTBE (2)	mg/L	0.002	USGS	ND	Kennedy/ Jenks	ND	Kennedy/ Jenks	ND	Kennedy/Jen ks
MICROORGANISMS									
Total Coliform	MPN/100ml	39,300	Ventura	261,800	Ventura	65,800	Ventura	107,000	Ventura
Fecal Coliform	MPN/100ml	13,500	Ventura	32,700	Ventura	17,200	Ventura	4,530	Ventura
Fecal Streptococci	MPN/100ml	20,200	Ventura	82,800	Ventura	48,300	Ventura	32,530	Ventura
Giardia	cysts/100L	NA	--	NA	--	NA	--	NA	--
Cryptosporidium	oocysts/100L	NA	--	NA	--	NA	--	NA	--

NA: Data not available.
ND: Levels not detectable.
(1) Chromium VI concentrations are based on 50 percent of the total chromium concentration. This ratio is based on data from California DHS.
(2) MTBE concentrations are based on USGS data (http://ca.water.usgs.gov/mtbe) indicating that California urban storm runoff samples have generally been less than 2 µg/L. MTBE is only expected to be found in the industrial drainage area.

PROJECT IMPACTS

Water Quality Constituents Analyzed

Classes of constituents were reviewed in relation to the existing and proposed land uses in the RiverPark Specific Plan Area, and in the drainage areas tributary to the Specific Plan Area, to determine which constituents would be affected by the proposed project. Consideration was also given to applicable regulatory standards. A brief description of the constituents selected for evaluation is provided below.

Total suspended solids (TSS) are evaluated to determine changes in sediment loads to the Santa Clara River from surface runoff. TSS is effectively filtered out when surface water infiltrates. For this reason, TSS does not impact groundwater quality and the impact of TSS on groundwater quality is not evaluated.

The Basin Plan has standards for four specific mineral constituents for both surface water and groundwater. These include sulfate, chloride, total dissolved solids (TDS), and boron. As the Basin Plan sets standards for these constituents, all are evaluated.

Among the nutrient constituents, nitrate and ammonia are evaluated as the Basin Plan contains standards for both. The Basin Plan sets objectives for both nitrate and ammonia for surface water and an objective for nitrate for groundwater.

Metallic constituents make up a significant portion of applicable drinking water standards due to their potential impact on human health. Metals selected for evaluation include arsenic, beryllium, cadmium, total chromium, Chromium VI, copper, iron, lead, manganese, mercury, nickel, selenium, silver, and zinc.

Chromium VI, a species of total chromium, is also evaluated in response to recent concerns raised about the human health effects of Chromium VI. At this time there is no defined regulatory standard for Chromium VI. Primary MCLs for total chromium are 50 and 100 μg/L based on state and federal drinking water standards, respectively. The California Department of Health Services (“DHS”) has recently requested that the State Office of Environmental Health Hazard Assessment (“OEHHA”) establish a specific Public Health Goal (“PHG”) for Chromium-VI. The PHG would formally identify a level of Chromium-VI in drinking water that does not pose a significant human health risk. In developing drinking water standards, state law requires DHS to consider economic and technical feasibility as well as the PHG. A blue-ribbon panel of expert scientists from throughout the United States has been established by the University of California (“UC”) to review scientific questions concerning the potential of Chromium-VI to cause cancer when ingested. The UC panel’s review will provide recommendations to assist OEHHA in the development of a Chromium-VI PHG. Neither river nor groundwater concentration data is available for Chromium-VI as a separate component from the total chromium as currently reported. Regional stormwater quality monitoring studies have not reported concentrations for Chromium-VI because it is not yet included in the Title 22 suite of regulated drinking water constituents. The PHG for total chromium, which is set at 2.5 µg/L, was calculated based on scientific information on the potential carcinogenicity of ingested Chromium-VI, along with an estimate that Chromium-VI comprised about 7 percent of the total chromium in water. However, more recent studies of Chromium-VI in a limited number of California water supplies indicate this percentage can be much higher, perhaps greater than 50 percent.[42] The quantitative analysis of the water quality impacts from Chromium VI are based on the assumption that it constitutes 50 percent of the total chromium concentration.

Due to the presence of agricultural activities, pesticides were selected for inclusion in the water quality analysis. Two particular pesticides were selected as being sufficiently representative based on existing and projected land use. ChemA represents a class of historically used chlorinated pesticides including aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, HCH, endosulfan, and toxaphene. The Santa Clara River estuary, downstream of the project site, is listed as being impaired for both ChemA and toxaphene. Lannate, which is the trade name for the EPA registered compound, methomyl, is an insecticide that is used on a wide variety of crops. Lannate was selected as a representative locally-applied pesticide due to its conservative chemical and toxicological attributes—i.e., high mobility, stability and toxicity. Neither Basin Plan Objectives nor MCLs exist for this compound, although a drinking water standard of 0.85 mg/L has been established using EPA health criteria toxicological calculations.

Given the proximity of the industrial sites in Drainage Area 3 to the RiverPark Specific Plan Area, two hydrocarbon constituents were selected for inclusion in the thresholds of significance. Oil and grease is a general class of hydrocarbons typically associated with wastewater that also has a basin plan objective. This objective is qualitatively called out as "sheen causing" and a surface water threshold has been conservatively estimated as 10 mg/L. Oil and grease is not associated with groundwater and this is reflected in the fact that there are no drinking water standards for this constituent. Subsequently, no groundwater threshold for oil and grease was established.

Methyl tertiary butyl ether (MTBE) is a hydrocarbon that has been added in relatively low concentrations to increase octane ratings in premium grade fuels since the late 1970's. Beginning in the early 1990's MTBE has been added in much higher concentrations (up to 15 percent) to enhance gasoline combustion and reduce tailpipe emissions. MTBE is the most common fuel oxygenate, used in more than 80 percent of oxygenated fuels. Potential and documented contamination of water resources by MTBE has become a cause for major public concern and increasing controversy. MTBE readily dissolves in

42 California DHS. State to Develop Health Goal, Seeks Scientific Review of Chromium-VI in Drinking Water. Press Release. http://www.dhs.ca.gov/opa/prssrels/2001/18-01.htm. March 27, 2001.

water, can move rapidly through soils and aquifers, is resistant to microbial decomposition and is difficult to remove via conventional water treatment schemes. The U.S. EPA has classified MTBE as a potential human carcinogen. Finally, MTBE can give water an unpleasant taste and odor. These factors have caused widespread concern that drinking water supplies and human health may be at risk. An EPA-appointed independent blue-ribbon panel of leading experts from the public health, environmental and scientific communities, fuels industry, water utilities, and local and state governments concluded, among other things, that MTBE has primarily caused odor and taste concerns, and that only in rare instances has it been found in drinking water supplies at levels well above health-based drinking water standards.[43] Based on the panel's recommendations, recent federal EPA legislation has been enacted to protect surface and groundwaters from MTBE contamination, including the establishment of primary and secondary drinking water standards. Local standards for surface water quality such as might be included in Basin Plan objectives and California Toxics Rule criteria have not been established for this constituent. Executive Order D-5-99 will phase out the use of MTBE as a gasoline additive in California by no later than December 31, 2002.

Microbial contaminants are the last class of constituents that were included in the thresholds of significance. Thresholds for pathogen indicators such as total coliform, fecal coliform, and fecal streptococci, whose presence can indicate wastewater contamination, were developed. In addition, to these traditional classes of indicator organisms, standards for *Giardia* and *Cryptosporidium* were also developed. *Giardia* and *Cryptosporidium* are two microbial contaminants that have become prominent in recent water quality regulations. Both are pathogenic protozoa that are difficult to enumerate and as such, monitoring for these contaminants is difficult and expensive. Insufficient information exists regarding ambient levels in stormwater runoff and within the Santa Clara River to evaluate impacts from these constituents at this time.

In summary, the following constituents are considered in the water resources analysis:

- Total suspended solids (TSS)
- Minerals
  - Sulfate
  - Chloride
  - Total dissolved solids (TDS)
  - Boron
- Nutrients
  - Nitrate
  - Ammonia
- Metals
  - Arsenic
  - Beryllium
  - Cadmium
  - Total Chromium
  - Chromium VI
  - Copper
  - Iron
  - Lead
  - Manganese
  - Mercury
  - Nickel
  - Selenium
  - Silver
  - Zinc
- Pesticides
  - ChemA
  - Lannate
- Hydrocarbons
  - Oil and grease
  - MTBE (Methyl tert butyl ethylene)
- Microbial Contaminants
  - Total Coliform
  - Fecal Coliform
  - Fecal Streptococci
  - *Giardia*
  - *Cryptosporidium*

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43 Blue Ribbon Panel. Blue Ribbon Panel on Oxygenates in Gasoline: Executive Summary and Recommendations. http://www.epa.gov/oar/caaac/mtbe-caaac.html. 1999.

Thresholds of Significance

This water resource analysis addresses potential impacts to groundwater and surface water quality and groundwater recharge and balance. The City of Oxnard reviewed the applicable regulatory and planning standards discussed above to determine appropriate thresholds of significance for this water resource analysis. Based on this review, the following thresholds of significance have been selected for this analysis by the City of Oxnard.

Groundwater

- Any discharges to exposed groundwater in the existing mine pits containing concentrations of selected constituents greater than ambient groundwater concentrations[44] or Basin Plan objectives as measured where the discharged water physically leaves the pits is identified as a significant impact.
- Any discharges to exposed groundwater of water containing pathogen concentrations greater than ambient groundwater concentrations or Basin Plan objectives as measured at the boundary of the Specific Plan Area is identified as a significant impact.[45]

The numerical standards used for the groundwater discharge analysis are presented in Table 4.5-19.

Surface Water

- Any discharge to the Santa Clara River exceeding the Basin Plan objectives for sulfate, chloride, total dissolved solids, boron, nitrate, ammonia, fecal coliform, and oil and grease is identified as a significant impact.
- Any discharge to the Santa Clara River exceeding the California Toxics Rule Criteria Maximum Concentrations (CMCs) for freshwater aquatic life for arsenic, cadmium, chromium III, chromium VI, copper, lead, nickel, selenium, silver, and zinc is identified as a significant impact.
- Any discharge to the Santa Clara River exceeding the California Toxics Rule Criteria Maximum Concentrations (CMCs) for human health for mercury is identified as a significant impact.

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44 For the purposes of this analysis ambient groundwater quality is generally defined as the maximum observed pollutant concentrations from UWCD's El Rio Spreading Grounds Wellfield data from 1991 to 2000, or the period of recharge. Chromium VI ambient concentrations are based on 50 percent of the total chromium concentration. For *Giardia* and *Cryptosporidium*, ambient concentrations are based on single samples collected at wells 2N22W21H2 and 2N22W22G1 on April 9, 1997. These concentrations are all at or below drinking water standards and provide a conservative benchmark for comparison without compromising groundwater quality.

45 This approach allows for conservative estimates for settling of particulate contaminants and die-off and dilution of microbial contaminants. Furthermore, it provides a more realistic benchmark for comparison that would not be subject to timing issues (peak versus trailing edge of storm flows) if discharges from individual storm drains were to be used.

- Any discharge to the Santa Clara River exceeding ambient concentrations[46] of iron, manganese, MTBE, total coliform, fecal coliform, fecal streptocooci, giardia and cryptosporidium is identified as a significant impact.

The numerical standards used for surface water discharges are also presented below in Table 4.5-19.

Dewatered Groundwater

- Any discharge of groundwater dewatered during construction exceeding the numerical standards for specific water constituents as contained in General NPDES Permit and Waste Discharge Requirements (Order No. 97-045) issued by the LARWQCB is identified as a significant impact.

Table 4.5-19
Thresholds of Significance for Surface Water and Groundwater Quality

		Threshold of Significance			
		Surface Water (1)		Groundwater (2)	
Constituent	Units	Threshold	Source	Threshold	Source
TSS	mg/l	38,800	Ambient	NS	---
MINERALS					
Sulfate	mg/l	600	Basin Plan Objective	500	CA Primary MCL
Chloride	mg/l	150	Basin Plan Objective	102	Ambient
TDS	mg/l	1,200	Basin Plan Objective	1,000	CA Sec MCL
Boron	mg/l	1.5	Basin Plan Objective	1.0	Ambient
NUTRIENTS					
Nitrate	mg/l	45	Basin Plan Objective	45	CA Pri MCL
Ammonia	mg/l	1.30	Basin Plan Objective	NS	---
METALS					
Arsenic	mg/l	0.34	CA Toxics Rule	<0.05 (4)	Ambient
Beryllium	mg/l	NS	(3)	<0.001 (4)	Ambient
Cadmium	mg/l	0.022	CA Toxics Rule	<0.001 (4)	Ambient
Chromium, total	mg/l	5.4	CA Toxics Rule	<0.01 (4)	Ambient
Chromium VI	mg/l	0.016	CA Toxics Rule	<0.005 (5)	Ambient
Copper	mg/l	0.052	CA Toxics Rule	<0.05 (4)	Ambient
Iron	mg/l	12.5	Ambient	0.13	Ambient
Lead	mg/l	0.48	CA Toxics Rule	<0.005 (4)	Ambient
Manganese	mg/l	0.56	Ambient	0.03	Ambient
Mercury	mg/l	0.000051	CA Toxics Rule	<0.001 (4)	Ambient
Nickel	mg/l	1.5	CA Toxics Rule	0.003	Ambient
Selenium	mg/l	0.005	CA Toxics Rule	0.009	Ambient
Silver	mg/l	0.044	CA Toxics Rule	0.01	Ambient
Zinc	mg/l	0.39	CA Toxics Rule	0.05	Ambient
PESTICIDES					
ChemA (11)	ng/g	100	Nat. Acad. Of Sci.	ND	Ambient
Lannate (10)	mg/l	0.85	EPA Criteria Estimate	<0.005	Ambient

(continues next page)

46 Ambient concentrations for iron and manganese are defined as the maximum concentrations measured by UWCD at the Freeman Diversion Santa Clara River sampling station. Ambient river concentration for total suspended solids is defined as the maximum of observed concentrations from USGS monitoring conducted during 1991 – 1993 at the Montalvo Station. Ambient river concentrations for pathogen indicators is defined as the maximum concentrations measured by the Ventura County Flood Control District at their Ventura River Foster Park sampling station. While this last source of data is not specific to the Santa Clara River, it represents the best source of analogous, local data. Ambient river concentration for MTBE is based on the National Water Quality Assessment "NAWQA" Program data for the Santa Ana Watershed and reflects limited sampling from the Santa Ana River and Warm Creek. Ambient river concentrations for Giardia and Cryptosporidium are based on a single sample collected 500 feet downstream of the Freeman Diversion on November 18, 1996.

Table 4.5-19 (continued)
Thresholds of Significance for Surface Water and Groundwater Quality

Constituent	Units	Threshold of Significance			
		Surface Water (1)		Groundwater (2)	
		Threshold	Source	Threshold	Source
HYDROCARBONS					
Oil/Grease	mg/l	10	Basin Plan Objective	NS	---
MTBE (8)	mg/L	<0.00049	Ambient	<0.005	Ambient
MICROORGANISMS					
Total Coliform	MPN/100 ml	160,000	Ambient	<1.1 (7)	CA Pri MCL
Fecal Coliform	MPN/100 ml	5,000/200	Ambient/BP Objective	<1.1 (7)	CA Pri MCL
Fecal Streptococci	MPN/100 ml	17,000	Ambient	NS	---
Giardia (9)	cysts/100 L	<1.6	Ambient	<1	Ambient
Cryptosporidium (9)	oocysts/100 L	<1.6	Ambient	<1	Ambient

Notes:

(1) Surface Water Thresholds of Significance Sources include the following:
California Toxics Rule: Criteria maximum concentration (CMC) for freshwater aquatic life. Chromium CMC is divided into 5,405 and 16 ppb for total Ch-III and total Ch-VI, respectively. Mercury CMC unavailable and so human health criteria (for consumption of organisms only) is used. Selenium CMC unavailable and so criteria continuous concentration (CCC) is used.
Basin Plan Objective: LARWQCB Basin Plan Objective for Reach 2 of the Santa Clara River. Ammonia objective conservatively assumes T = 15oC and pH = 8.1 (average Santa Clara River conditions), and Water Designation COLD (4-day avg.). The basin plan objectives for ammonia are currently being considered for revision by the LARWQCB. Oil/grease objective is "sheen-causing," which is conservatively approximated as 10 mg/L.
Ambient: Santa Clara River concentration, based on data associated with flow rates greater than 100 cfs. Pathogen indicator data unavailable for the Santa Clara River; ambient values shown based on 2001 VCFCD data for Foster Park sampling station on the Ventura River. The Ventura River is considered to be sufficiently analogous to the Santa Clara River for the purposes of these water quality analyses. Range of iron and manganese concentrations based on UWCD water quality data for the Santa Clara River at their Freeman Diversion sampling station. TSS concentrations based on 1991-1993 USGS water quality data for the Santa Clara River at their Montalvo sampling station.

(2) Groundwater Threshold of Significance Sources include:
Ambient: Values shown represent the maximum of reported value (1991-2000 data, post-Freeman diversion), that does not exceed drinking water standards, as determined from the United Water Conservation District El Rio wells #1, 2A, 3, 4, 5, 6, 7, 8 and 11 located adjacent to the El Rio spreading basins.
Drinking Water Standards: Where the maximum observed ambient groundwater exceeds, drinking water standards, the Maximum Contaminant Level (MCL) or Secondary Maximum Contaminant Level (SMCL) is used as the threshold of significance.

(3) California Toxics Rule criteria for beryllium not yet established.

(4) Upper end of range is an older non-detect result. This occurs as a result of historic sampling which utilized analytical procedures and equipment having higher detection limits than are currently achievable.

(5) Ambient Chromium VI concentration is estimated at 50 percent of the total chromium concentration based on data from the California DHS.

(6) Point of Compliance, as per adopted project water quality thresholds, is established as "point of contact with groundwater beneath pits" for all conservative-behaving constituents (i.e., non-bacteria). These concentrations are identical to those entering the pits ("point of contact with exposed groundwater in pits") for most constituents; however, for metals, the particulate fractions are removed in order to account for sedimentation and filtration mechanisms which will occur in and beneath the pits. Point of Compliance for pathogen indicators is established as "within aquifer at downgradient property line." Removal factor of 5.6 applied to pathogen indicator concentrations at "point of contact with exposed groundwater in pits." This factor is taken from Kennedy/Jenks' Reverse Engineering document (KJ, 2000b) and accounts for dilution, die-off and sorption/filtration removal mechanisms.

(7) The total coliform MCL is based on a standard requiring less than 5 percent of all tests per month to be positive and the fecal coliform MCL is none detected. The standards cited (<1.1 MPN/100 mL) represent the analytical detection limit for total and fecal coliform which are conservative approximations for this analysis.

(8) Ambient surface water concentration for MTBE is based on the National Water Quality Assessment "NAWQA" Program data for the Santa Ana Watershed and reflects limited sampling from the Santa Ana River and Warm Creek. Ambient groundwater concentration for MTBE is based on single samples from wells 2N22W21H2 and 2N22W22G1 as well as samples from the water storage/infiltration basins collected in 1997.

(9) Groundwater thresholds for Giardia and Cryptosporidium are based on ambient conditions as reflected by two samples collected at wells 2N22W21H2 and 2N22W22G1 on April 9, 1997. Surface water thresholds for Giardia and Cryptosporidium are based on ambient conditions as reflected by one sample collected on November 18, 1996, 500 feet downstream of the Freeman Diversion.

(10) Surface water threshold for Lannate is based on an EPA Health Criteria toxicology calculation.

(11) Surface water threshold for Chem A is based on a tissue concentration established by the National Academy of Science.

The numerical standards used for dewatered groundwater are presented in Table 4.5-20.

The City of Oxnard has selected the following as the threshold standards for water quality. These thresholds are environmentally conservative and consistent with both the preservation of Basin Plan designated beneficial uses and the SWRCB's Anti-Degradation Policy.

Table 4.5-20
NPDES Dewatering Permit Effluent Limitations

Constituent	Units	Discharge Limitations Monthly Average	Discharge Limitations Daily Maximum
EFFLUENT LIMITATIONS			
Total Suspended Solids	mg/L	50	150
Turbidity	NTU	50	150
BOD_5 20°C	mg/L	20	30
Oil and Grease	mg/L	10	15
Settleable Solids	mg/L	0.1	0.3
Sulfides	mg/L	--	1
Detergents as methylene blue active substances (MBAS)	mg/L	--	0.5
pH		at all times between 6.0 and 9.0	
DISCHARGE LIMITATIONS	Units	Maximum Allowable Concentration	
TDS	mg/L	1,200	
Sulfate	mg/L	600	
Chloride	mg/L	150	
Boron (1)	mg/L	1.5	
Nitrogen (2)	mg/L	--	
Phenols	mg/L	1	
Phenolic Compounds (chlorinated)	µg/L	1	
Benzene	µg/L	1	
Toluene	µg/L	15	
Ethylbenzene	µg/L	700	
Xylene	µg/L	1,750	
Ethylene Dibromide	µg/L	0.05	
Carbon Tetrachloride	µg/L	0.5	
Tetrachloroethylene	µg/L	5	
Trichloroethylene	µg/L	5	
1,4-dichlorobenzene	µg/L	5	
1,1-dichloroethane	µg/L	5	
1,2- dichloroethane	µg/L	0.5	
1,1-dichloroethylene	µg/L	6	
Vinyl Chloride	µg/L	0.5	
Arsenic	µg/L	50	
Cadmium	µg/L	5	
Chromium	µg/L	50	
Copper	µg/L	1,000	
Lead	µg/L	50	
Mercury	µg/L	2	
Selenium	µg/L	10	
Silver	µg/L	50	
Total Petroleum Hydrocarbons	µg/L	100	
Methy Tertiary Butyl Ether (MTBE)	µg/L	35	

Source: RWQCB, Order No. 97-045
Notes:
(1) Where naturally occurring boron results in concentrations higher than the stated limit, a site-specific limit may be determined on a case-by-case basis.
(2) Nitrate-nitrogen plus nitrite-nitrogen (NO3-N + NO2-N). The lack of adequate nitrogen data for all streams precluded the establishment of numerical limits for all streams.

Groundwater Recharge and Water Balance

For the purposes of determining the impact of the project on groundwater recharge and water balance, the City of Oxnard is using the following thresholds developed by the County of Ventura:

- Any direct or indirect decrease the net quantity of groundwater in a basin that is overdrafted is a significant adverse impact.

Known Groundwater Quality Impacts – Compare the impacts of each constituent resulting from the proposed land use with the limits for those constituents required to meet the beneficial use stated in the current Basin Plan.

- Non-impacted Basin - In hydrologic units where all groundwater constituents meet the current Basin Plan Standards, the proposed land use that individually or cumulatively causes the hydrologic unit to fail to meet these standards, is a significant adverse impact. Proposed land use that does not individually or cumulatively cause the hydrologic unit to fail to meet Basin Standards has a less than significant impact.
- Impacted Basin – Compare the impacts of each constituent resulting from the proposed land use with the respective Basin Standards for those constituents causing the basin to be impacted. If one or more constituent exceeds the Basin Standards, the impact shall be significant for both the project and cumulative impacts.

Project Impact Analysis

Numerous proposed components of the RiverPark Project have the potential to impact water quantity and quality including reconfiguration of the existing mining pits, abandonment of onsite wells, changes in existing drainage patterns, changes in land use that will effect stormwater runoff, and the future diversion of surface water into the existing mine pits for storage by UWCD. The pits would be reconfigured under the proposed Specific Plan and Mine Reclamation Plan. The existing slopes of the pits will be stabilized and the existing peninsula of fill material in the Vickers Pit and the land bridge separating the Vickers and Brigham Pits. Onsite irrigation and industrial supply wells will be abandoned. The Specific Plan would allow the site to be graded and developed with new land uses supported by a new storm drain system. In addition, the Specific Plan would allow the reclaimed mine pits to be used by UWCD for the storage of surface water. Each of these components of the RiverPark Project that could impact water quantity and quality is briefly described below.

Stormwater Drainage

Currently, runoff drains to the Large and Small Woolsey Pits from the adjacent agricultural and industrial areas. As proposed, the RiverPark project would involve modification of El Rio Retention

Basin No. 1 and the filling of Retention Basin No. 2. El Rio Drainage Basin No. 1 will be partially filled to provide a minimum of 1 foot above historic high groundwater levels and lined, and will continue to function as a detention basin for runoff generated by the agricultural area to the east of Vineyard Avenue (Drainage Area 4). El Rio Drainage Basin No. 2 will be filled in and reclaimed for development with new uses. Two new detention basins, designed as stormwater management systems, would be built to treat runoff from Drainage Areas 2 and 3. These lined detention basins are designed to treat events up to the 10-year frequency storm. Treated stormwater will be released to the Santa Clara River through new storm drains to existing outlets to the Santa Clara River. Runoff from storm events exceeding the 10-year frequency storm capacity of these water quality detention basins will overflow to the pits. The residential component of RiverPark Area 'B' will utilize a similar stormwater management system so that most stormflows will be treated and detained in lined detention basins prior to discharge to the Santa Clara River, while larger stormflows will be diverted directly to the pits.

The proposed RiverPark Specific Plan Area will consist primarily of commercial and residential land uses. The eastern portion of the residential area proposed in RiverPark Area 'B' will slope gradually towards the southeast, away from the Santa Clara River, towards the Brigham-Vickers Water Storage/Recharge Basin. The western portion of the residential area proposed in RiverPark Area 'B' will drain to the southwest. RiverPark Area 'A' will slope gradually towards the southwest, towards the intersection of the Santa Clara River and the Ventura Freeway. The two off-site areas, which currently drain to the Specific Plan Area, will continue to drain into the Specific Plan Area. Figure 4.5-11 illustrates the location of the drainage areas and the location of the major conveyance and treatment facilities.

A more detailed description of this proposed storm drain and water quality treatment system is provided below.

Drainage Area 1

Stormwater drainage from the southern (primarily commercial) areas of RiverPark A will be treated by a dry swale located in the median of Santa Clara River Boulevard and conveyed in an underlying stormdrain pipeline. This stormdrain pipeline discharges to the existing Stroube stormdrain that, in turn, discharges through the levee to the Santa Clara River. This stormdrain design will accommodate up to the 100-year peak flow event. Catch basin inserts and manhole-accessible centrifugal separator units, with the potential addition of other structural BMPs, are incorporated into the storm drain system to meet Ventura County and City of Oxnard requirements for stormwater discharge.

Drainage Area 2a

Stormdrains from this residential area will discharge to either the North Detention Basin or a pretreatment dry swale located between the eastern side of the Santa Clara River levee and the western border of the RiverPark B residential area. Flows from these storm drains will join with stormflows from Drainage Area 3, which also are routed through the North Detention Basin and the dry swale along the river. This swale will convey stormflows southward to a discharge point to the Santa Clara River located at approximately the RiverPark A-B boundary. Stormflows that exceed the 10-year event peak flow will overtop the swale and be detained in the surrounding cottonwood forest. This riparian buffer strip will therefore serve as a detention basin or floodplain to alleviate flooding during very large stormflow events.

Drainage Area 2b

Storm drains from this residential drainage area either discharge to the South Detention Basin or the pretreatment dry swale located between the eastern side of the RiverPark B residential area and the western edge of the Brigham-Vickers Water Storage/Recharge Basin. The swale will convey stormflows southward to the South Detention Basin, which then drains to a large capacity pipeline for conveyance to the Drainage Area 1 stormdrain pipeline and ultimately to the Santa Clara River. Stormflows that exceed the 10-year event peak flow will bypass directly to the Brigham-Vickers Water Storage/Recharge Basin. The combined storage volume of the Water Storage/Recharge Basins is slightly larger than a 100-year storm event from all the on-site and off-site tributary drainage areas (Haslinger, 2001). This storage capacity estimate assumes a historic high groundwater elevation of 78 feet and allows for 1 foot of freeboard.

Drainage Area 3a

Stormdrains from this industrial drainage area discharge to a dry swale located between the eastern edge of the Large Woolsey Water Storage/Recharge Basin and the western border of the Beedy Street/JJC area. The swale conveys storm flows southward to a large capacity stormdrain that discharges to the North Detention Basin, located on the northern edge of RiverPark B. This north detention basin drains to the Drainage Area 2a dry swale located adjacent to the western edge of the RiverPark B residential area. The swale will convey stormflows southward to a large capacity stormdrain which outlets to the Santa Clara River. Stormflows exceeding the 10-year event peak flow bypass the treatment system via flow bifurcation structures located at the catch basins, and flow directly to the adjacent Large Woolsey Water Storage/Recharge Basin.

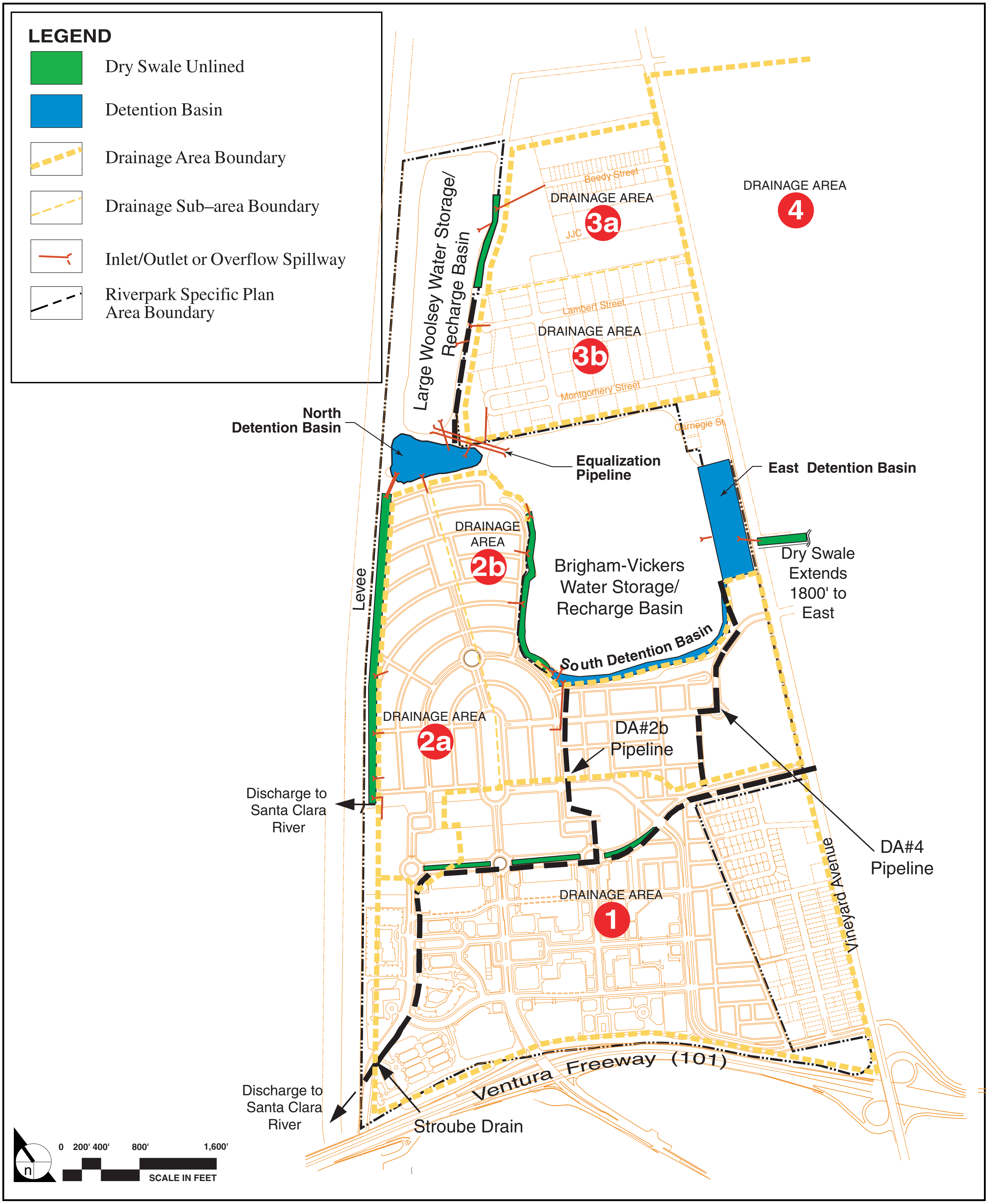

FIGURE **4.5-11**

Proposed Stormwater Treatment System Drainage Areas

Drainage Area 3b

Storm drains from this industrial drainage area will discharge to a large capacity storm drain pipeline located between the eastern edge of the Large Woolsey Water Storage/Recharge Basin and the western border of the Montgomery/Lambert Street area. A pretreatment swale is not included here because of insufficient width between the western edge of the industrial area at Lambert Street and the eastern edge of Large Woolsey pit. The stormdrain discharges to the North Detention Basin. The North Detention Basin drains to the Drainage Area 2a dry swale that runs adjacent to the western edge of the RiverPark B residential area. The swale conveys stormflows southward to a large capacity storm drain pipeline which outlets to the Santa Clara River. Stormflows exceeding the 10-year event peak flow bypass the treatment system via flow bifurcation structures located at the catch basins, and flow directly to the adjacent Large Woolsey Water Storage/Recharge Basin.

Drainage Area 4

Stormflows generated from the agricultural area tributary to the project site are conveyed via existing drainage channels into a dry swale located at the drainage area's southern boundary. The swale conveys storm flows westward and across Vineyard Avenue to the East Detention Basin adjacent to the Brigham-Vickers Water Storage/Recharge Basin. Stormflows from the Carnegie Street industrial area (a relatively minor contribution) discharge directly to the East Detention Basin. This detention basin drains to a large capacity stormdrain which discharges into the Drainage Area 1 stormdrain, and ultimately to the Santa Clara River. Stormflows that exceed the 10-year event peak flow will bypass the swale via an existing drainage ditch and discharge directly to the Brigham-Vickers Water Storage/Recharge Basin. A comprehensive description of the proposed stormwater system is provided in Appendix 4.5-5.

UWCD Surface Water Diversions

The proposed Specific Plan designates the reclaimed mine pits for use as water storage and recharge basins and allows the pits to be used by the United Water Conservation District (UWCD) as water storage and recharge basins at some future date. As discussed in Section 2.0, Environmental Setting, UWCD manages groundwater and delivers water to cities and agricultural uses within a large part of Ventura County. The Freeman Diversion project was constructed in 1991 by UWCD to divert water from the Santa Clara River for groundwater recharge and agricultural use. UWCD currently operates spreading grounds to the north of this project site in Saticoy and to the east of the site in El Rio.

The District's current ability to recharge the local aquifer system is limited after about four weeks of precipitation in wet years due to the limited capacity of the existing spreading grounds. In addition, UWCD does not divert water from the river immediately after a storm due to the high level of silt. As a result, UWCD is not able to divert the full amount of water from Santa Clara River to which it is currently entitled. UWCD has expressed interest in using the existing mine pits within the Specific Plan Area, after implementation of the proposed reclamation plan, for the storage of water diverted from the Santa Clara River at the Freeman Diversion structure. Water stored in the pits would be allowed to infiltrate in the basins to recharge the aquifer or transferred to other UWCD facilities for recharge or delivery to customers for use. It is anticipated that over time, the Large Woolsey and Brigham/Vickers Water Storage/Recharge Basin bottoms will silt up and function primarily as storage facilities. UWCD will need to prepare engineering and environmental studies and secure funding before the mine pits could be used for this purpose. At this time, UWCD has not secured funding for design, construction or operation of the mine pits for this purpose and no schedule has been determined for these future actions by UWCD. This analysis focuses on the use of the pits allowed by the proposed RiverPark Specific Plan.

Construction Characteristics

The reclamation plan for the RiverPark Specific Plan area addresses the reclamation of the existing mine pits and the stockpile and plant areas. The reclamation of the mine pits[47] encompasses the stabilization of basin slopes to improve stability and reduce lateral movement under static and seismic conditions. Slope stabilization will allow for the development of appropriate setbacks from adjacent structures and will accommodate the construction of the stormwater treatment systems and a proposed perimeter road. Stabilization is expected to be achieved through a combination of grading and mechanical reinforcement methods. Revegetation of the slopes following stabilization is also planned.

Reclamation of the stockpile area will include the excavation, removal, and recompaction of uncertified fills, where present. In order to perform this work, dewatering of the excavation area may be necessary depending on the groundwater level at the time of construction. Specific details regarding dewatering operations will not be known until the stockpile excavation begins. Groundwater levels at the time of construction would have the greatest impact influence on the specifics of the dewatering operation. Additionally, the methodology of the grading contractor, i.e., the size of the excavation, also will influence the scope of the dewatering operation. A preliminary dewatering evaluation estimated that a wellpoint dewatering system could generate as much as 110 to 130 acre-feet per day of

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47 West Coast Environmental and Engineering. *RiverPark Reclamation Plan. Prepared for Hanson Aggregates West, Inc.* August 1, 2001.

discharge, if the groundwater level was at or below about 55 feet msl and excavation down to about 35 feet msl was required.

Potential discharge points for this water include the Large Woolsey Mine Pit, the Vulcan (previously CalMat) Ferro Pit (located immediately north of the Large Woolsey Pit, the UWCD El Rio Spreading Basins, or the Santa Clara River. Dewatering is anticipated to last for 3 to 4 months, based on the anticipated groundwater levels, to accommodate the grading activities for the reclamation of the stockpile area.

Discussions with Regional Board staff[48] indicate that discharges of the dewatered groundwater to the mine pits or the Santa Clara River would be subject to a National Pollutant Discharge Elimination System (NPDES) Permit and waste discharge requirements. Although there is a general permit, the quantity of flow that may be extracted would require application for an individual permit. Individual permits generally follow the same guidelines as the general permit with special provisions included to address unique aspects of the project.

Depending on the water level at the time of construction, the volume of dewatering could be substantial. Selection of a specific discharge point would be dependent on the amount of groundwater required to be dewatered and the relative location of the area to be dewatered to the discharge point to avoid mounding effects.

Impacts on Water Quantity

Construction

The dewatering that will occur during construction could impact groundwater quantities depending on the actual amount of dewatering required and the method of discharge. If a substantial amount of groundwater is discharged to the Santa Clara River, this would result in a negative impact on groundwater quantities. This potential impact could be mitigated by allowing the dewatered groundwater to percolate back to groundwater. This could be achieved, if feasible, by discharging the groundwater to the mine pits if a small amount of dewatering is necessary or to the El Rio Spreading Grounds or the Ferro Pit if larger withdrawals are required. This impact is considered significant.

RiverPark Project Impacts

Impacts to groundwater quantity from the RiverPark Specific Plan were estimated by examining the site's interaction with the groundwater system over a 20-year period on a project basis and then

48 Nye, L.B. (Regional Water Quality Control Board). Personal Communication. September 17, 2001.

comparing the results to the existing conditions. The methodology used to analyze the project impacts was generally consistent with the methodology used for the existing conditions analysis. Because the project will result in land use changes, some additional elements were added to the water balance to reflect inflows and outflows to groundwater. Components of the RiverPark Project that will impact groundwater quantity include:

- Residential and commercial development that will change the amount and location of pervious acreage available for surface water infiltration and potential groundwater recharge;
- Abandonment of onsite wells including 4 irrigation wells and 2 industrial water supply wells;
- Reconfiguration of existing mine pits including slope stabilization and modification of the land bridge between the Brigham and Vickers pits;
- Diversion of onsite and offsite stormwater runoff into a series of grass-lined swales and detention basins for conveyance to the Santa Clara River;[49]
- Overflow of detention basins into the mine pits if surface water runoff volume exceeds the capacity of the drainage system (10-year storm event); and
- Diversion of surface water into mine pits for recharge and storage by UWCD.

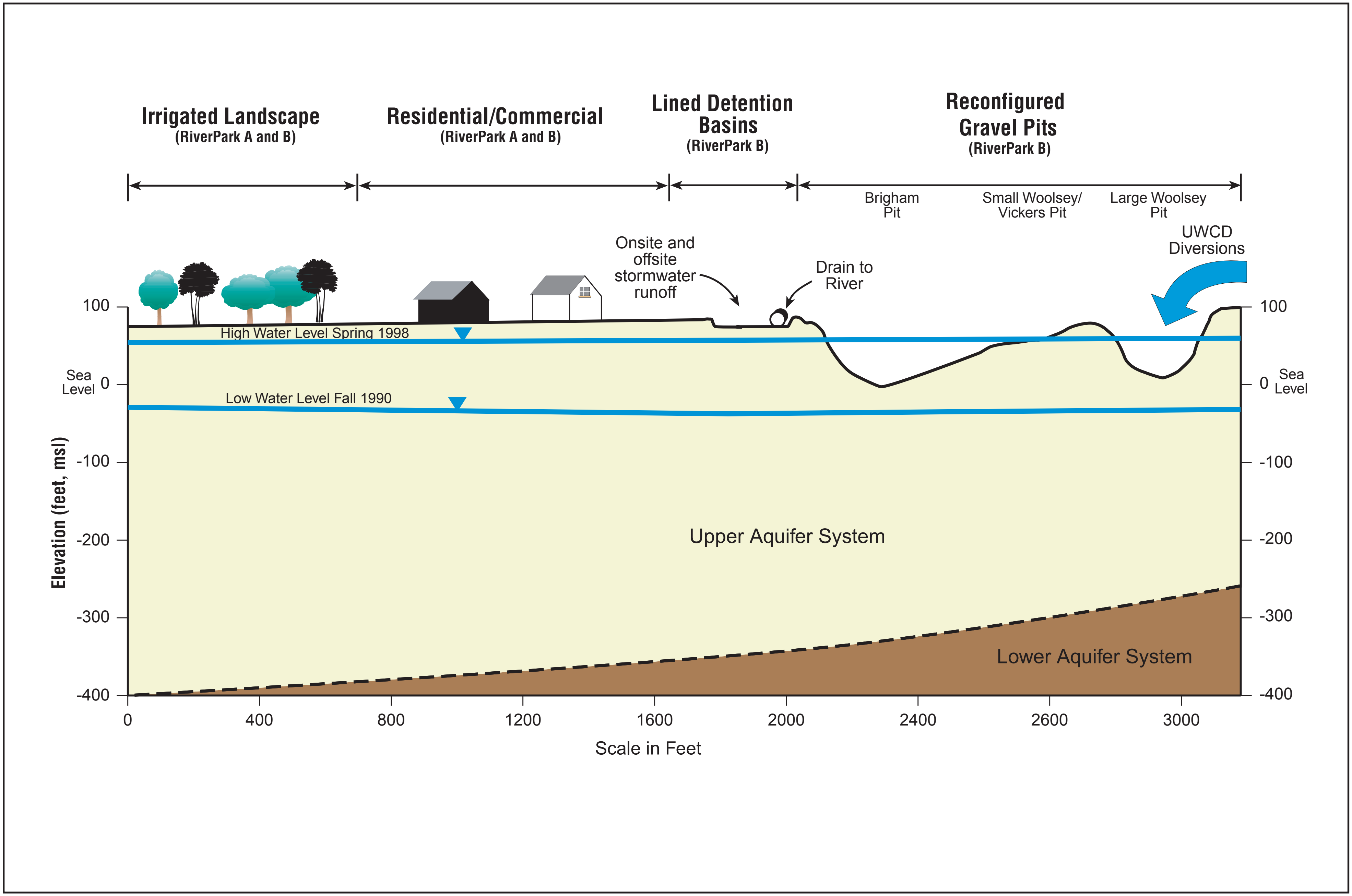
To determine the impact of the RiverPark Project on the groundwater basin, the net amount of groundwater extraction resulting from the Project is compared to the historical groundwater extraction for the Specific Plan Area.

Project Site Water Balances

To evaluate the project's impact to groundwater quantity, three analyses were conducted. One consisted of estimating a water balance for the reconfiguration of the existing mine pits, incorporating surface water diversions by UWCD. The second involved an estimate of groundwater recharge associated with irrigated landscape and open areas of the site where potential infiltration could occur. The third analysis considered the changes to the surface water drainage system whereby stormwater runoff will be diverted to the Santa Clara River via a system of dry swales, detention basins, and drain pipes. These project conditions are illustrated in the conceptual cross-section on Figure 4.5-12. Data and analyses are included as Attachments 5, 6, and 7 in Appendix 4.5-3 and summarized below.

Reconfigured Mine Pits with UWCD Diversions. The RiverPark Specific Plan will leave the existing mine pits open and unfilled, with only minor reconfiguration. One of the proposed pit modifications

49 Integrated Water Resources. *Design and Technical Analysis of the Proposed Stormwater Quality Treatment System for RiverPark.* November 12, 2001.



SOURCE: Todd Engineers, September 2001.

FIGURE **4.5-12**

Riverpark Post-Project Water Balances

involves the partial removal of material comprising a land bridge between the Brigham and Vickers pits and the fill peninsula between the Vickers and Small Woolsey pits down to an approximate elevation of 50 feet msl (compare pit geometry in Figure 4.5-8 with Figure 4.5-12. This revised pit geometry was used for creating a project water balance for the open mine pits. Acreage within each of the topographic contours on the grading plan was calculated to estimate the area of groundwater exposed to evaporation in the pits. The surface water was varied in the analysis as water levels rose and fell over the 20-year period.

Under the existing conditions analysis, stormwater runoff currently diverted into the mine pits was incorporated into the water balance. As part of the RiverPark Specific Plan, the newly constructed drainage system will divert these flows to the Santa Clara River with only infrequent overflow into the pits. Because historical precipitation and runoff data indicate that the overflow into the pits would not have occurred over the study period, runoff is not incorporated into this water balance.

Anticipated amounts of surface water that could be diverted into the RiverPark pits from the Santa Clara River were estimated by UWCD[50] and provided for this study. These estimates considered historic diversion and streamflow data, rejected recharge from mounding at spreading basins that could be diverted to RiverPark, and the capacity of the mine pits. Estimated annual diversions to the RiverPark pits averaged 7,022 AFY on a water-year basis. UWCD also provided monthly allocation percentages to apply to the estimated annual diversions. For purposes of the water balance analysis, estimated diversion amounts were added first into available capacity at Large Woolsey pit (total capacity of approximately 2,200 AF) with overflow into Vickers and Brigham pits. The amount of diverted water that could be stored in the pits at any given time varied with the elevation of exposed groundwater in the pits. Because UWCD plans to pump out the stored water to make room for additional diversions, stored water amounts were not carried forward in the water balance from month to month.

The project Reconfigured Mine Pits water balance employs the same data and methodology as the Existing Mine Pits water balance. Surface water diversions were added to the pits and allowed to evaporate with the groundwater, which was exposed for most of the study period. Under existing conditions, water levels dropped below the bottoms of all four pits during 34 months of the 240-month study period. With the addition of UWCD diversions in project conditions, the pits are expected to be dry only 12 months of the 240-month study period or less depending on how the project is operated. For

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50 *United Water Conservation District. RiverPark Water Availability (spreadsheet). June 26, 2001.*

purposes of the analysis, it was assumed that diverted water would be exposed to evaporation during the month that diversion occurred due to insufficient vadose zone and/or reduced infiltration rates.

As a result of increased groundwater exposure, overall evaporation increased from existing conditions to project conditions. However, the increase in evaporation is minor with respect to the other components of the water balance. On an average basis over the 20-year study period, evaporation from the exposed water in the mine pits increased from 352 AFY during existing conditions to 416 AFY during project conditions, an increase of approximately 64 AFY (compare annual Qelake totals in Attachment 1 to Qelake totals in Attachment 5, Appendix 4.5-3).

The water balance for the Reconfigured Mine Pits is presented in Attachment 5 in Appendix 4.5-3 and summarized in Table 4.5-21.

Table 4.5-21
RiverPark Site Water Balances - Project Analysis

Water Year	Project		
	Reconfigured Gravel Pits Water Balance (AFY)	Average Irrigation Recharge (AFY)	Project Total (AFY)
1979-1980	14,792	195	14,986
1980-1981	7,165	195	7,359
1981-1982	7,703	195	7,898
1982-1983	13,763	195	13,958
1983-1984	3,329	195	3,524
1984-1985	-113	195	81
1985-1986	11,055	195	11,249
1986-1987	2,264	195	2,459
1987-1988	2,359	195	2,553
1988-1989	438	195	633
1989-1990	75	195	269
1990-1991	3,695	195	3,890
1991-1992	13,204	195	13,398
1992-1993	15,099	195	15,294
1993-1994	9,469	195	9,664
1994-1995	13,905	195	14,100
1995-1996	9,398	195	9,593
1996-1997	8,775	195	8,969
1997-1998	5,401	195	5,596
1998-1999	2,860	195	3,054
Minimum	-113	195	81
Maximum	15,099	195	15,294
20-Year Ave	7,232	195	7,426

As shown in Table 4.5-21, the annual water balance at the mine pits ranges from a loss of -113 AFY to a gain of 15,099 AFY. A net loss is predicted for one water year (1984-85) when precipitation (194 AFY) and diversion amounts (304 AFY) were lower than evaporation from the exposed water table in the mine pits (552 AFY). Gains to the groundwater system result from the large surface water diversion amounts added to the mine pits. Because this water is added directly to the water table under most conditions and will recharge local groundwater through the pit walls (and, during some conditions, the pit bottoms), it is considered an increase in groundwater for the purposes of this analysis. It is acknowledged that the diversions may result in decreased infiltration along the Montalvo Forebay reach of the Santa Clara River where annual infiltration averaged about 9,360 AFY (Table 4-5.2) However, because diversions are anticipated to occur when streamflow is high, much of that water would likely have continued as streamflow to the Pacific Ocean. It is also acknowledged that diverted and stored water will likely be removed from the pits for either recharge or direct use in the Oxnard Plain. However, both of these uses benefit the groundwater basin and are not considered to create substantial losses to the water balance. If the UWCD proposed diversions are removed from the water balance, results are similar to the existing conditions water balance results with the exception of decreased stormwater runoff into the pits. Using the 20-year historical record of water levels, water table exposure in the pits, UWCD anticipated diversions, evaporation, and precipitation, project conditions are predicted to result in an average net gain of approximately 7,232 AFY at the reconfigured mine pits (Table 4.5-21).

Irrigated Acreage. The second project analysis incorporates water demand factors for the pervious areas of the RiverPark development including irrigated parks, fields, and landscaping. These areas cover approximately 446 acres, or about 64 percent of the RiverPark property. The area does not include the open mine pits, which were analyzed separately in the Reconfigured Mine Pits water balance described above. These areas will be irrigated with water provided by the City of Oxnard.

The analysis assumes a landscape/park irrigation efficiency of 80 percent and predicts that 20 percent of the demand will recharge the groundwater system in the form of return flows. Using an irrigation demand factor of 2.1815 AFY/acre[51] and a pervious irrigated acreage of 446 acres, the average total irrigation demand is estimated at 973 AFY. Of that 973 AFY, 20 percent, or 195 AFY, is estimated to recharge groundwater (Attachment 6, Appendix 4.5-3). Irrigation demand is an average estimate and is not modified to incorporate changes in hydrologic conditions. It is assumed that changes in precipitation and irrigation amounts will counterbalance to meet the irrigated area demand and that recharge beneath the area will be relatively consistent over time whether from irrigation return flows or precipitation infiltration. As such, the average annual recharge amount is kept constant at 195 AFY for every year in the 20-year analysis (Table 4.5-21). This simplification likely underestimates groundwater recharge in wet years and is assumed to be conservative for the purposes of estimating the RiverPark development's impacts on groundwater quantity.

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[51] Tetra Tech/ASL Consulting Engineers. 2000.

Stormwater Drainage System. Currently, surface water runoff from the areas located east of the Large Woolsey and north of the Small Woolsey Mine Pits drains into these pits. As previously described, the project proposes to reroute this offsite runoff to the Santa Clara River via a system of dry swales, detention basins, and drain pipes.[52] The dry swales will also contain drainage pipes to effectively convey water into and, in some areas, out of the lined detention basins. Since these pipes are expected to limit infiltration of surface water runoff, the dry swales are not considered to be areas of recharge in the water balance. Infiltration is also expected to be negligible in the detention basins since they will be lined and used only as temporary collection points. As such, the detention basins are not considered recharge points in the water quantity analysis.

Both offsite and onsite stormwater runoff will ultimately be conveyed to the Santa Clara River near the southern end of the property. This is closer to the reach of the river where streamflow infiltration is minimal due to underlying clays. As a conservative assumption with respect to the analysis of water quantity, all of the stormwater runoff conveyed to the river is assumed to leave the Montalvo Forebay without recharging groundwater.

The drainage system is designed to hold and convey all runoff up to amounts associated with a 10-year storm event.[53] This capacity equates to precipitation of approximately 5.53 cumulative inches on a 24-hour basis.[54] Should runoff volumes exceed this capacity, excess runoff will be diverted into the reclaimed mine pits.[55] An examination of daily precipitation events for the 20-year study period indicates that the highest 24-hour precipitation amount that has been measured at the El Rio station since 1979 was 4.98 inches (on 12-06-97). Since this amount is lower than the proposed design capacity of the drainage system, it is assumed that no runoff water would have overflowed into the mine pits during the 20-year study period. Assuming similar hydrologic conditions for the future, data predict that if any water overflowed into the pits, it would likely occur on an infrequent basis and only after a sufficient period of precipitation to exceed the system capacity. Therefore, as a conservative assumption with respect to water quantity, no groundwater recharge from stormwater runoff is included in the project water balance. Daily precipitation data from the El Rio Station 239E are sorted and listed as Attachment 7 in Appendix 4.5-3.

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52 Integrated Water Resources. Design and Technical Analysis of the Proposed Stormwater Quality Treatment System for RiverPark. November 12, 2001.

53 Integrated Water Resources. *Design and Technical Analysis of the Proposed Stormwater Quality Treatment System for RiverPark*. November 12, 2001.

54 Alan Eide, Tetra Tech/ASL Consulting Engineers. Personal Communication. May 23, 2001.

55 Integrated Water Resources. *Design and Technical Analysis of the Proposed Stormwater Quality Treatment System for RiverPark*. November 12, 2001.

Project Impacts to Groundwater Quantity

As shown in Table 4.5-21, the combined project analyses predict a large net recharge to groundwater for the entire 20-year study period as a result of the UWCD diversions into the pits. Recharge to the groundwater system ranges from 81 AFY to 15,294 AFY. Under average conditions, approximately 7,426 AFY is added to the groundwater system beneath the site for project conditions.

The significance threshold for groundwater quantity is based on a comparison of the water balances for the existing conditions to that of the project conditions. If there is a decrease in the water balance, then there is a significant impact. If there is no change in the water balance or an increase, then there is no impact or a beneficial impact. Existing condition and project water balance data are summarized in Table 4.5-22. As shown in the table, the project results in a net gain to the groundwater system in all 20 years of the study period. This gain is largely controlled by the estimated surface water diversions planned by UWCD (diversions average 7,022 AFY) and, to some extent, the elimination of groundwater pumping for agricultural and industrial supply (which consumed up to –1,172 AFY of groundwater) during project conditions.

Table 4.5-22
Project Impacts on Water Quantity

Water Year	Existing Conditions Water Balance (AFY)	Project Water Balance (AFY)	Project Comparison With Existing Conditions (AFY)
1979-1980	216	14,986	14,770
1980-1981	-461	7,359	7,820
1981-1982	-880	7,898	8,778
1982-1983	-414	13,958	14,372
1983-1984	-1,489	3,524	5,013
1984-1985	-1,160	81	1,241
1985-1986	-455	11,249	11,704
1986-1987	-1,185	2,459	3,644
1987-1988	-785	2,553	3,338
1988-1989	-668	633	1,301
1989-1990	-583	269	852
1990-1991	-516	3,890	4,406
1991-1992	-28	13,398	13,426
1992-1993	136	15,294	15,158
1993-1994	-852	9,664	10,516
1994-1995	99	14,100	14,001
1995-1996	-780	9,593	10,373
1996-1997	-867	8,969	9,836
1997-1998	343	5,596	5,253
1998-1999	-1,130	3,054	4,184
Minimum	-1,489	81	852
Maximum	343	15,294	15,158
20-Year Average	-573	7,426	7,999

The maximum increase in recharge as a result of the project is 15,158 AFY with an average recharge of 7,999 AFY (Table 4.5-22). Therefore, the RiverPark Specific Plan has no significant impacts with respect to groundwater quantity and in fact results in a benefit to the groundwater balance.

Water Quality

Construction

From a water quality perspective, the groundwater extracted during the dewatering operation will reflect the ambient quality of the groundwater. For this reason, the impact of this extracted groundwater is evaluated based on ambient groundwater data for the area. Table 4.5-23, below, presents a comparison of dewatered groundwater (ambient water) quality with the NPDES permit standards being used as significance thresholds in this analysis. Of the listed constituents, only TDS and sulfate concentrations exceed the established thresholds of significance. Observed TDS concentrations have been as high as 1,710 mg/L in comparison to the threshold limit of 1,200 mg/L. Observed sulfate concentrations have been as high as 740 mg/L in comparison to the threshold limits of 600 mg/L. These exceedances are based on maximum observed values; average values for these constituents are below the standards and are not anticipated to be a significant impact, particularly if the water is recharged to the groundwater basin. Although no data exists for several constituents, including $BOD_{5,20}$, oil and grease, settleable solids, and sulfides, these are constituents typically associated with wastewater and not groundwater. These constituents are not included among the drinking water MCL or SMCL standards and are therefore expected to be lower than the NPDES permit concentrations.

Because nitrate concentrations vary both with location and hydrologic conditions, there is a potential for the dewatering operations to temporarily alter groundwater flow patterns and result in higher nitrate levels at UWCD's El Rio Spreading Ground wells. This potential impact could be mitigated, if feasible, by discharging the dewatered groundwater to the El Rio Spreading Ground recharge basins. This would develop a mound that should attenuate the impacts of the dewatering operations. This impact is considered significant.

Table 4.5-23
Comparison of Dewatered Groundwater Quality with NPDES Standards

Constituent	Units	Dewatered Groundwater Quality Range (1)	NPDES Standard
Total Suspended Solids	mg/L	<50 (5)	50
Turbidity	mg/L	<0.2 - 6.2	50
BOD_{5}, 20°C	mg/L	<20 (5)	20
Oil and Grease	mg/L	<10 (5)	10
Settleable Solids	mg/L	<0.1 (5)	0.1
Sulfides	mg/L	<1 (5)	1
Methylene blue active substances (MBAS)	mg/L	<0.02 - <0.2	0.5
pH	--	7.1 - 8.3	6.0 to 9.0
TDS (3)	mg/L	570 - 1,710	1,200
Sulfate (4)	mg/L	255 – 740	600
Chloride	mg/L	21 – 102	150
Boron	mg/L	0.4 - 1.0	1.5
Nitrogen	mg/L	<0.1 - 29	–
Phenols	µg/L	<5 (1)	1
Phenolic Compounds (chlorinated)	µg/L	<0.5 (1)	1
Benzene	µg/L	<0.1 (1)	1
Toluene	µg/L	<0.1 (1)	15
Ethylbenzene	µg/L	<0.1 (1)	700
Xylene	µg/L	<0.1 (1)	1,750
Ethylene Dibromide	µg/L	<0.02 (1)	0.05
Carbon Tetrachloride	µg/L	<0.1 (1)	0.5
Tetrachloroethylene	µg/L	<0.1 (1)	5
Trichloroethylene	µg/L	<0.1 (1)	5
1,4-dichlorobenzene	µg/L	<0.5 (1)	5
1,1-dichloroethane	µg/L	<0.1 (1)	5
1,2- dichloroethane	µg/L	<0.1 (1)	0.5
1,1-dichloroethylene	µg/L	<0.1 (1)	6
Vinyl Chloride	µg/L	<0.1 (1)	0.5
Arsenic (2)	µg/L	<0.5 - <50	50
Cadmium (2)	µg/L	<0.2 - <1	5
Chromium (2)	µg/L	<1 - <10	50
Copper (2)	µg/L	<10 - <50	1,000
Lead (2)	µg/L	<0.2 - <5	50
Mercury	µg/L	<0.2 - <1	2
Selenium	µg/L	<5 - 9	10
Silver (2)	µg/L	<1 - <10	50
Total Petroleum Hydrocarbons	mg/l	NS	100
Methyl Tertiary Butyl Ether (MTBE)	µg/L	<3	35

Notes:
(1) Where only a single "less than" value is reported, the constituent was never detected.
(2) The upper range represents the largest non-detect value for these constituents. The highest detected value for these constituents are: arsenic - 5 µg/L; cadmium - 0.3 µg/L; chromium - 5 µg/L; lead - 3.8 µg/L; and silver - 0.6 µg/L. Copper has been detected positively once over the period of review, but the sample point was discarded as it appears to be an anomaly.
(3) TDS exceeded the NPDES standard in 88 of 247 samples, with an overall average of 1,000 mg/L.
(4) Sulfate exceeded the NPDES standard in 10 of 297 samples, with an overall average of 457 mg/L.
(5) Sampling data for these constituents is not available. Given that these specific constituents are typically not found in groundwater, no impacts are anticipated.

RiverPark Specific Plan Impacts

Expected runoff constituent concentrations have been estimated utilizing data corresponding to land uses (Tables 4.5-17 and 4.5-18). Calculations of removal efficiencies for BMP treatment elements in the proposed treatment system are presented below in Table 4.5-24. In addition to the proposed treatment system, the particulate fraction of the metal constituents is expected to settle in the Water Storage/Recharge basins for storm events greater than 10-years in frequency and would not impact downgradient water quality.[56] Metals concentrations for the stormwater reaching groundwater under the Water Storage/Recharge basins are assumed to consist entirely of the dissolved fraction. Particulate fractions for the various metals were taken from sampling conducted in Ventura County,[57] Los Angeles County,[58] Santa Monica,[59] and Fresno.[60] Preference in assigning particulate fractions was given to the most analogous sources of data. Filtration is assumed to be the primary removal mechanism, but surface adsorption is also anticipated to enhance particulate removal as the suspended solids loading to the Water Storage/Recharge basins increases. Estimates of discharge quality to the Santa Clara River and to groundwater exposed in the Water Storage/Recharge basins for the proposed RiverPark Specific Plan are based on the mix of land use in the respective drainage areas. These levels are compared to the significance thresholds and are listed below in Tables 4.5-25 and 4.5-26.

Impacts to groundwater quality resulting from the recharge of surface water are expected to be negligible. There is little potential for surface water runoff to recharge groundwater while in the Santa Clara riverbed. The Stroube Drain outfall, the discharge point for the majority of the RiverPark Specific Plan Area, is very close to the southern edge of the Montalvo Forebay boundary providing only a short reach of the Santa Clara River that could recharge the aquifer. Under the flow conditions in which substantial amounts of discharge are expected (high river flow rates), the percolation rates would be reduced and negligible impacts to groundwater quality from the recharge of surface water are expected. Therefore, impacts to groundwater quantity from the infiltration of surface runoff will not be significant.

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56 *Settling of the particulate fraction is based on the premise that the water storage/infiltration basins will behave similar to a percolation basin used in soil aquifer treatment. As indicated in Groundwater Recharge Using Waters of Impaired Quality (Committee on Groundwater Recharge, 1994), "Trace elements present in suspended matter generally are removed during SAT by filtration and do not migrate. […] Smaller suspended particulates that can move through soil pores without becoming trapped are also attenuated by sorption to mineral surfaces in the soil matrix." Similar findings were evidenced in work by A.C. Chang and A.L. Page (Chapter 21, Soil Deposition of Trace Metals during Groundwater Recharge Using Surface Spreading.) and Henry F.H. Ku and Dale L. Simmons (Effect of Urban Stormwater Runoff on Ground Water Beneath Recharge Basins on Long Island, New York. U.S. Geological Survey Water-Resources Investigations Report 85-4088. 1986.). Copies of these articles are contained in* Appendix *4.5-7.*

57 Ventura Countywide Stormwater Quality Management Program. *Ventura Countywide Stormwater Quality Management Plan: Application for Reissuance of Waste Discharge Requirements and National Pollutant Discharge Elimination System Permit.* 1999.

58 Los Angeles County Department of Public Works. *Los Angeles County 1994 to 2000 Integrated Receiving Water Impacts Report.* 2000.

59 Woodward-Clyde. *Santa Monica Bay Area Municipal Stormwater/Urban Runoff Pilot Project – Evaluation of Potential Catch Basin Retrofits. Prepared for Santa Monica Cities Consortium.* 1998.

60 Oltmann, R.N. and Shulters, M.V. *Rainfall and Runoff Quantity and Quality Characteristics of Four Urban Land-Use Catchments in Fresno, California October 1981 to April 1983. U.S. Geological Survey Water-Supply Paper 2335.* 1989.

Table 4.5-24
Anticipated BMP Removal Efficiencies

Constituent	Removal Efficiencies		
	Dry Swale	Detention Basin	Centrifugal Separator Unit
TSS	90%	65%	40%
MINERALS			
Sulfate	20%	0%	0%
Chloride	0%	0%	0%
TDS	0%	0%	0%
Boron	75%	55%	20%
NUTRIENTS			
Nitrate	75%	0%	0%
Ammonia	20%	0%	0%
METALS			
Arsenic	75%	55%	20%
Beryllium	75%	55%	20%
Cadmium	75%	55%	20%
Chromium, total	75%	55%	20%
Chromium VI	75%	55%	20%
Copper	75%	55%	20%
Iron	75%	55%	20%
Lead	75%	55%	20%
Manganese	75%	55%	20%
Mercury	75%	55%	20%
Nickel	75%	55%	20%
Selenium	75%	55%	20%
Silver	75%	55%	20%
Zinc	75%	55%	20%
PESTICIDES			
ChemA	90%	65%	40%
Lannate	0%	0%	0%
HYDROCARBONS			
Oil/Grease	80%	0%	40%
MTBE	0%	0%	0%
BACTERIAL INDICATORS			
Total Coliform	80%	70%	20%
Fecal Coliform	80%	70%	20%
Fecal Streptococci	80%	70%	20%
Giardia	80%	70%	20%
Cryptosporidium	80%	70%	20%

Notes and Assumptions:
1. Dry swale removal rates for sulfate and ammonia were estimated based upon an assumption that their behaviors as ionic species are similar to that of nitrate, only perhaps more conservative.
2. Oil & grease removal rates were estimated based upon an assumption that their behavior is similar to that of sediments because of their affinity for adsorption. Detention basin removal (i.e., via sedimentation processes) is considered negligible because oil & grease are present primarily as a floatable sheen.
3. ChemA constituents are likely to be entirely associated with sediments given the very high partitioning coefficients of these chlorinated pesticides; therefore, their removal behavior is assumed to be similar to that of sediments.
4. Centrifugal separator unit removal rates based on manufacturer's information which cites 80 percent TSS removal, and assuming that 50 percent of Drainage Area #1 stormflows are routed through these devices.

Table 4.5-25
RiverPark Project Stormwater Discharges to Santa Clara River

Constituent Concentrations					Thresholds of Significant Impact	
			Post-Project Conditions			
Constituent	Units	Existing Conditions	Raw Stormwater	Post Treatment Stormwater	Water Quality Threshold	Water Quality Criteria Applied
TSS	mg/l	885	649	70	38,800	Ambient
MINERALS						
Sulfate	mg/l	287	169	137	600	Basin Plan Obj.
Chloride	mg/l	35	33	33	150	Basin Plan Obj.
TDS	mg/l	681	428	428	1200	Basin Plan Obj.
Boron	mg/l	0.43	0.32	0.06	1.50	Basin Plan Obj.
NUTRIENTS						
Nitrate	mg/l as NO3	43.7	26.2	6.9	45	Basin Plan Obj.
Ammonia	mg/l as NH3	2.16	1.60	1.30	1.3	Basin Plan Obj.
METALS						
Arsenic	mg/l	0.012	0.009	0.002	0.34	CA Toxics Rule
Beryllium	mg/l	0.001	0.001	0.000	NS	---
Cadmium	mg/l	0.004	0.004	0.001	0.022	CA Toxics Rule
Chromium, total	mg/l	0.096	0.059	0.009	5.4	CA Toxics Rule
Chromium VI (3)	mg/l	0.048	0.029	0.004	0.016	CA Toxics Rule
Copper	mg/l	0.078	0.062	0.016	0.052	CA Toxics Rule
Iron	mg/l	3.61	3.26	1.15	12.500	Ambient
Lead	mg/l	0.031	0.027	0.007	0.48	CA Toxics Rule
Manganese	mg/l	0.18	0.14	0.03	0.560	Ambient
Mercury	mg/l	0.000128	0.000163	0.000048	0.000051	CA Toxics Rule
Nickel	mg/l	0.073	0.053	0.01	1.5	CA Toxics Rule
Selenium	mg/l	0.007	0.006	0.001	0.005	CA Toxics Rule
Silver	mg/l	0.007	0.007	0.001	0.044	CA Toxics Rule
Zinc	mg/l	0.345	0.310	0.083	0.39	CA Toxics Rule
PESTICIDES						
ChemA	ng/g	ND	ND	ND	100	Nat. Acad. of Sci.
Lannate	mg/l	NA	NA	NA	0.85	EPA Criteria Est.
HYDROCARBONS						
Oil/Grease	mg/l	3	11	3	10	Basin Plan Obj.
MTBE	mg/l	ND	0.0003	0.0003	<0.00049	Ambient
MICROORGANISMS						
Total Coliform (1)	MPN/100ml	209,180	143,819	25,918	160,000	Ambient
Fecal Coliform (1) (2)	MPN/100ml	26,150	19,653	2,027	5,000 / 200	Ambient/BP Obj.
Fecal Streptococci (1)	MPN/100ml	70,085	51,992	8,653	17,000	Ambient
Giardia	cysts/100 L	NA	NA	<1.6	<1.6	Ambient
Cryptosporidium	oocysts/100L	NA	NA	<1.6	<1.6	Ambient

ND: Not Detectable. Concentrations below analytical detection limits.
NA: Not available. Data not available for these constituents.
(1) Pathogen indicator data unavailable for the Santa Clara River; ambient values shown based on 2001 Ventura River VCFCD data at Foster Park sampling station.
(2) Threshold of Significant Impact shown with both Basin Plan Objective and Ambient values to document existing river water quality exceedences of Basin Plan Objective. Project discharges are compared to the Basin Plan Objective.
(3) Chromium VI concentrations estimated at 50 percent of the total chromium concentration.

Table 4.5-26
RiverPark Project Stormwater Discharges to Water Storage/Infiltration Basins

Constituent Concentrations				Thresholds of Significant Impact	
Constituent	Units	Project Stormwater Discharge	At Point of Contact with Groundwater Beneath Pits	Water Quality Threshold	Water Quality Criteria Applied
TSS	mg/l	54	0	NS	---
MINERALS					
Sulfate	mg/l	147	147	500	CA Primary ML
Chloride	mg/l	13	13	102	Ambient
TDS	mg/l	334	334	1,000	CA Sec MCL
Boron	mg/l	0.23	0.16	1.0	Ambient
NUTRIENTS					
Nitrate	mg/l as NO3	6.4	6.4	45	CA Pri MCL
Ammonia	mg/l as NH3	0.53	0.53	NS	---
METALS					
Arsenic	mg/l	0.004	0.002	<0.05	Ambient
Beryllium	mg/l	0.001	0.0004	<0.001	Ambient
Cadmium	mg/l	0.001	0.0006	<0.001	Ambient
Chromium, total	mg/l	0.006	0.001	<0.01	Ambient
Chromium VI (2)	mg/l	0.003	0.001	<0.005	Ambient
Copper	mg/l	0.034	0.013	<0.05	Ambient
Iron	mg/l	1.34	0.21	0.13	Ambient
Lead	mg/l	0.010	0.004	<0.005	Ambient
Manganese	mg/l	0.146	0.05	0.03	Ambient
Mercury	mg/l	0.00004	0.00000	<0.001	Ambient
Nickel	mg/l	0.011	0.007	0.003	Ambient
Selenium	mg/l	0.001	0.001	0.009	Ambient
Silver	mg/l	0.001	0.000	0.01	Ambient
Zinc	mg/l	0.134	0.035	0.05	Ambient
PESTICIDES					
ChemA	mg/l	ND	ND	NS	---
Lannate	mg/l	NA	NA	<0.005	Ambient
HYDROCARBONS					
Oil/Grease	mg/l	2	2	NS	---
MTBE (1)	mg/l	0.0003	0.0003	<0.005	Ambient
MICROORGANISMS		Project Stormwater Discharge	Within Aquifer At Downgradient Property Line		
Total Coliform	MPN/100ml	163,046	<1.1	<1.1	CA Pri MCL
Fecal Coliform	MPN/100ml	24,402	<1.1	<1.1	CA Pri MCL
Fecal Streptococci	MPN/100ml	58,142	<2	NS	---
Giardia	Cysts/ 100 L	NA	NA	<1	Ambient
Cryptosporidium	Oocysts/100 L	NA	NA	<1	Ambient

ND: Not Detectable. Concentrations below analytical detection limits.
NA: Data Not Available. Constituents not sampled or tested for.
(1) MTBE has not been detected in groundwater, Freeman Diversion water, or in samples from the pits. It has been assumed that the concentration of MTBE in the runoff is below the analytical detection limit (0.0003 mg/L) and therefore is listed as non-detects (ND).
(2) Chromium VI concentrations are based on 50 percent of total chromium.

Constituents with No Significant Impacts

As indicated in Tables 4.5-25 and 4.5-26, the following constituent concentrations were below their respective thresholds of significance:

- Total suspended solids (TSS)
- Minerals
  - Sulfate
  - Chloride
  - Total dissolved solids (TDS)
  - Boron
- Nutrients
  - Nitrate
  - Ammonia
- Metals
  - Arsenic
  - Beryllium
  - Cadmium
  - Total Chromium
  - Chromium VI
  - Copper
  - Iron (surface water discharges only)
  - Lead
  - Manganese (surface water discharges only)
  - Mercury
  - Nickel (surface water discharges only)
  - Selenium
  - Silver
  - Zinc
- Pesticides
  - ChemA
- Hydrocarbons
  - Oil and grease
  - Methyl
- Microbial Contaminants
  - Total Coliform
  - Fecal Coliform (groundwater discharges only)
  - Fecal Streptococci
  - Giardia
  - Cryptosporidium

Based on several recent samples from UWCD El Rio wells, MTBE has not been detected in local groundwater (analytical detection limit = 3 µg/L). Even at a reporting limit of just 0.2 µg/L, MTBE was detected in 21 percent of 480 wells located in areas of the nation that use MTBE in gasoline to abate air pollution; in the rest of the nation, MTBE detection frequency in groundwater was just 2 percent.[61] The State DHS has reported MTBE detection frequencies of 0.65 and 4.5 percent for ground and surface waters based on a 3 µg/L detection limit, 0.4 percent and 1.4 percent exceeding 5 µg/L (State secondary MCL), and 0.2 percent and 0.3 percent exceeding 13 µg/L (State primary MCL).[62] Basin Plan objectives and CTR criteria have not been established for this constituent.

MTBE concentrations in groundwater greater than 30 µg/L usually can be attributed to a leaking tank or pipeline facility. Low MTBE concentrations, less than 3 µg/L, are more likely to result from atmospheric sources.[63] Groundwater sampling in rural areas has a low frequency of detection, and concentrations of MTBE are generally low when detected. In California and in other States there is a high correlation between urban land use, motor vehicle traffic and population density, and the frequency of detection and water concentrations of MTBE.[64] This is as expected given that gasoline is the only source of MTBE.

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61 USGS. MTBE in the Nation's Ground Water. http://sd.water.usgs.gov/nawqa/vocns/brp-pjs-handout.html. 1999.

62 California DHS. MTBE in California Drinking Water.

63 Squillace, P.J., Pankow, J.F., Korte, N.E. and Zogorski, J.S. *Environmental Behavior and Fate of Methyl tert-Butyl Ether. USGS NAWQA Fact Sheet FS-203-96.* 1998.

64 Squillace, P.J., Zogorski, J.S., Wilber, W. and Price, C.V. A Preliminary Assessment of the Occurrence and Possible Sources of MTBE in Groundwater of the United States, 1993-1994. USGS Open-File Report 95-456. 1995.

In a NAWQA investigation of MTBE in stormwater,[65] MTBE was detected in 6.9 percent of the 592 stormwater samples collected from 16 U.S. cities and metropolitan areas at an analytical detection limit of 0.2 µg/L. When detected, concentrations ranged from 0.2 to 8.7 µg/L, with a median of 1.5 µg/L. Based on the results of this comprehensive nationwide stormwater monitoring study, MTBE concentrations are not anticipated to exceed the California DHS primary MCL of 10 µg/L. Therefore, MTBE is not anticipated to impact local ground or surface waters as a result of stormwater discharges from the RiverPark project.

As previously discussed, there is evidence of Benzene and MTBE in groundwater on an adjacent property in the Carnegie Street industrial area as a result of leaks from gasoline pumps. The Carnegie Street industrial area is located between Vineyard Avenue and the Small Woolsey/Brigham Mine Pit. This site is located approximately 3,800 feet east of the stockpile area on the Hanson Aggregates mine site. Dewatering during construction will be required in this stockpile area. Depending on groundwater levels at the time of construction, this dewatering operation could be required for 4-6 months. The potential for the dewatering operation to effect the movement of this existing groundwater contamination is not considered to be likely for several reasons. First, the contamination at this site consists largely of Total Petrochemical Hydrocarbon (TPH) (gas) compounds, which are relatively immobile and contained onsite. Investigations of this site to date have determined that the mass of MTBE, Benzene and TPH in the groundwater on the site has been largely immobile since the early 1990s. Active remediation with a pump and treat system will begin in the next 60 days. Based on the volume of contamination on this site, 50 percent containment will likely be achieved in the next 12 months. The proposed dewatering of the stockpile area could begin in the Fall of 2002 for a duration of up to 6 months. The pump and treat system on the Poole site will create a local groundwater capture zone that will restrict the migration of contaminants offsite. In addition, groundwater modeling completed indicates that the open Small Woolsey/Brigham/Vickers mine pits will significantly dampen the lateral extent, configuration, and the magnitude of water declines from the dewatering operation.[66] For these reasons, the dewatering operation will not impact this existing contamination or result in a significant impact on groundwater quality related to this contamination.

Constituents with Significant Impacts

As indicated in Tables 4.5-25 and 4.5-26, the concentrations of fecal coliform in surface water discharge and the concentrations of iron, manganese and nickel in runoff that will be discharged to the mine pits

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[65] Delzer, G.C., Zogorski, J.S., Lopes, T.J. and Bosshart, R.L. *USGS Water Resources Investigations Report 96-4145.* 1996.

[66] Fugro West, Inc. Construction Dewatering in Stockpile Area, Environmental Issues. November 27, 2001.

will be higher than the significance thresholds for these constituents and are identified as significant impacts. Each of these impacts is described below.

Fecal Coliform

Discharges to the Santa Clara River are anticipated to have a fecal coliform concentration of 2,027 MPN/ 100 mL based on analogous runoff data. The threshold of significance being used in this analysis is 200 MPN/ 100 mL based on Basin Plan standards. The fecal coliform threshold is based on a Basin Plan Objective that is lower than what has been observed historically in the Ventura River during rainfall events that would be expected to generate such runoff. The anticipated runoff concentration is substantially less than the maximum observed ambient river concentration of 5,000 MPN/100 mL. As the estimated concentrations exceed the significance threshold being used, this impact is significant.

Metals

Iron. Ambient groundwater conditions were used to characterize the threshold of significance for iron. The maximum observed groundwater concentration for iron was 0.13 mg/L. Discharges to the exposed groundwater in the pits were estimated to have a concentration of 0.21 mg/L. As the estimated concentrations exceed the significance threshold being used, this impact is significant.

Manganese. Ambient groundwater conditions were used to characterize the threshold of significance for manganese. The maximum observed groundwater concentration for manganese was 0.03 mg/L. Discharges to the exposed groundwater in the pits were estimated to have a concentration of 0.05 mg/L. As the estimated concentrations exceed the significance threshold being used, this impact is significant.

Nickel. Ambient groundwater conditions were used to characterize the threshold of significance for nickel. The maximum observed groundwater concentration for nickel was 0.003 mg/L. Discharges to the exposed groundwater in the pits were estimated to have a concentration of 0.007 mg/L. As the estimated concentrations exceed the significance threshold being used, this impact is significant.

Frequency of Impacts to Groundwater

Based on a statistical review of historical rainfall data at El Rio Station 239, the Ventura County Flood Control District was able to develop duration and depth relationships with storm-frequency.

These values are tabulated in Table 4.5-27. The stormwater conveyance and treatment systems have been designed to handle up to the 10-year peak runoff flowrates before allowing runoff to overflow into the Water Storage/Recharge basins. The criteria for the 10-year storm event and the subsequent 10-year peak runoff flowrates are based on hydrologic calculations in conformance with Ventura County Flood Control District design standards and are dependent on land use and soil type. The mass rainfall total used as a basis for the design for a 24-hour event was 5.53 inches. This value exceeds historically observed daily data (1979 – 1999) at El Rio Station 239, and indicates that over the 20-year period reviewed, no runoff would reach the Water Storage/Recharge basins. This is a positive benefit of the proposed project as it would substantially reduce the amount of pollutant loading to the Water Storage/Recharge basins, particularly from the early storm period or "first flush," in comparison to existing conditions.

Table 4.5-27
Rainfall Depth-Duration-Frequency at El Rio Station 239

Return Period, Years	Maximum Precipitation for Indicated Duration, inches		
	1 Day	2 Day	5 Day
2	2.29	2.9	3.74
5	3.41	4.53	5.92
10	4.14	5.64	7.32
20	4.82	6.69	8.62
25	5.04	7.02	9.02
50	5.68	8.03	10.24
100	6.31	9.02	11.42
PMP	20.54	29.55	39.44

Source: Ventura County Flood Control District
PMP – Probable Maximum Precipitation

Historical data does not preclude the possibility that some runoff could reach the Water Storage/Recharge basins. However, by designing the treatment and conveyance systems to handle up to and including the 10-year volume, the project is reducing the amount of runoff that could reach the basins. Figures 4.5-13 through 4.5-16 show the 2-year, 10-year, 25-year, and 100-year hydrographs for drainage areas 2B, 3A, 3B, and 4 (drainage areas that could runoff to the Water Storage/Recharge basins), respectively. Runoff in excess of the 10-year event cumulative volume is the volume of water that could reach the Water Storage/Recharge basins. Table 4.5-28 compares the existing and project runoff quantities for each of the drainage areas tributary to the Water Storage/Recharge basins. As the table illustrates, there is a substantial reduction in the volume of runoff sent to the Water Storage/Recharge basins.

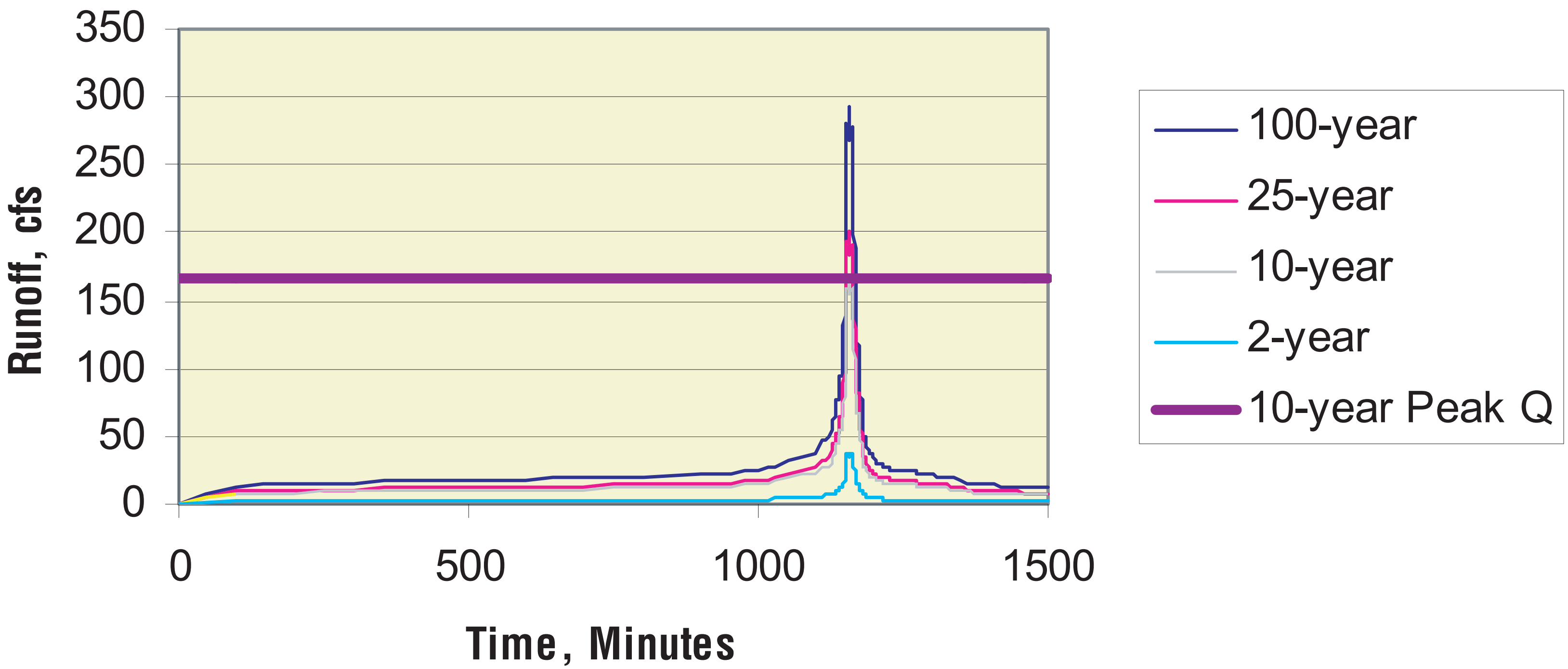
Table 4.5-28
Existing and Project Runoff Quantities Tributary to the Water Storage/Infiltration Basins

Drainage Area (1)	Runoff to the Water Storage/Infiltration Basins, AF							
	2-Year Event		10-Year Event		25-Year Event		100-Year Event	
	Existing	Project	Existing	Project	Existing	Project	Existing	Project
2B	6.4	0	27.8	0	33.7	5.7	48.8	20.8
3A +3B (2)	13.2	0	57.6	0	69.7	6.7	101	38
4	22.9	0	100.2	0	121.3	22.3	175.8	76.8
Total	42.5	0	185.6	0	224.7	34.7	325.6	135.6

Notes:
(1) Drainage Areas 1 and 2A do not drain to the water storage/infiltration basins.
(2) Drainage Areas 3A and 3B drain to the same detention basin and are considered collectively.

Impacts from UWCD Use of the Water Storage/Recharge Basins

UWCD monitoring data was used to estimate the quality of water from the Santa Clara River that would be diverted to the Water Quality/Recharge Basins. Monitoring data was available for sulfate, chloride, TDS, boron, nitrate, ammonia, copper, iron, manganese, and zinc. Data from other sources was used to estimate concentrations of other constituents not included in the monitoring data. The City of Ventura monitors the Santa Clara River upstream of the Harbor Street Bridge and data from this source was used for lead and nickel. This data source was qualified to include only those samples collected when flows at the Freeman Diversion exceeded 250 cubic feet per second to ensure that the sample was reflective of conditions when UWCD might be diverting streamflow. Two comprehensive samples were collected from the Santa Clara River in August and September 2001. Based on a review of UWCD sampling, there does not appear to be a strong relationship between flow and metals concentration, so the sample results were used for arsenic, beryllium, cadmium, chromium, selenium, and silver. Ventura County Flood Control District's (VCFCD) Countywide Stormwater Quality Management Program data were also used for mercury, ChemA constituents, oil and grease, total coliform, fecal coliform, and fecal streptococcus. This program consists of stormwater monitoring from specific land uses and specific receiving waters throughout the county. No monitoring on the Santa Clara River has been conducted to date, but VCFCD staff has indicated that a sampling station is being constructed at the Freeman Diversion and should be ready to collect data in the upcoming year. This past year, the VCFCD conducted monitoring on the Ventura River. This data represents the most analogous data source currently available. Table 4.5-29, below, presents the projected water quality of the diverted water and the source of the data.

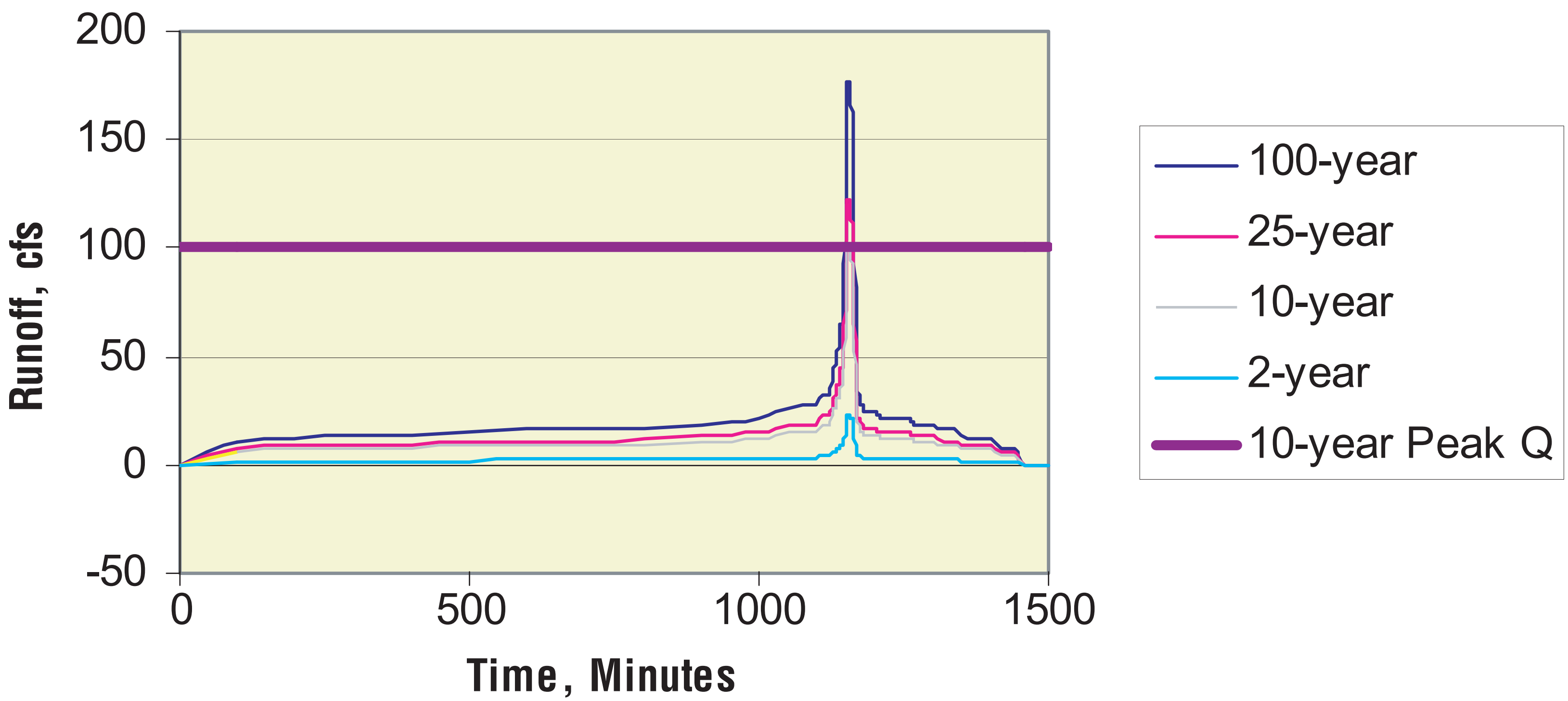


NOTE: Runoff to the Brigham-Vickers Water Storage/Infiltration Basin (equivalent to area under the hydrograph, but above the 10-year peak flowrate) for the 25-year storm event is 0.3 AF and for the 100-year storm event is 1.9 AF.

SOURCE: Kennedy/Jenks Consultants, September 2001.

FIGURE **4.5-13**

Drainage Area 2B Hydrographs

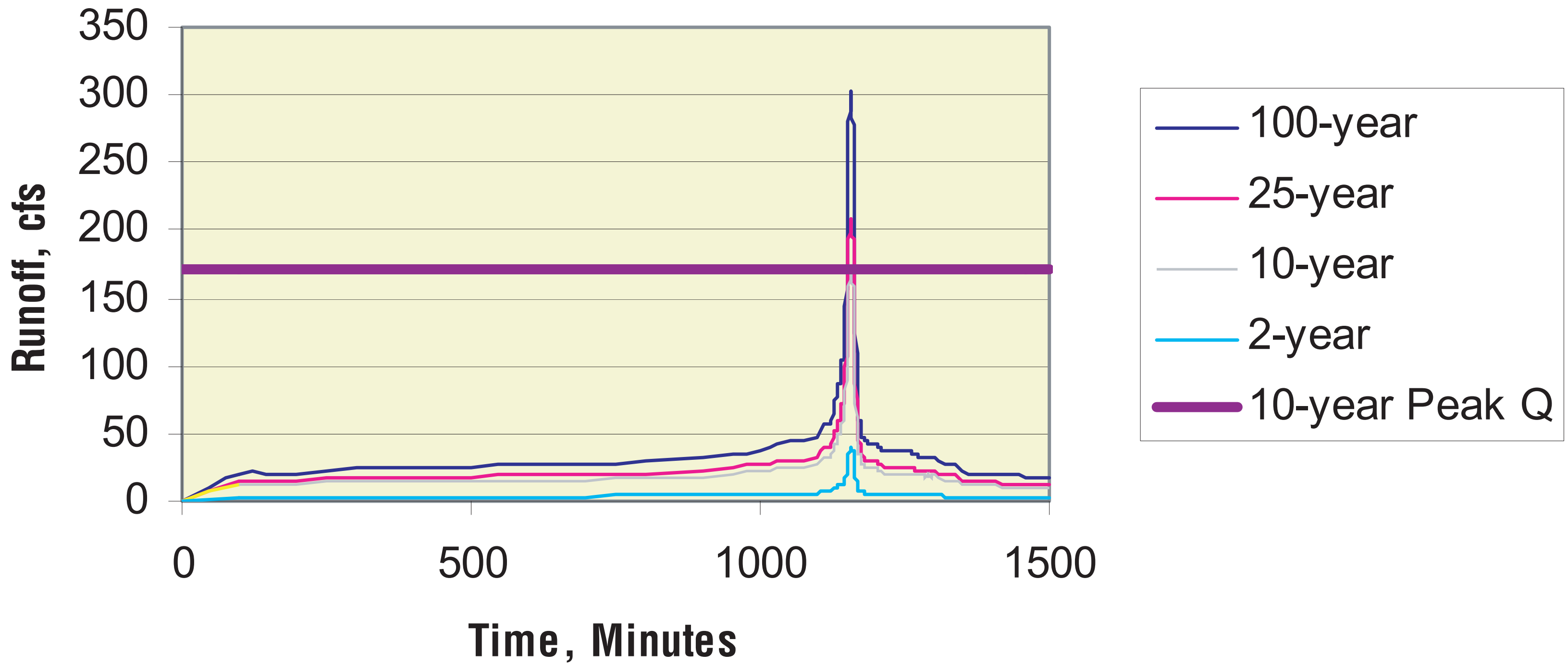


NOTE: Runoff to the Large Woolsey Water Storage/Infiltration Basin (equivalent to area under the hydrograph, but above the 10-year peak flowrate) for the 25-year storm event is 0.2 AF and for the 100-year storm event is 1.1 AF.

SOURCE: Kennedy/Jenks Consultants, September 2001.

FIGURE **4.5-14**

Drainage Area 3A Hydrographs

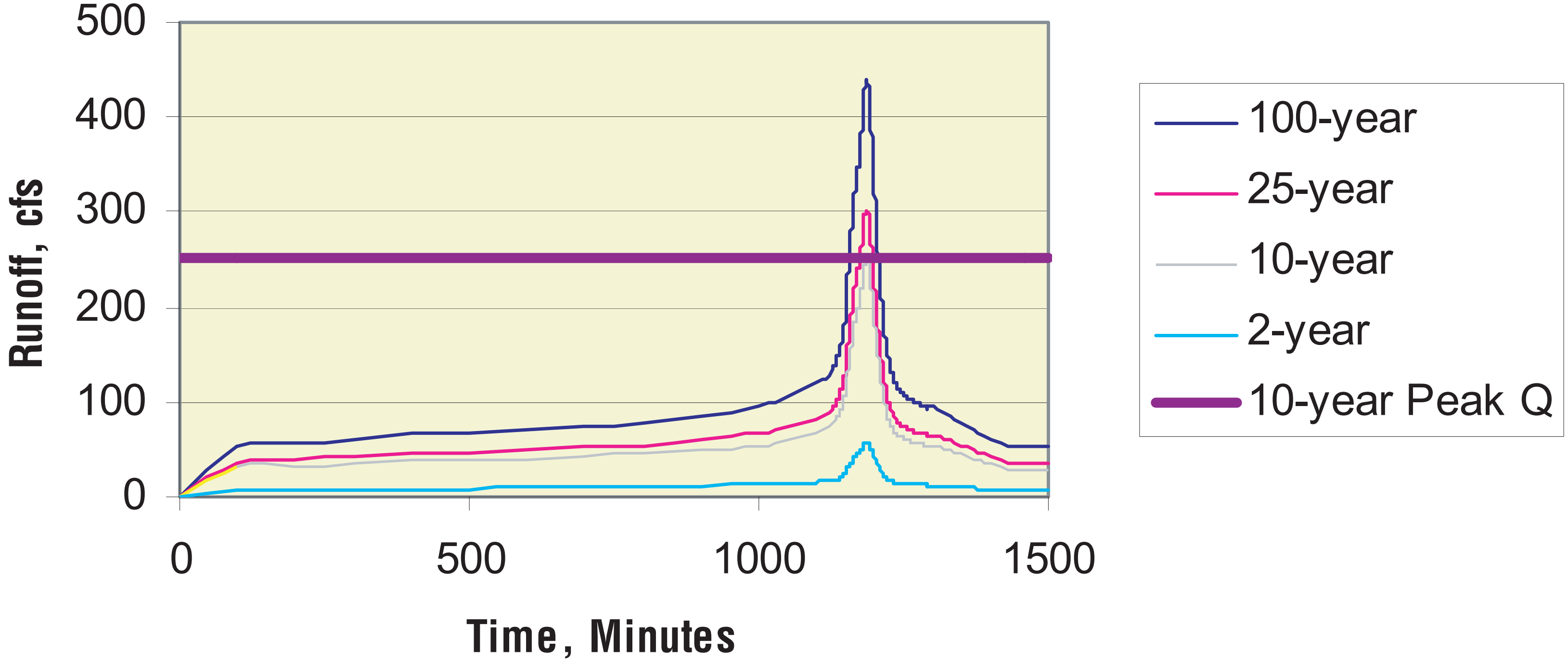


NOTE: Runoff to the Large Woolsey Water Storage/Infiltration Basin (equivalent to area under the hydrograph, but above the 10-year peak flowrate) for the 25-year storm event is 0.3 AF and for the 100-year storm event is 1.7 AF.

SOURCE: Kennedy/Jenks Consultants, September 2001.

FIGURE **4.5-15**

Drainage Area 3B Hydrographs



NOTE: Runoff to the Brigham-Vickers Water Storage/Infiltration Basin (equivalent to area under the hydrograph, but above the 10-year peak flowrate) for the 25-year storm event is 1.0 AF and for the 100-year storm event is 7.2 AF.

SOURCE: Kennedy/Jenks Consultants, September 2001.

FIGURE **4.5-16**

Drainage Area 4 Hydrographs

39-22•11/01

Table 4.5-29
Projected Concentrations for Diverted Santa Clara River Water

Constituent	Units	Concentration	Source (1)	Particulate Fraction	Source
TSS	mg/l	1,790	USGS (4)	--	---
MINERALS					
Sulfate	mg/l	446	UWCD (2)	--	---
Chloride	mg/l	45	UWCD (2)	--	---
TDS	mg/l	964	UWCD (2)	--	---
Boron	mg/l	0.68	UWCD (2)	30%	LA County
NUTRIENTS					
Nitrate	mg/l as NO3	6.4	UWCD (2)	--	---
Ammonia	mg/l as NH3	0.28	UWCD (2)	--	---
METALS					
Arsenic	mg/l	0.002	IWR Sample (5)	76%	VCFCD
Beryllium	mg/l	0.0002	IWR Sample (5)	ND	---
Cadmium	mg/l	0.0002	IWR Sample (5)	94%	VCFCD
Chromium, total	mg/l	0.004	IWR Sample (5)	98%	VCFCD
Chromium VI	mg/l	0.002	IWR Sample (5)	98%	VCFCD
Copper	mg/l	0.052	UWCD (2)	37%	VCFCD
Iron	mg/l	0.542	UWCD (2)	84%	LA County
Lead	mg/l	0.005	City of Ventura (3)	50%	VCFCD
Manganese	mg/l	0.062	UWCD (2)	64%	Fresno
Mercury	mg/l	0.00006	VCFCD (6)	96%	VCFCD
Nickel	mg/l	0.037	City of Ventura (3)	91%	VCFCD
Selenium	mg/l	0.006	IWR Sample (5)	41%	VCFCD
Silver	mg/l	0.001	IWR Sample (5)	0%	VCFCD
Zinc	mg/l	0.055	UWCD (2)	69%	VCFCD
PESTICIDES					
ChemA	mg/l	ND	VCFCD (6)	--	---
Lannate	mg/l	NA	--	--	---
HYDROCARBONS					
Oil/Grease	mg/l	<3	VCFCD (6)	--	---
MTBE	mg/L	<0.00049	Ambient	--	---
MICROORGANISMS					
Total Coliform	MPN/100ml	52,600	VCFCD (6)	--	---
Fecal Coliform	MPN/100ml	2,100	VCFCD (6)	---	---
Fecal Streptococci	MPN/100ml	8,700	VCFCD (6)	---	---
Giardia	cysts/100 L	NA	---	---	---
Cryptosporidium	oocysts/100L	NA	---	---	---

Notes:
NA - Not Applicable
(1) The cited concentrations represent several sources of data due to the lack of a complete constituent profile. These sources consist of (in order of application): UWCD sampling at the Freeman Diversion (1991 - 2000); City of Ventura, Santa Clara River monitoring data (May 1996 - June 2001); USGS, Montalvo Monitoring Station Data (1991 - 1993); IWR Santa Clara River sample (August 21, 2001); and Ventura County Flood Control District, Ventura River, Foster Park monitoring station data (February 2001 - March 2001).
(2) Anticipated diverted river water quality, based on UWCD data from their Freeman Diversion sampling station. Since mineral concentrations are known to be a function of flowrate, regression relationships were established relating sulfate, chloride, TDS (TFR method) and boron to River flowrates. From these regression equations, conservative representative values were then calculated assuming a minimum river flow of 250 cfs during diversion periods. For nitrate, ammonia, copper, iron, manganese and zinc, the mean UWCD value was used.
(3) Anticipated diverted river water quality based on City of Ventura monitoring of the Santa Clara River is based on samples collected with a streamflow greater than 250 cfs as measured at the Freeman Diversion.
(4) USGS, Montalvo monitoring station data (1991 - 1993) was used for total suspended solids (TSS).
(5) IWR collected a sample from the Santa Clara River at the Freeman Diversion on August 21, 2001 and had it analyzed for several metals. This approach was used to fill in data gaps based on the observation that other metals in the UWCD sampling did not exhibit a relationship between concentration and river flowrate.
(6) VCFCD data (2001) for the Ventura River from their Foster Park monitoring station (mean values shown, except for pathogen indicators, for which log-mean values were used) was used as the closest analogous source.

Because the diverted water is expected to be higher in silt load than the water currently accepted for diversion to either the Saticoy or El Rio Spreading Grounds, it will bypass the existing siltation basin and be delivered to the Water Storage/Recharge basins untreated. Table 4.5-30, below, presents the diverted water quality relative to the established significance thresholds for each of the groundwater constituents. Since many of the metal constituents in the diverted river water have a substantial particulate fraction, these would be expected to settle out similar to the stormwater runoff discharges from the RiverPark development. The concentration of metal constituents as measured with groundwater beneath the pits is based on the average dissolved fraction concentration determined by the VCFCD sampling of the Ventura River. When this data was not available, average dissolved fraction concentrations were extracted from other analogous sources. Microbial constituents were compared to the significance threshold at the boundary of the Specific Plan Area, as these concentrations will be attenuated during subsurface saturated-zone transport via mechanisms of dilution, adsorption/filtration and die-off.

As Table 4.5-30 indicates, there are no significant impacts resulting from the UWCD diversion of Santa Clara River water.

Waste Load Calculations

Runoff generated by the project will increase as a result of implementing the proposed treatment system and converting open space/agricultural lands to residential and commercial uses. Table 4.5-31, below, lists the estimated runoff quality generated by the project during a historic wet year (water year 1997/98) and a historic dry year (1989/90). Comparing the projected constituent concentrations in the runoff to the surface water discharge thresholds of significance (ambient river concentrations), no significant impacts are noted. Total suspended solids, total coliform, fecal coliform, and fecal streptococci concentrations are all calculated to be substantially less than the thresholds of significance. ChemA and toxaphene are not expected to be the runoff as the records kept by the County Agricultural Commissioner shows these materials have not been applied in the area and all stormwater data collected and analyzed did not show the presence of ChemA constituents.[67] No change, therefore, is expected.

67 Integrated Water Resources. Design and Technical Analysis of the proposed Stormwater Quality Treatment System for RiverPark. November 12, 2001.

Table 4.5-30
UWCD Santa Clara River Diversion Water Quality Analysis

Constituent	Units	Diverted Santa Clara River	At Point of Contact with Groundwater Beneath Pits (1)	Thresholds of Significant Impact: Water Quality Threshold	Thresholds of Significant Impact: Water Quality Criteria Applied
TSS	mg/l	1790	0	NS	---
MINERALS					
Sulfate	mg/l	446	446	500	CA Primary ML
Chloride	mg/l	45	45	102	Ambient
TDS	mg/l	964	964	1,000	CA Sec MCL
Boron	mg/l	0.68	0.68	1.0	Ambient
NUTRIENTS					
Nitrate	mg/l as NO3	6.4	6.4	45	CA Pri MCL
Ammonia	mg/l as NH3	0.28	0.28	NS	---
METALS					
Arsenic	mg/l	0.002	<0.05	<0.05	Ambient
Beryllium	mg/l	0.0002	<0.001	<0.001	Ambient
Cadmium	mg/l	0.0002	<0.001	<0.001	Ambient
Chromium, total	mg/l	0.002	<0.01	<0.01	Ambient
Chromium VI	mg/l	0.001	<0.005	<0.005	Ambient
Copper	mg/l	0.052	<0.05	<0.05	Ambient
Iron	mg/l	0.542	0.085	0.13	Ambient
Lead	mg/l	0.005	<0.005	<0.005	Ambient
Manganese	mg/l	0.062	0.022	0.03	Ambient
Mercury	mg/l	0.00006	<0.001	<0.001	Ambient
Nickel	mg/l	0.037	0.003	0.003	Ambient
Selenium	mg/l	0.006	0.004	0.009	Ambient
Silver	mg/l	0.001	0.001	0.01	Ambient
Zinc	mg/l	0.055	0.017	0.05	Ambient
PESTICIDES					
ChemA	mg/l	ND	---	NS	---
Lannate	mg/l	ND	---	<0.005	Ambient
HYDROCARBONS					
Oil/Grease	mg/l	3	3	NS	---
MTBE	mg/L	<0.00049	<0.00049	<0.005	Ambient
MICROORGANISMS		Diverted Santa Clara River	Within Aquifer at Downgradient Property Line		
Total Coliform	MPN/100ml	52,600	<1.1	<1.1	CA Pri MCL
Fecal Coliform	MPN/100ml	2,100	<1.1	<1.1	CA Pri MCL
Fecal Streptococci	MPN/100ml	8,700	0	NS	---
Giardia	Cysts/100 L	NA	NA	<1	Ambient
Cryptosporidium	Oocysts/100 L	NA	NA	<1	Ambient

Notes:
ND - Below detection limits
NS - No standard
NA - Data not available
(1) The concentration at the point of contact represents the anticipated diverted river water quality assuming 100 percent particulate fraction removal (applicable only to metals) and no blending with pit water. This latter assumption is a highly conservative one considering that (1) there will nearly always be water in the pits (which has been shown to approximately reflect the quality of adjacent groundwaters), and that (2) complete discharge short-circuiting to pit outflow areas is unlikely. The values shown represent the reported dissolved concentrations for metals (which was estimated for those values based on UWCD Santa Clara River data as this data set does not include dissolved information). Where concentrations are listed as "<" a value, the value represents the current analytical detection limit.

Table 4.5-31
Project Stormwater Concentrations and Loads for TMDL-Related Constituents

Constituent	Concentration		Mass Load		Ambient River Concentration	
	Units	Ave. Concentration	Units	Loading	Units	Concentration
RiverPark Specific Plan						
Total Coliform	MPN/100 mL	21,811	MPN/day	7.56E+14	MPN/100 mL	160,000
Fecal Coliform	MPN/100 mL	4,643	MPN/day	1.61E+14	MPN/100 mL	5,000
Fecal Streptococci	MPN/100 mL	12,915	MPN/day	4.48E+14	MPN/100 mL	17,000
Total Suspended Solids	mg/L	44	lbs/day	3,401	mg/L	38,800
Chem A	µg/L	ND	lbs/day	---	µg/L	ND
Toxaphene	µg/L	ND	lbs/day	---	µg/L	ND
Cumulative Impacts						
Total Coliform	MPN/100 mL	52,640	MPN/day	8.37E+14	MPN/100 mL	160,000
Fecal Coliform	MPN/100 mL	13,760	MPN/day	2.19E+14	MPN/100 mL	5,000
Fecal Streptococci	MPN/100 mL	38,640	MPN/day	6.14E+14	MPN/100 mL	17,000
Total Suspended Solids	mg/L	94	lbs/day	3,281	mg/L	38,800
Chem A	µg/L	ND	lbs/day	---	µg/L	ND
Toxaphene	µg/L	ND	lbs/day	---	µg/L	ND

Notes:
Cumulative impacts for project conditions include the El Rio Areas east and west of Vineyard Avenue (runoff to Stroube Drain).

The amount of runoff will significantly increase as a result of runoff diverted from the Water Storage/Recharge basins. Table 4.5-32 lists the range of stormwater flows for historic wet and dry years.

Table 4.5-32
Existing Conditions and Project Runoff Comparison

Scenario	Runoff Amounts, AFY		
	Wet Year (1)	Average Year (3)	Dry Year (2)
RiverPark Specific Plan			
Existing	687	300	99
Project	23,474	10,263	3,376
Change in Runoff	22,787	9,962	3,277
Cumulative Impacts			
Existing	0	0	0
Project	10,761	4,704	1,547
Change in Runoff	10,761	4,704	1,547

Notes:
(1) Wet weather is the data from water year 1997/98.
(2) Dry weather is the data from water year 1989/90.
(3) Average year is based on the historical average from 1979/80 to 1998/99

Percolation decreases as a result of the project since the runoff from Drainage Areas 3 and 4 are now diverted to the Santa Clara River. The amount of the decrease varies with the hydrologic condition. Table 4.5-33 shows the range for historic wet and dry years.

Table 4.5-33
Existing Conditions and Project Percolation Comparison

Scenario	Percolation Amounts, AFY		
	Wet Year (1)	Average Year (3)	Dry Year (2)
RiverPark Specific Plan			
Existing	45,029	19,686	6,475
Project	20,533	8,977	2,953
Change in Percolation	-24,496	-10,709	-3,522
Cumulative Impacts			
Existing	16,555	7,238	2,381
Project	7,503	3,280	1,079
Change in Percolation	-9,052	-3,957	-1,302

Notes:
(1) Wet weather is the data from water year 1997/98.
(2) Dry weather is the data from water year 1989/90.
(3) Average year is based on the historical average from 1979/80 to 1998/99

Table 4.5-34, below, shows the estimates for changes to groundwater and surface water contributions under historic drought conditions and 10-year, 50-year, and 100-year rainfall events. Discussions with RWQCB staff[68] regarding the calculations further indicated a desire to establish nuisance (dry-weather run-off) flow rates. Because the stormwater treatment system will use detention basins and low flow outlets, nuisance flows from drainage areas 3 and 4 should be captured within the detention basins and would likely evaporate before reaching the Santa Clara River. Nuisance flows would be confined to those generated by the residential and commercial portions of the RiverPark Specific Plan area. Since these are newly developed areas, proper planning, construction, operation, and maintenance of irrigation systems and other outdoor water features would minimize the amount of nuisance water flows to the Santa Clara River. Therefore, no significant increase in pollutant loads will occur.

68 Elizabeth Erickson. Los Angeles Regional Water Quality Control Board. Personal communication, October 22, 2001.

Table 4.5-34
Existing and Project Groundwater and Surface Water Net Contributions Comparison

	Estimate of Contribution					
	Existing Conditions		Project Conditions		Net Change	
Scenario	Groundwater	Surface Water	Groundwater	Surface Water	Groundwater	Surface Water
RiverPark Specific Plan						
Historic drought conditions, AFY	6,475	99	2,953	3,376	-3,522	3,277
10-year event, AF/event	4,910	75	2,239	2,559	-2,671	2,485
50-year event, AF/event	6,736	103	3,072	3,512	-3,664	3,409
100-year event, AF/event	7,483	114	3,412	3,901	-4,071	3,787
Cumulative Impacts						
Historic drought conditions, AFY	2,381	0	1,079	1,547	-1,302	1,547
10-year event, AF/event	1,805	0	818	1,173	-987	1,173
50-year event, AF/event	2,476	0	1,122	1,610	-1,354	1,610
100-year event, AF/event	2,751	0	1,247	1,788	-1,504	1,788

Notes:
(1) Historic drought conditions are based on rainfall data from 1989/90.
(2) 10-year, 50-year, and 100-year event rainfall totals are based on historical records from El Rio Monitoring Station 239.

CUMULATIVE IMPACTS

Of the related projects considered in the cumulative impact analysis, two are located north of the Ventura Freeway in the vicinity of the project. One is residential project proposed on a 4-acre site located immediately east of the Specific Plan Area between Stroube Street and Sycamore Street in the El Rio West Neighborhood. The residential project would involve the development of a 4-acre vacant site. This site would likely drain to the south Sycamore Street and then south and east to Vineyard Avenue. Development of this small site would reduce groundwater recharge from infiltration to a small degree.

The second related project is the County of Ventura Juvenile Justice Complex. This project is under construction on a 29.5 acre agricultural site located east of the Large Woolsey Mine Pit and west of Vineyard Avenue. The County has chosen to site the new Juvenile Justice Center (JJC) on agricultural fields located to the southeast of the Large Woolsey Pit. The proposed project will include a 540-bed detention and commitment facility and a building with six courtrooms and various administrative offices. A portion of the site will not be used and will be maintained as open space. As designed, the JJC will retain and percolate all stormwater runoff in a detention basin on the project site. This is considered a mitigation measure for replacing pervious agricultural lands with impervious paved areas that may reduce groundwater recharge. Approximately 19 acres of the JJC site will be developed, 9.5 acres will remain undeveloped and 1 acre will contain the detention basin.

Overall, the JJC project will result in a net increase in groundwater recharge averaging 39 AFY.[69]

Given the characteristics of these two related projects no cumulative impacts to surface or groundwater quality will result.

MITIGATION MEASURES

Construction

4.5-1 Groundwater extracted as a result of dewatering during construction shall be discharged to the UWCD El Rio Spreading Ground recharge basins, if feasible, to mitigate potential impacts on groundwater quantity and quality.

Operation

Mitigation of the identified significant impacts would require that the concentrations of fecal coliform, iron, manganese, and nickel in runoff be reduced below the numeric thresholds of significance selected for this analysis. Treatment options for mitigation of these impacts are discussed below.

Fecal Coliform

Fecal coliform is most effectively treated through a disinfection processes. Four potential disinfection treatment alternatives have been identified to reduce fecal coliform concentrations in runoff that will reach the Santa Clara River. These methods include chlorination treatment, hydrogen peroxide treatment, filtration through constructed wetlands, and treatment with ultraviolet light. Each of these available treatment methods is discussed below.

Chlorination

Chlorination is the addition of gaseous or liquid chlorine to a liquid stream for the purpose of disinfection. Pathogen disinfection is proportional to the concentration of chlorine. This mitigation measure could reduce fecal coliform impacts to a level that is less than the numerical significance thresholds used in this analysis but would result in additional impacts. Specifically, chlorination would result in the potential production of trihalomethanes (THM), a group of known carcinogenic

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69 Table 4.5-35, Appendix 4.5-8

compounds that include chloroform, bromodichloromethane, dibromochloromethane, and bromoform. This concern also eliminated bromine and ozone disinfection. A further concern would be the potential introduction of chlorine into the Santa Clara River aquatic environment that could detrimental to aquatic life. To avoid this potential impact, an additional treatment process, dechlorination, would be needed. Additional cost and treatment area would be required for dechlorination. For these reasons, chlorination is not considered a feasible mitigation measure.

Hydrogen peroxide

Hydrogen peroxide is another available disinfectant that could reduce fecal coliform concentrations. Hydrogen peroxide is a strong oxidizing agent that does not have a residual that could cause impacts downstream. However, relative to other disinfectants, such as chlorine or ozone, it is not as efficient in reducing pathogen concentrations. Use of hydrogen peroxide for disinfection purposes is an innovative approach, but there is a lack of information at this time that would be necessary to develop an effective fecal coliform treatment system. For these reasons, hydrogen peroxide is not considered to be a feasible mitigation measure.

Constructed Wetlands

The use of constructed wetlands to mitigate fecal coliform impacts could be accomplished by incorporating wetland vegetation into the landscaping of the proposed dry swales. Wetland vegetation promotes the reduction of nitrates, and increases filtration that would reduce downstream metal concentrations. The vegetation would also encourage increased settling of suspended matter, which is often associated with microbial contaminants including fecal coliform. Constructed wetlands offer a more natural alternative to the mechanical treatment systems. In addition to reducing fecal coliform levels, constructed wetlands would also reduce ammonia and nitrate levels and would enhance metals and pesticide removal. However, implementation of constructed wetlands vegetation would necessitate rerouting of the drainage to wetlands along the edge of the mine pits and along the western edge of the Specific Plan Area. The area required for constructed wetlands would be large given the volume of runoff that needs to be treated. Maintenance of these constructed wetlands would be an issue as the volume and velocity of runoff from large storm events could erode and damage the wetland areas. Constructed wetlands could remove an estimated 95 percent of the fecal coliform concentration, but this represents only an increase of 25 percent above what would be achieved by the proposed water quality treatment detention basins.[70] Fecal coliform concentrations for discharges to the Santa Clara River

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70 Integrated Water Resources. Wetlands Mitigation. July 19, 2001.

were calculated at 1,042 MPN/ 100 mL, which is still higher than the Basin Plan objective of 200 MPN/100 mL. Constructed wetlands would not, therefor, reduce fecal coliform concentrations below the level of significance being used in this analysis. Subsequently, constructed wetlands are not considered to be a feasible mitigation measure.

Ultraviolet Light Disinfection

Ultraviolet light disinfection (UV disinfection) involves the use of ultraviolet light to disrupt the reproductive capability of pathogens. Irradiation with UV light for a specified contact time (given dose for a given length of time) alters the DNA of the pathogen, rendering it unable to reproduce. UV disinfection is being used with increasing regularity in the water reclamation industry. UV disinfection is capable of destroying fecal coliform bacteria without producing THMs or any residual that may impact the aquatic life of the Santa Clara River.

In order to be effective, however, the water being treated with UV must be low in turbidity to prevent shielding of the fecal coliform from the UV light. To achieve this, tube settlers followed by sand filtration would be required. In addition, UV disinfection requires a minimum exposure time to be effective. This requires that UV disinfection equipment be sized to accommodate the peak flow rate or that flow equalization with subsequent pumping be provided to reduce equipment capacity. A system would need to provide a compromise between these competing needs. For the purposes of developing this potential mitigation measure for analysis, the following assumptions were made:

1. A single, centralized treatment facility will be developed to treat fecal coliform.
2. Only the flow from Drainage Areas No. 1 and 2A must be flow equalized. The discharge from the other drainage areas can be regulated by the detention basin low flow outlets. Discharges from the three detention basins would be routed to the flow equalization structure and would match the downstream treatment capacity to avoid need for further flow equalization volume.
3. Treatment would be provided in 1,000 gallon per minute modules.

Based on these assumptions, a potential treatment system would consist of the following:

1. Approximately 23 million gallon flow equalization tank (approximate dimensions – 433 feet long by 433 feet wide by 16 feet deep).
2. 1,000 gallon per minute tube settler (approximate dimensions – 49 feet long by 23 feet wide by 15 feet deep).
3. 1,000 gallon per minute sand filter (approximate dimensions – 23 feet long by 23 feet wide by 16 feet deep).
4. 1,000 gallon per minute UV disinfection system (approximate dimensions – 30 feet long by 2 feet wide by 3 feet deep).

The surface water treatment system outlined above is estimated to have a cost of $24,155,000 and would require an area of 4.3 acres.[71] A properly maintained and operated UV disinfection system should be more than adequate to reduce the fecal coliform in stormwater to below the 200 MPN/100 mL numeric level of significance used in this analysis. Annual inspection and maintenance would be required to ensure that the treatment system would be operational when needed. The amount of storage needed would result in 59.1 days of treatment time using a 1,000 gallon per minute disinfection system. This is of concern from a vector standpoint because the breeding cycle for mosquitoes ranges between 7 and 10 days. In order to reduce the treatment time to less than 7 days, it would be necessary to increase the capacity of the treatment system from 1,000 gallons to 9,000 gallons. This would result in a subsequent reduction in storage volume from 22.9 million gallons to 10.9 million gallons. The cost of the system, using the modular data would drop from $24,155,000 to $21,300,000 and the acreage required would drop from 4.3 acres to 2.4 acres.

Although the system should be effective in reducing fecal coliform levels to below the numerical threshold limits used in this analysis, this measure is not feasible as the estimated cost for this system is approximately $21,300,000 and 2.4 acres of land would be required. The cost and amount of land required make this system infeasible. In addition, it should be noted that this system would result in a relatively small decrease in the level of coliform in relation to the cost.

Iron, Manganese, and Nickel

Two treatment options to reduce iron, manganese and nickel concentrations in runoff from storms greater than a 10-year storm event that would be discharged to the Water Storage/Recharge Basins have been identified. These treatment methods are chlorine oxidation/filtration and manganese green sand filtration with continuous regeneration by potassium permanganate. Both of these available treatment methods is discussed below.

Chlorine Oxidation/Filtration

Chlorine oxidation/filtration uses chlorine to oxidize dissolved metals constituents into a particulate form that can be filtered out. Since it uses chlorine, the potential to produce THMs is a significant drawback of this process. Specifically, chlorination would result in the potential production of trihalomethanes (THM), a group of known carcinogenic compounds that include chloroform, bromodichloromethane, dibromochloromethane, and bromoform. This concern also eliminated bromine

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[71] Komex. Letter Report to Tim Thompson, R.G., Integrated Water Resources. Conceptual Level Stormwater Treatment Plant Designs And Costs For RiverPark. September 28, 2001.

and ozone disinfection. A further concern would be the potential introduction of chlorine into the Santa Clara River aquatic environment that could detrimental to aquatic life. To avoid this potential impact, an additional treatment process, dechlorination, would be needed. Additional cost and treatment area would be required for dechlorination. In addition, these treatment systems would be used very infrequently. As discussed above, based on historic rainfall data, no runoff would have reached the mine pits between 1979 and 1999 if the proposed water quality treatment system had been in place. Reliability is also an issue, as the treatment system would be used infrequently. For these reasons, chlorine oxidation/filtration is not considered a feasible mitigation measure.

Manganese Green Sand Filtration

Manganese green sand filtration with continuous regeneration with potassium permanganate is a similar process, but utilizes potassium permanganate as the oxidant. Use of potassium permanganate avoids THM production issues while allowing for the removal of the desired constituents.

Similar to the approach used for UV disinfection of smaller return frequency storms, a single facility to treat all excess flows would be most suitable. The treatment system would be modular and initially sized at 1,000 gallons per minute. This facility is to be located between the east and south detention basins. The components of the treatment system included a 10.9 million gallon flow equalization tank (approximate dimensions of 300 feet long x 300 feet wide x 16 feet deep) and a 1,000 gallon per minute manganese green sand filter. Piping from the detention basins to the flow equalization tank is also necessary. The system is estimated to cost $11,755,000 and take up approximately 2 acres.[72]

The levels of iron, manganese, and nickel out of the treatment system are expected to be 0.067 to 0.402 mg/L, 0.007 to 0.044 mg/L, and 0.001 to 0.003 mg/L, respectively. Although the iron and manganese levels may exceed the threshold limits, additional removal is anticipated in the Water Storage/Recharge basins as iron and manganese would be oxidized entirely to particulate form. Removal via settling in the Water Storage/Recharge basins would reduce the level for those constituents to less than 0.13 mg/L and less than 0.03 mg/L, respectively, as measured at groundwater beneath the Water Storage/Recharge basins.

Similar to the surface water treatment system, the groundwater treatment system should also be increased in treatment capacity to reduce the treatment time to less than seven days. This would entail increasing treatment from 1,000 gallons per minute to 2,000 gallons per minute. Equalization volume

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72 Komex. Letter Report to Tim Thompson, R.G., Integrated Water Resources. Conceptual Level Stormwater Treatment Plant Designs And Costs For RiverPark. September 28, 2001.

would be reduced from 10.9 million gallons to 9.4 million gallons. The cost of the system would drop from $11,755,000 to $10,800,000 and the required acreage would decrease from 2.0 acres to 1.8 acres. Reliability is also an issue, as the treatment system would be used infrequently.

The magnitude of the cost and the amount of land required for the treatment facilities (2 acres) associated with this mitigation measure are substantial. Although the system should be capable of reducing iron, manganese, and nickel concentrations below the identified numerical threshold limits, this measure is considered infeasible from a cost, land planning and reliability issues.

UNAVOIDABLE SIGNIFICANT IMPACTS

Based on the thresholds of significance used in this analysis, unavoidable significant impacts have been identified for fecal coliform, iron, manganese, and nickel. The concentrations of these constituents in runoff will be higher than the thresholds of significance used in this analysis. Fecal coliform concentrations discharged to the Santa Clara River will exceed the Basin Plan objective for recreational use, but represent an improvement over existing conditions. The concentration also falls within the observed maximum ambient concentration for conditions that would likely result in discharges to the River.

Iron concentration in discharges to the Water Storage/Recharge basins exceeds ambient groundwater concentration, but is lower than the SMCL and the existing discharge concentration. Manganese concentration in discharges to the Water Storage/Recharge basins also exceeds ambient groundwater concentration, but is lower than the existing discharge concentration and matches the SMCL. Nickel concentration in discharges to the Water Storage/Recharge basin exceeds the ambient groundwater concentration, but is lower than the MCL. Although concentrations for these constituents could potentially degrade groundwater quality, the frequency of these occurrences is expected to be very rare. Based on the historical rainfall data form 1979 to 1999 and the proposed stormwater treatment system, no runoff would have reached the Water Storage/Recharge basins and thus no threshold exceedances would have been observed. In this respect, the implemented stormwater treatment system would, under all but the most extreme rainfall events, reduce mass loading of these contaminants to groundwater.

Reduction of the concentrations of these constituents to a level that is lower than the numeric thresholds of significance used in this analysis is not feasible due to the significant costs associated with treatment systems that would be required and the reliability of treatment systems that would operate infrequently.

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4.6 AGRICULTURAL RESOURCES

INTRODUCTION

This section addresses the significance of the impact of converting the existing agricultural land located within the boundary of the RiverPark Specific Plan Area to urban uses. This section also examines the consistency of the Project with the policies of City of Oxnard 2020 General Plan. *Potential impacts on nearby agricultural areas is also addressed. Sources utilized in this section include the* 2020 General Plan *(November 1990), the* 2020 General Plan *EIR (June 1990), Ventura County Annual Crop Report (2000), the State Department of Conservation Farmland Conversion Report (1998), the Soil Survey: Ventura, California, (April 1970) and the State Important Farmlands Map.*

ENVIRONMENTAL SETTING

There are two systems used by the United States Soil Conservation Service (SCS) to determine a soil's agricultural productivity. The two systems are the Soil Capability Classification and the Storie Index Rating System. In general, the prime soil classifications of both systems indicate the absence of soil limitations, which, if present, would require the application of management techniques (e.g., drainage, leveling, special fertilizing practices) to enhance production.

Federal and State Farmland Classifications

Soil Capability Classification

The Soil Capability Classification System takes into consideration soil limitations and the way in which soils respond to treatment. Capability classes range from Class I soils, which have few limitations for agriculture, to Class VIII soils, which are unsuitable for agriculture. Class I soils give top yields with a minimum of management skills, while yields of Class II land can equal those of Class I with implementation of minor management practices. Generally, as the ratings of the capability classification system increase, crop yields and profits are more difficult to obtain.

Storie Index Rating System

The Storie Index Rating system ranks soil characteristics according to their suitability for agriculture from Grade 1 soils (80 to 100 rating), which have few or no limitations for agricultural production to

Grade 6 soils (less than 10), which are not suitable for agriculture. Under this system, soils deemed less than prime can operate as prime soils when limitations such as poor drainage, slopes, or soil nutrient deficiencies are partially or entirely removed.

State of California Department of Conservation Classifications

Using Soil Conservation Service soil classifications, discussed above, the California Department of Conservation (DOC) and the California Association of Resource Conservation Districts translate soil survey data into an "Important Farmland Series" of maps for the State's agricultural counties. The purpose of the DOC's Farmland Mapping and Monitoring Program (FMMP), which updates its maps biennially, is to provide land use conversion information for decision makers to use in their planning for the present and future of California's agricultural land resources.[1] Thus, these classifications focus only on those lands that have been recently farmed. Land not recently farmed does not show up on the Important Farmland Series of maps.

The DOC, in its *Farmland Conversion Report* published in June 1994, has clarified the way unfarmed agricultural lands are removed from their important farmland maps. Before removing unfarmed land from the maps, the DOC now waits two mapping cycles (four years) rather than one to make it easier for the DOC to track changes.

The important farmland maps and the Advisory Guidelines for the Farmland Mapping and Monitoring Program identify five agriculture-related categories: prime farmland, farmland of statewide importance, unique farmland, farmland of local importance, and grazing land. Each is described below.

Prime Farmland

Prime farmland is land with the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. The land must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date of 1992 (or since 1988).

Farmland of Statewide Importance

Farmland of statewide importance is land similar to prime farmland, but with minor shortcomings, such as greater slopes or with less ability to hold and store moisture. The land must have been used for

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1 Department of Conservation: *Farmland Conversion Report: 1996 to 1998*, p.1. Sacramento, California, 2000.

the production of irrigated crops at some time during the two update cycles prior to the mapping date (or since 1988).

Unique Farmland

Unique farmland is land of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards, as found in some climatic zones in California. The land must have been cultivated at some time during the two update cycles prior to the mapping date (or since 1988).

Farmland of Local Importance

Farmland of local importance is land of importance to the local agricultural economy, as determined by each County's Board of Supervisors and a local advisory committee. According to the *Farmland Conversion Report*, farmland of local importance in Ventura County includes soils that are listed as prime farmland or farmlands of statewide importance that are not irrigated, and soils growing dryland crops (beans, grain, dryland walnuts, and dryland apricots).

Grazing Land

Grazing land is land on which the existing vegetation is suited to the grazing of livestock. The minimum mapping unit for this category is 40 acres.

Contribution of Agriculture to the Ventura County Economy

Farming in Ventura County has been, and continues to be, a major contributor to the nation's food supply as well as a vital component of the rural lifestyle, which exists throughout much of the County. Besides providing food for the nation's tables, agriculture generates a substantial number of jobs ranging from crop production to processing, shipping, and other related industries.

Based on the climate and quality of soils, Ventura County is recognized as one of the principal agricultural counties in the State, with gross revenues from the sales of agricultural commodities of $1.05 billion in 2000.[2] Ventura County ranks number ten among the highest in agricultural revenues of

2 Office of Agricultural Commissioner: *Annual Crop Report: 2000*, p. 2. Santa Paula, California: 2001.

the 58 agricultural counties in the state, and approximately 19,600 jobs were generated in 2000 by agriculture in the County. In comparison, the County contained a total of 392,500 jobs in 2000.[3]

In 2000, the ten leading crops in the County were lemons, strawberries, celery, avocados, nursery stock, avocados, cut flowers, tomatoes, peppers, Valencia oranges, and lettuce, with lemons holding the highest value at $187,166,000.[4] Within the City of Oxnard, row crops such as celery, cabbage, cauliflower, broccoli, peppers, lima beans, strawberries, lettuce and tomatoes predominate.

Agriculture has remained economically viable in the County, in spite of pressures such as increased agricultural land values, increased water cost, and compatibility problems with urban uses, because of the area's climate, soils, and air quality. The total value in constant dollars of Ventura County's agricultural production has been increasing since the 1930's.[5]

Farmland Conversion

One of the basic underlying premises of agricultural conversions is that the proximity of agricultural land to urban uses increases the value of the land either directly through formal purchase offers, or indirectly from recent sales in the vicinity. This is evidenced by the fact that property values, as measured by the County Assessor's office, are higher adjacent to the urban fringe.[6] One exception is in the case of a roadway intersection where future urban growth is expected, or near areas where land use designations are predicted to change.

One study suggests that in response to increased land values, the types of crops on the land shifts to higher yield, higher value crops. The intent being to maximize the cash yield from the land available, otherwise the land will be converted to a higher and better use. On the surface, this appears to be partially the case in much of Ventura County. For example, Valencia orange production dropped from about 16,000 acres in 1975 to 9,360 acres in 2000.[7] During this same time, higher value crops such as avocados, strawberries, broccoli, celery, and specialty lettuce have increased substantially.[8] It should be noted that numerous factors may also contribute to this shift, including

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3 California Department of Finance, 2000 County Profiles for Ventura County. (http://www.dof.ca.gov/HTML/FS_DATA/profiles/pf_home.htm), July 2001.

4 Office of Agricultural Commissioner: *Annual Crop Report: 2000*, p. ii. Santa Paula, California: 2001.

5 Ventura County Agricultural Land Trust and Conservancy and the California State Coastal Conservancy: *The Value of Agriculture to Ventura County: An Economic Analysis*, March 1996.

6 Ibid.

7 Office of Agricultural Commissioner: *Annual Crop Report: 2000*, Santa Paula, California: 2001.

8 Ventura County Agricultural Land Trust and Conservancy and the California State Coastal Conservancy: *The Value of Agriculture to Ventura County: An Economic Analysis*, March 1996.

market forces, pests, as well as climate and soil types, which limit the types of crops that can be cultivated in an area.

The amount of agricultural land converted to other uses has been monitored since 1984 by the DOC based on information reported by the County Agricultural Commissioner. This information is presented below in Table 4.6-1.

Table 4.6-1
Conversion of Farmlands within Ventura County 1988-1998

Year	Prime Farmland	Land of Statewide Import.	Unique Farmland	Farmland of Local Importance	Grazing	Total Agriculture
1990	53,591	38,299	22,510	11,691	210,068	336,159
1992	53,300	38,299	22,510	11,691	210,068	336,159
1994	53,042	37,883	22,512	11,416	209,091	333,900
1996	52,141	37,611	22,437	11,148	208,752	332,089
1998	51,817	37,7000	22,644	11,076	207,853	331,088
2000	51,624	37,613	22,608	11,097	206,693	329,635
10 Yr. Diff.	1,967	-686	134	615	2,215	5,071
Annual Avg.	-266.5	-137	19.6	-118.8	-475	1,304.8
%Diff.	4%	3%	.6%	6%	1%	2%

Source: Department of Conservation, Farmland Conversion Reports 1988 to 1990, 1992 to 1994, 1996 to 1998, 1998 to 2000. (Sacramento, California).

As shown, the total amount of agricultural land within the County declined 2 percent during the ten-year period from 1990 to 2000. This equates to an average loss of 266 acres of prime farmland annually and 916 acres of all farmland categories annually. The rate of decline for Prime Farmland and Land of Statewide Importance, which are the land categories with the greatest potential for agricultural productivity, stood at 4 percent and 3 percent, respectively, during this same period. When considering the combined categories of important farmland, the loss over this ten-year period amounts to 4 percent of land within this combined category. It should be noted that for the nine-year period between 1984 and 1993, crop yields on a per acre basis have increased for the County's leading crops.[9] During this period, celery crop yields have increased 22.5 percent, strawberries have increased 2.6 percent, lemons have increased 47 percent, Valencia oranges have increased 48 percent, and the yield for avocados increased 59 percent. This increase can be attributed to improved farming techniques, seed stock, and other production related factors.

9 Ventura County Agricultural Land Trust and Conservancy and the California State Coastal Conservancy: *The Value of Agriculture to Ventura County: An Economic Analysis*, March 1996.

Plans and Policies for Agricultural Land

City of Oxnard 2020 General Plan

The City of Oxnard has consistently administered policies and programs designed to preserve a majority of the agricultural land in the City's Planning Area while accommodating anticipated growth. The Open Space/Conservation, Growth Management, Land Use, Economic Development and Community Design Elements of the *2020 General Plan* address the City's policies on agricultural land.

The *2020 General Plan Open Space/Conservation Element* recognizes the importance of the agricultural production lands in the City's Planning Area and includes policies for the protection of these lands. The maintenance and enhancement of natural resources and open space is identified as a goal of the *General Plan*, and the protection of agricultural lands from premature and unnecessary urbanization is set forth as an objective.

In addition, the *2020 General Plan* contains objectives and policies promoting the preservation of agricultural land within the City's Planning Area in the *Growth Management*, *Land Use*, *Economic Development*, *and Community Design Elements*. An objective in the *Growth Management Element* calls for the creation of an appropriate balance between urban development and the preservation of agricultural uses within the City's Planning Area. This objective further states that development is only allowed within the City Urban Growth Boundary (CURB) while leaving the remainder in Resource Protection, Open Space, or Agricultural designations. Objectives in the *Land Use Element* call for limiting the urbanized area of the City, facilitating a permanent greenbelt between the City and neighboring cities, and preserving permanent agricultural land within the City's Planning Area. The *Economic Development Element* contains policies supporting the continued contribution of agriculture to the economy and lifestyle of the City and encouraging the retention of and reinvestment in agriculture. An objective in the *Community Design Element* states that the unique coastal and agricultural character of the City should be maintained.

The primary method identified in the *2020 General Plan* when it was adopted in 1990 for preserving agricultural land was the City's participation in greenbelt agreements. The *Oxnard-Camarillo Greenbelt* was originally established by the Cities of Oxnard and Camarillo in mid-1982. The County Board of Supervisors endorsed the Greenbelt in late 1982. As discussed above, this greenbelt was amended in 1984 to add the Del Norte area. This greenbelt agreement includes 29,200 acres. Of this total, approximately 12,905 acres are located within the City of Oxnard's Planning Area.

The *Open Space/Conservation Element* also called for consideration of a new greenbelt in the northwestern portion of the City's Planning Area. This new 4,600-acre greenbelt, called the *Ventura-Oxnard Greenbelt*, was created by the Cities of Oxnard and Ventura in 1993. The Ventura County Board of Supervisors joined this greenbelt agreement in early 1994. The Ventura County LAFCO also endorsed this greenbelt agreement in early 1994. This greenbelt does not include the City's Planning Reserve Area located north of Gonzales Road and east of Victoria Avenue, within which is the RiverPark Specific Plan Area.

The policies in *Open Space/Conservation Element* related to the preservation of agricultural land also call for the City to support other mechanisms for the preservation of agricultural land, including the use of Williamson Land Conservation Act contracts, purchase of conservation easements, and adoption of a right-to-farm ordinance.

Aside from greenbelt agreements, the City's Save Open Space and Agriculture Resources (SOAR) Ordinance, which was passed in November 1998, is another method used by the City to preserve its agricultural resources. The SOAR ordinance consisted of an amendment to the *2020 General Plan* to create a City Urban Restriction Boundary (CURB) and a City Buffer Boundary (CBB). The purpose of the SOAR Ordinance is to ensure that Agriculture, Open Space, and Rural-designated lands are not prematurely or unnecessarily converted to other uses. Under the SOAR Ordinance, the City would restrict urban services and urbanized uses of lands to within the CURB Line through the year 2020 and requires city voter approval before any Agriculture-designated land within the CBB, and outside the CURB can be developed under the City's jurisdiction for urban uses. The City Council may amend the CURB to include land contemplated for construction of public potable water facilities, public schools, public parks, or other government facilities, or to include certain development projects and those that have obtained approval as of the effective date of the SOAR Ordinance, a vested right pursuant to state or local law, all uses exempted from the provisions of the *General Plan* Amendment, but only to the minimum amount of land reasonably necessary to accommodate said uses.[10]

As shown in Figure 4.6-1, the CURB is established generally coterminous with and in the same location as the Sphere of Influence line established by the Local Agency Formation Commission (LAFCO) as it existed as of January 1998. Of the 23,178 acres of agricultural land located in the City's Planning Area at the time the SOAR Ordinance was approved, the build-out of the *2020 General Plan* would result in the conversion of approximately 3,729 acres of this land, leaving 19,449 acres of agricultural land in the City's Planning Area. As shown, the City of Oxnard *General Plan* provides for the preservation of most

10 Section 3.6, Oxnard SOAR Ordinance, November 1998.

of the agricultural land within the City's Planning Area while allowing some conversion of agricultural land to accommodate anticipated growth.

The Williamson Act

The California Land Conservation Act, also known as the Williamson Act, was adopted in 1965 in order to encourage the preservation of the state's agricultural lands and to prevent its premature conversion to urban uses. In order to preserve these uses, this act established an agricultural preserve contract procedure by which any county or city within the state taxes landowners at a lower rate using a scale based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. In return, the owners guarantee that these properties would remain under agricultural production for a ten-year period. This contract is renewed automatically unless a notice of non-renewal is filed by the owner. In this manner, each agricultural preserve contract (at any given date) is always operable at least nine years into the future. No Williamson Act contracts exist in the Specific Plan Area.

County GP/El Rio Area Plan

The agricultural land located east of Vineyard Avenue and north of the El Rio Community is located outside the City's CURB and is under the jurisdiction of the County of Ventura. This County's land use policies for this area are contained in the County *General Plan* and the El Rio Area Plan, a component of the County *General Plan*.

Preservation and protection of irrigated agricultural lands to assure the continued availability of such lands for the production of food and fiber is a stated goal under the County *General Plan*. Specific policies to achieve that goal include: planning development on land designated as Prime or of Statewide Importance to remove as little land from agricultural production as possible and to minimize impacts on topsoil; preservation of agricultural land by retaining and expanding the existing Greenbelt Agreements and encouraging the formation of additional Greenbelt Agreements; and, regulating development adjacent to agricultural-designated lands so as to minimize conflicts with agricultural use of those lands.[11] In addition, the County adopted its own SOAR Ordinance for unincorporated areas of the County in November 1998. The County SOAR Ordinance requires countywide voter approval of any change to the County *General Plan* involving the Agricultural, Open Space, or Rural designations or any changes to a County *General Plan* goal or policy related to those land use designations.

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11 County of Ventura Planning Division: *Ventura County General Plan*, "Resources Element," p.22. Ventura, California: December 1994.

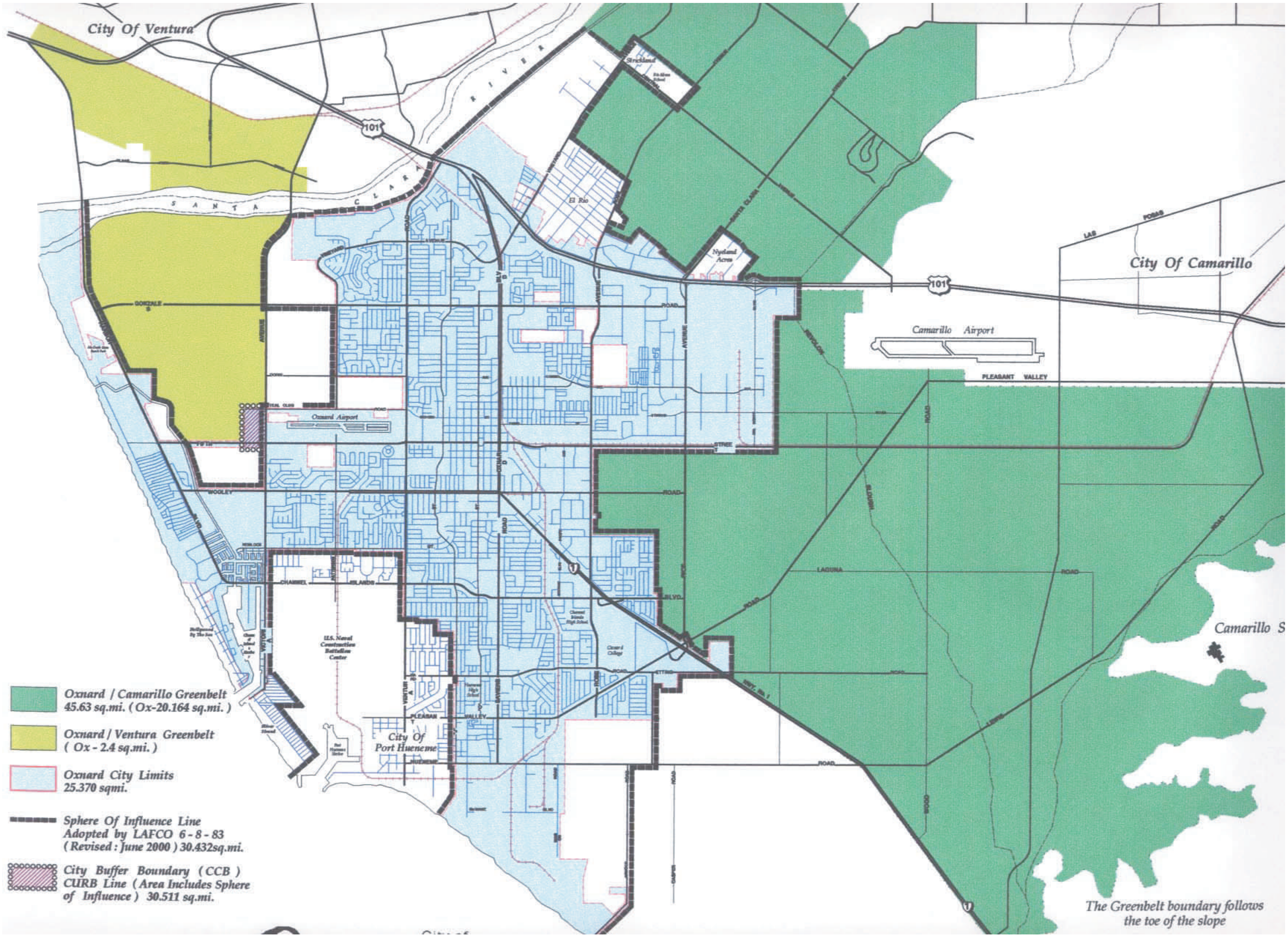

FIGURE 4.6-1

Greenbelts and CURB and CBB Boundaries

The El Rio Area Plan further specifies the County's goals and policies for the unincorporated area near the Specific Plan Area. Preservation and protection of irrigated agricultural lands in the El Rio/Del Norte area and minimizing incompatibilities between agricultural operations and other land uses are stated goals. Specific policies to achieve that goal include: designating land outside the Existing Community- or Rural-designated areas within the El Rio/Del Norte Area Plan boundary which is currently in, or suitable for agricultural production as Agriculture and zoned such areas Agricultural Exclusive (A-E), prohibiting conflict of discretionary development located on land designated as Agricultural with the agricultural uses of those land, conditioning discretionary development adjacent to Agricultural designated land to ensure that impacts on the agricultural uses are minimized, requiring discretionary, non-agricultural land uses adjacent to Agricultural designated land to establish buffers, conditioning preservation of topsoil for reuse for discretionary development on lands containing Prime farmland or Farmland of Statewide Significance agricultural soils, and requiring evaluation regarding the feasibility of dedicating land or a conservation easement or cash-in-lieu fees to preserve agricultural land which is comparable to any land which would be permanently lost due to discretionary development on lands containing Prime farmland or Farmland of Statewide Significance agricultural soils.

On-Site Characteristics

Important Farmlands

The State Important Farmland Map for the Specific Plan Area and surrounding areas is shown in Figure 4.6-2. Presently, only the approximate 155 acres of agricultural land in RiverPark Area 'A' is mapped as farmland. This portion of the Specific Plan Area is mapped as Prime Farmland. The other parts of the Specific Plan Area are mapped as "Urban and Built-Up Land" and "Other Land."[12]

Agricultural Land within the Specific Plan Area

Figure 4.6-3 shows the location of existing agricultural land in the Specific Plan Area. As shown, approximately 155 acres of agricultural land is located in RiverPark Area 'A'. In addition to this agricultural land in RiverPark Area 'A', there is a small amount of agricultural land in RiverPark Area 'B'. As shown, there is a small strip of agricultural land located between Vineyard Avenue and El Rio Retention Basin No. 2. This strip includes 16 acres located on the Retention Basin site and a small 3-

12 The current State Important Farmland Map for the Oxnard Quadrangle shows the Large Woolsey Mine Pit as Unique Farmland and the Small Woolsey, Vickers and Brigham Mine Pits as Farmland of Statewide Importance. This mapping error was reported to Kerri Kisko of the State Department of Conservation Farmland Mapping and Monitoring Program on October 29, 2001.

acre parcel immediately north of this parcel. A portion of the bottom of El Rio Retention Basin No. 2 is also currently being farmed.

At the time the County of Ventura acquired the El Rio Retention Basin No. 2 site, the soils on this sites was mapped as Prime Farmland. As mitigation for the impact of the construction of the retention basin on this agricultural land, the topsoil from the basin was temporarily stockpiled and then returned to the bottom of the completed basin. Basin 2 and the adjacent 16 acres along Vineyard Avenue are leased for agricultural use by the County. Presently, the farmer leasing this site from the County is farming the 16 acres on Vineyard and approximately 35 acres of the bottom of the 49-acre retention basin. The farmer grows in the bottom of the basin at his own risk, as the basin could be inundated with runoff during a storm event.

While the land at the bottom of El Rio Retention Basin No. 2 is marginal farmland, due to the chance of flooding, the portion of the basin currently being farmed is considered as agricultural land for purposes of this analysis. With this land, a total of 209 acres of agricultural land is located within the Specific Plan Area. All of the agricultural land within the Specific Plan Area is currently under cultivation with strawberries.

PROJECT IMPACTS

Thresholds of Significance

Based on Appendix G of the CEQA *Guidelines*, the City of Oxnard considers impacts on agricultural land to be significant if:

- a project converts prime farmland, farmland of statewide importance, and/or unique farmland, as shown on the State Important Farmlands maps, to non-agricultural use;
- conflicts with a Williamson Act contract
- or involves other changes in the existing environment which could result in the conversion of prime farmland, farmland of statewide importance, and/or unique farmland to non-agricultural uses.

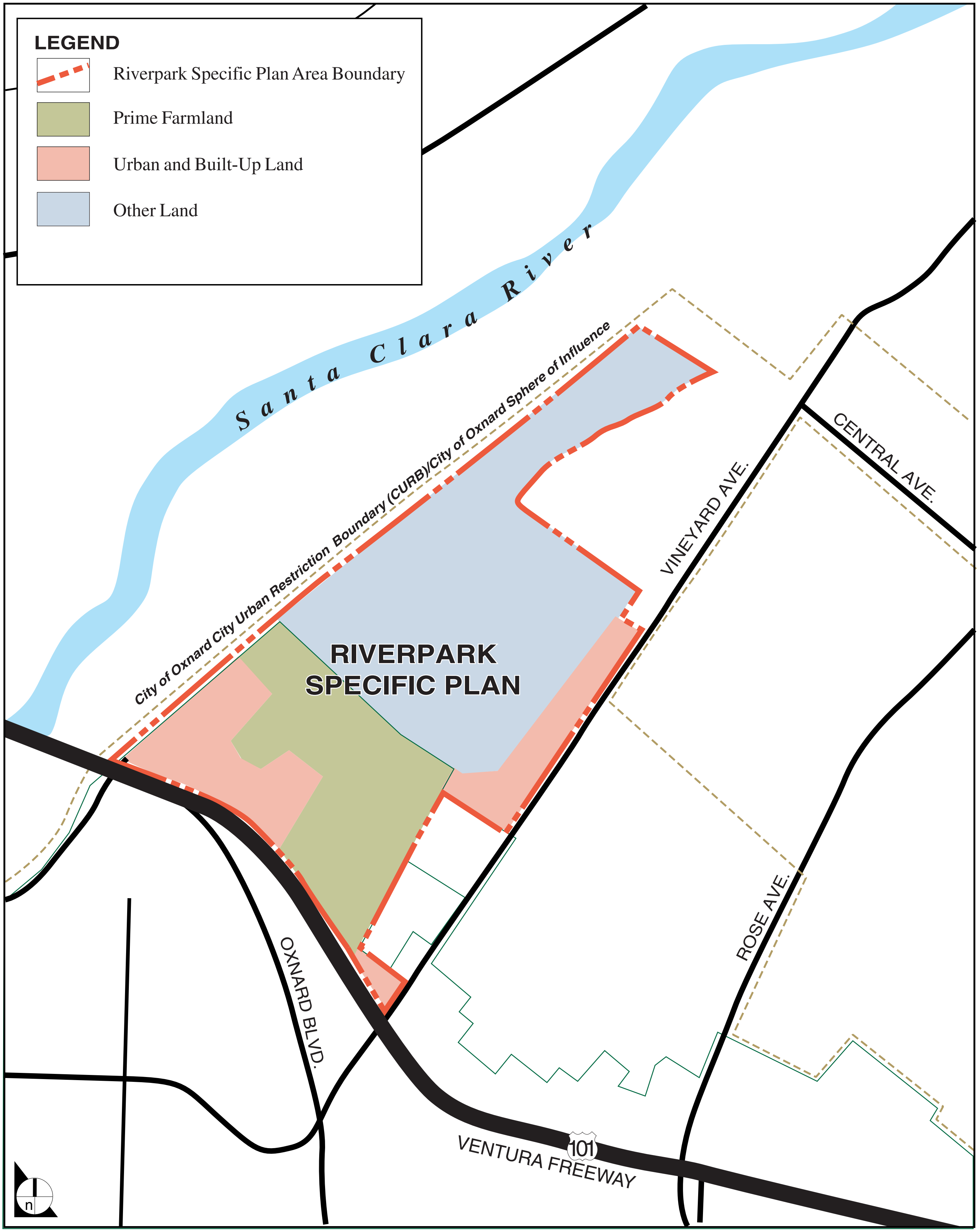

FIGURE 4.6-2

State Important Farmland Map

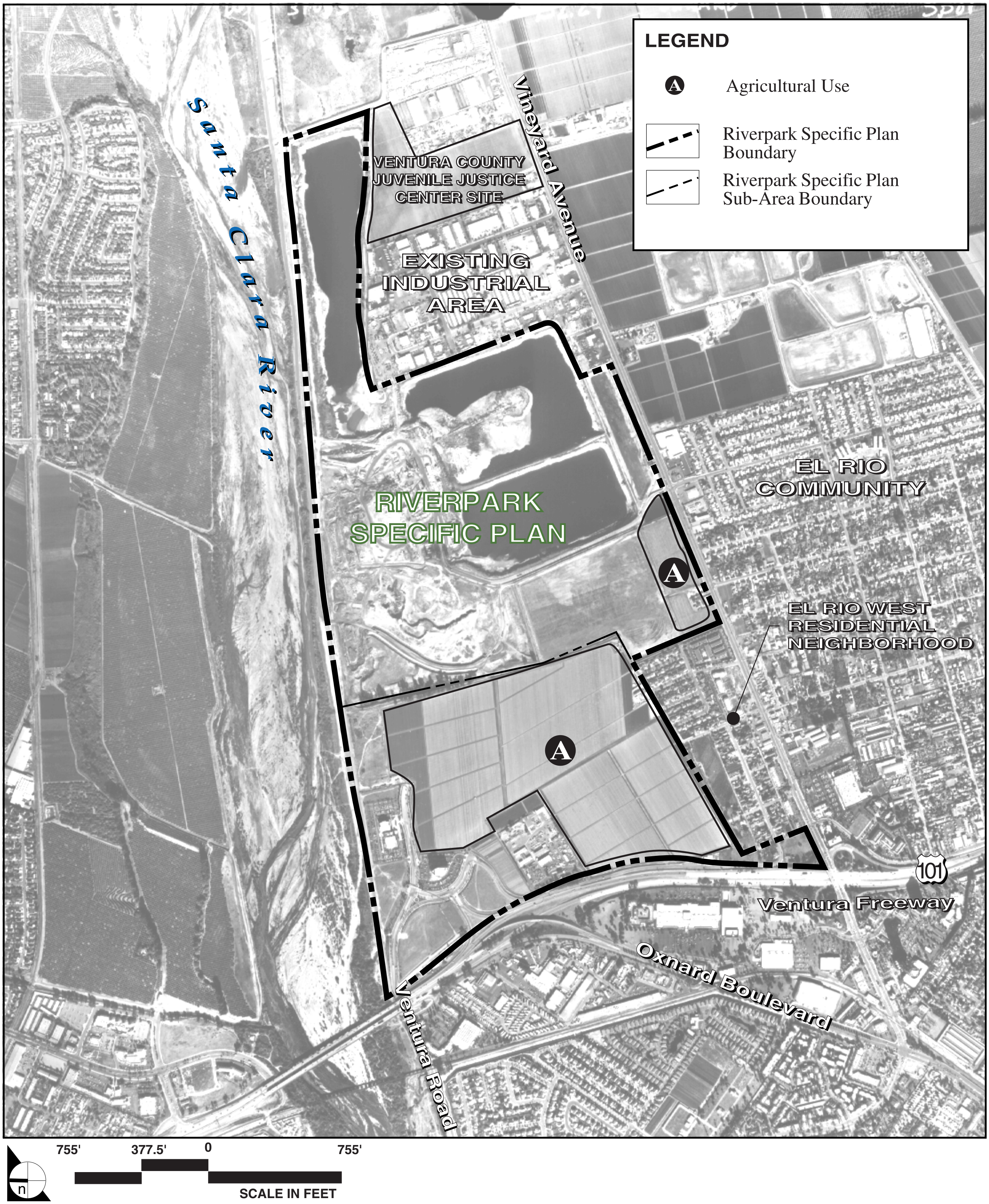

FIGURE 4.6-3

Existing Agricultural Land in the Specific Plan Area

Direct Impacts

Conversion of Agricultural Land and Soils

The 155 acres of agricultural land in RiverPark Area 'A' is mapped as Prime Farmland. The 54 acres of land currently being farmed in RiverPark Area 'B' is not mapped as farmland on the State Important Farmland Maps. Based on the thresholds defined for this analysis, the loss of the 155 acres of agricultural land in RiverPark Area 'A' is a significant impact. The loss of the 54 acres of land currently being farmed in RiverPark Area 'B', consisting of a 19 acres of farmland along Vineyard Avenue and 35 acres on the bottom of the retention basin, is not a significant impact.

The most recent data indicates that the County contains a total of 112,159 acres of prime farmland, farmland of statewide importance, and unique farmland.[13] Most of this land is classified as prime soils. The conversion of the Specific Plan Area from farmland to the proposed uses would reduce the total amount of these farmland types within the County by approximately 0.14 percent.

It should be noted that the conversion of the agricultural land in RiverPark Area 'A' has been previously considered by the City at three different times. This impact was considered by the City in 1986 when the Oxnard Town Center Specific Plan was proposed. In 1990, conversion of this agricultural land to urban uses was considered when the *2020 General Plan* was adopted by the City. Conversion of this land was considered again when the City reviewed the Historic Enhancement of Oxnard (HERO) redevelopment project in 1997. Environmental Impact Reports were prepared for all three of these land use policy projects that identified the conversion of this land to urban uses as a significant impact. The City found the benefits of these projects outweighed this impact on each of these three occasions and a Statement of Overriding Considerations was adopted.

Indirect & Secondary Impacts

Economic Loss

The loss of agricultural productivity during build-out of the Specific Plan would reduce total revenues from crop production, and incrementally reduce the volume of produce that is processed and shipped at local facilities. At the request of the Ventura County Agriculture Commission mentioned in the Notice of Preparation the following analysis examines the monetary effects of this crop loss.

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13 *Department of Conservation, Farmland Conversion Reports 1996 to 1998 (Sacramento, California).*

The site is suitable for growing a number of crops, including flowers, fruit, vegetables, and sod. Revenue generated by agricultural production on the property could vary considerably dependent upon the type and amount of crops under cultivation. There could be several different types of crops grown on a particular parcel of land within the Specific Plan Area during a given year. Further, various parcels may also lie fallow for part of the year. Given this, in order to calculate a reasonably accurate crop production value the property was systematically surveyed to determine if any perennial crops were found on the property. These were assumed to remain constant throughout a given year.

The results of a field survey found that approximately 209 acres of land was cultivated with strawberries. The value of this crop was then calculated based on the latest dollar value identified in the *Ventura County Agricultural Commissioner Annual Crop Report* (2000). Using a generation factor of 31.00 tons of strawberries per acre, and a unit price of $960.24 per ton, the annual crop value of strawberries per acre was $29,767.44 in 2000. The total annual crop value for the 209 acres is estimated at approximately $6,221,000 based on the above.

The reduction in harvested acres would create incrementally fewer economic opportunities for support industries. Based on a study which examined the degree of dependence of Ventura County agricultural support industries on the County's crop production, it was concluded that these industries can withstand up to a 37 percent reduction in total crop acres prior to closing or leaving the County.[14] At the time the study was prepared, agricultural land within the County totaled 101,483 acres. Based on the above, the point at which support industries would be significantly affected would occur when the amount of farmland under cultivation within the County is reduced to 63,612 acres (37 percent of 101,483). Currently, there is 112,159 acres of farmland mapped in Ventura County on the State Important Farmland Maps. While the conversion of the Specific Plan Area from agricultural to urban uses would incrementally decrease the amount of farmland under cultivation in the County, this would not significantly impact the supporting agricultural industries based on the conclusions contained in this study.

Impacts on Nearby Agricultural Areas

The nearest agricultural land to the Specific Plan Area is located east of Vineyard Avenue and north of the El Rio Community. The closest residential areas proposed in the RiverPark Specific Plan would be located approximately 1,500 feet from this agricultural land. Because the nearest agricultural land will be buffered from the proposed residential and school uses by more than 1,500 feet, development of

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14 Ventura County Agricultural Land Trust and Conservancy and the California State Coastal Conservancy: *The Value of Agriculture to Ventura County: An Economic Analysis*, March 1996.

the uses allowed by the proposed Specific Plan would not have significant impacts on the this agricultural land, including such impacts as blocking solar access to agricultural sites and land use incompatibility. Furthermore, the proposed Specific Plan consists of commercial and residential uses that would not generate a significant amount of dust or introduce agricultural pests and diseases. The RiverPark Project will also result in a net gain in local groundwater, as described in detail in Section 4.5, Water Resources. No impact on agricultural water supplies, therefore, will result.

CUMULATIVE IMPACTS

The Oxnard *2020 General Plan* contains a projection of the amount of agricultural land that will be converted to urban uses if all existing agricultural land designated for urban uses in the *General Plan* is developed. This projection includes the agricultural land in RiverPark Area 'A', which is designated for Regional Commercial use on the *2020 General Plan* Land Use Map. This projection reflects the CURB approved by the voters in 1998, which preserves over 19,449 acres of the 22,800 acres of agricultural land within the City's Planning Area. A total of 3,351 acres of agricultural land, including the prime agricultural land within the RiverPark Specific Plan Area, will be impacted if all land designated for urban uses in the *2020 General Plan* are developed. The proposed project will contribute to this significant cumulative loss of agricultural land.

MITIGATION MEASURES

There are no feasible measures to mitigate the direct loss of the agricultural land within the Specific Plan Area.

UNAVOIDABLE SIGNIFICANT IMPACTS

The loss of agricultural land within the RiverPark Specific Plan Area would be an unavoidable significant impact resulting from the Project. The portion of the Specific Plan Area containing the 155 acres of prime farmland has been designated for urban uses since 1986 and the RiverPark Project is consistent with the policies of the Oxnard *2020 General Plan* addressing the preservation of agricultural land.

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4.7 TRANSPORTATION & CIRCULATION

INTRODUCTION

This section assesses the operation of the existing circulation system and determines the future operating condition of the roadway network with the addition of traffic generated by the proposed RiverPark Specific Plan. Information in this section is obtained from a traffic study prepared in October 2001 by Crain and Associates, titled Traffic Analysis For Oxnard RiverPark Specific Plan Development. This traffic study report is provided in its entirety as Appendix 4.7 of this EIR.

The traffic study contains an analysis of the potential traffic and circulation impacts associated with the proposed RiverPark Specific Plan. The study was conducted according to the guidelines set forth in the City of Oxnard's Traffic Impact Study Standards. Under the City's technical direction, traffic impacts were assessed for the proposed Specific Plan Project on the study area transportation system. The report documents the results of that study, which analyzed existing and future traffic conditions in accordance with procedures specified by the Ventura County Transportation Commission (VCTC) and Southern California Association of Governments (SCAG) in the Ventura County Congestion Management Plan (CMP). Staff from the Cities of Oxnard and Ventura and the County of Ventura participated in a series of meetings to ensure that this report (and underlying analyses) met all applicable CEQA and CMP requirements. The analysis incorporated a detailed evaluation of traffic conditions at 33 intersections consisting of 25 intersections in Oxnard and immediately surrounding areas and 8 intersections in the City of Ventura. Five segments of the state highway network were also evaluated. These study locations include those roadway facilities most likely to be directly impacted by the traffic generated by the RiverPark project.

The study analyses was performed by evaluating the capacities of the 33 study intersections as compared to: (1) existing traffic; (2) estimated future "Without Project" traffic due to ambient growth and related projects only; (3) estimated future "With Project" traffic due to ambient growth, related projects and RiverPark; (4) estimated future "With Project" traffic with the implementation of project mitigation measures.

ENVIRONMENTAL SETTING

Plans and Policies for Transportation and Circulation

2020 General Plan Circulation Element

The City of Oxnard Circulation Element provides a comprehensive transportation plan concerned with the movement of people, goods, and resources. As such, it is closely linked to the Land Use Element. The provisions of the Circulation Element support the goals, objectives, policies and plan proposals of the Land Use Element, while in turn the Land Use Element is a reflection of a community's existing and planned circulation system.

The circulation system in and around the City of Oxnard includes several different travel modes. The City is adjacent to two airports and contains a third. The main line of the Union Pacific Railroad passes through the downtown and central industrial areas, and Oxnard is also a terminal for commuter rail service to Los Angeles. Further, the Port of Hueneme is adjacent to the City. All of these modes provide transportation services which utilize the existing roadway network. The City's Circulation Element addresses all of these travel modes and seeks to create a system which coordinates their operation.

City Traffic Standards and Agreements

The City standard for the operation of the roadway system is found in the Circulation Element of the *2020 General Plan* and is defined as follows:

- Where environmentally feasible, all intersections in the City of Oxnard should operate at Level of Service "C" (Level of Service classifications are explained later in this section) with the exception of Oxnard Boulevard (State Route 1), which will experience higher levels of congestion until a bypass expressway (Rice Avenue) is constructed.

The City of Oxnard and County of Ventura have entered into a Reciprocal Traffic Mitigation Agreement. Under this agreement, the City reviews all discretionary projects in accordance with this agreement to determine traffic impacts on County roads within the City's Area of Interest. The thresholds identified in the City's traffic analysis guidelines (Oxnard Resolution 10,418) are used to determine whether a traffic analysis is required. The minimum threshold limit represents an increase of 25 or more vehicle trips in the morning or afternoon peak hours.

The City has agreed to compensate the County an amount determined by the County based on a project's pro-rata share of the cost of mitigation to the County roads within the City's Area of Interest. The County determines the project's pro-rata share by comparing a project's projected traffic on County roads to the estimated 2010 traffic volume total as determined by the Ventura County Transportation Commission traffic model. Similarly, projects located within unincorporated County territory but within the City's area of interest are required to pay a pro-rata share of improvements to City roadways subject to the requirements of this agreement.

Capital Improvement Program

The intensities and locations of land uses allowed by the Land Use Element of the 2020 General Plan have been correlated by the City with circulation improvements necessary to serve these uses. A specific set of transportation improvements have been identified to maintain the City circulation standard in light of the General Plan build-out. These improvements are identified in the City of Oxnard Capital Improvement Program (CIP).

The CIP lists needed improvements and identifies funding sources. The CIP forecasts City circulation needs six years in advance, and the projects and funding sources are updated annually. During the review, the City evaluates the latest traffic counts to determine when and what type of improvements are needed and revises the list of projects on the CIP accordingly.

In order to fund needed transportation improvements within the City, a number of funding sources are utilized. These sources include Federal, State, and local programs and the responsibility for distribution of these funds lies with a number of agencies. Revenue sources include a portion of the State gas tax, Transportation Development Act funds, and a Citywide traffic impact fee.

The Citywide traffic impact fee is assessed on all new development located within the City of Oxnard. The fee is based on the total number of daily trips predicted to be created by a project. The funds are placed into an account earmarked for improvements to the arterial roadway system. The funds are then distributed for specific circulation improvements identified in the CIP. The fee is based on the full build-out of all uses allowed by the City's 2020 General Plan and the cost to build all of the roadway improvements needed to fully develop the Circulation Element Master Plan. In this manner, sufficient funding will be provided to fully develop the City's master planned roadway network to accommodate the traffic from all uses allowed by the 2020 General Plan at an acceptable level of service.

County of Ventura Congestion Management Program

Pursuant to state law, the County of Ventura has adopted a Congestion Management Program (CMP). Roadways on the CMP network in the vicinity of the Specific Plan Area include Victoria Avenue, Olivas Park Drive, Gonzales Road, and Ventura Road. Fourteen of the 33 study intersections are identified as CMP intersections. The purpose of the CMP is develop a coordinated approach to managing and decreasing traffic congestion by linking the various transportation, land use, and air quality planning programs throughout the County. In this context, one of its primary objectives is to make certain that each city and the County take into consideration the county-wide transportation impact of local land use decisions by tying planning decisions to funding of needed transportation projects. Improved operation of the transportation system would result in reductions in the amount of air emissions generated by vehicle traffic traveling on this network.[1]

Other Circulation Plans

The Circulation Element of the City of San Buenaventura 2010 Comprehensive Plan includes a Circulation Plan Map. The Circulation Element states that roadway improvements shown on the Circulation Plan Map are generalized, and are not intended to show specific alignments. This Map, adopted in 1989, shows a future extension of Kimball Road across the Santa Clara River into Oxnard. This extension of Kimball Road across the river is also shown on the current County Roadway Network, which reflects roadways shown on city circulation plans. No alignment study for the extension of Kimball Road has been prepared. The extension of Kimball Road is not shown on the City of Oxnard 2020 Circulation Element Map. The City of San Buenaventura is currently updating its Comprehensive Plan and the County is also currently updating the Circulation Element of the County General Plan.

Roadway and Street Network Classification System

The functional classification system used by the City of Oxnard's Circulation Element categorizes each street according to primary function. This system divides all streets and highways into the following categories.

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1 Ventura County Transportation Commission: *Ventura County Congestion Management Program*. December 1995.

Freeways

Freeways represent the major link between Ventura County and the Los Angeles Metropolitan area as well as Santa Barbara County. They provide access to the region and also accommodate some of the longer trips within the County, which relieves portions of the local street network. Such facilities are outside the purview of the City and no City standards apply to these roadways.

Arterials

Arterials supplement the freeway network by providing the principal facilities for traffic movement within the City and County. The function of the arterial is to distribute and collect freeway-bound traffic and to accommodate intra-city trips and other medium-distance movements. Primary arterials provide for a direct thoroughfare within a specified region, as well as trips between cities, many bound for the freeway. The approximate capacity of a primary arterial is 54,000 average daily trips (ADT). A primary arterial requires 120 feet of right-of-way and includes two 44-foot travel ways, a 16-foot median and eight-foot sidewalks. A typical cross-section would include three travel lanes and a bike lane in each direction.

Secondary arterials provide for intra-city trips but are used primarily for access to residential, commercial, and industrial districts. The approximate capacity of a secondary arterial is 34,000 ADT. Secondary arterials require 96-feet of right-of-way. The roadway provides for a 16-foot median, two 32-foot roadways and eight-foot sidewalks. Two travel lanes and a bike lane are provided in each direction. Local arterials primarily provide access within a district or neighborhood. The approximate capacity of a local arterial is 25,000 ADT. A 66-foot right-of-way is provided.

To minimize noise and vibration impacts on sensitive land uses, the City has designated several arterial roadways as truck routes; heavy truck movements are restricted to these roadways. All major roadways in the vicinity of the project site are designated as truck routes. Two key components of the City's truck route system provide arterial access to the Port of Hueneme. The designated "western access" route is Victoria Avenue, while the "eastern access" route is formed by Hueneme Road and Rice Avenue. In the immediate project area, Victoria Avenue is the officially designated truck route.

Surrounding Roadway Network

Figure 4.7-1 illustrates the existing regional and local circulation network. As shown, regional access to the City and the project site is provided by the Ventura Freeway (U.S. Highway 101) and Pacific Coast Highway (State Route 1).

Ventura Freeway (U.S. Route 101)

The Ventura Freeway extends from the Los Angeles area through Ventura County and north to Santa Barbara County where the Ventura Freeway continues to the north as the 101 Freeway. The Ventura Freeway currently provides two to three lanes in the northbound direction and three to four lanes in the southbound direction from the Santa Clara River Bridge to Vineyard Avenue. At the Route 1 interchange, the Ventura Freeway provides a two-lane ramp interchange in the southbound direction to southbound Route 1 (Oxnard Boulevard). Also provided is a one-lane flyover that connects the northbound Route 1 to the northbound Ventura Freeway.

Oxnard Boulevard (Route 1)

Route 1 is a discontinuous state highway. At the interchange with the Ventura Freeway, Route 1 extends southerly as Oxnard Boulevard from the Ventura Freeway to south of Wooley Road, then extends in a southeast direction to Rose Avenue where it is constructed to freeway standards. Route 1 provides two lanes in each direction south of the Ventura Freeway.

The City of Oxnard is conveniently linked with the City of Ventura, the Conejo Valley and the City of Los Angeles via the Ventura Freeway and with the Malibu Coastline via the Pacific Coast Highway. With regard to the project site, direct ramp access for the Ventura Freeway is provided by the Vineyard Avenue and Ventura Road interchanges. The major arterial and collector streets within the project study area are described below.

Vineyard Avenue

Vineyard Avenue, designated as Route 232, extends northeasterly from Oxnard Boulevard to Los Angeles Avenue (Route 118). Route 232 provides full interchange with the Ventura Freeway. Vineyard Avenue also extends west of Oxnard Boulevard as an arterial for approximately two miles where it bends in a southerly direction and becomes Patterson Road.

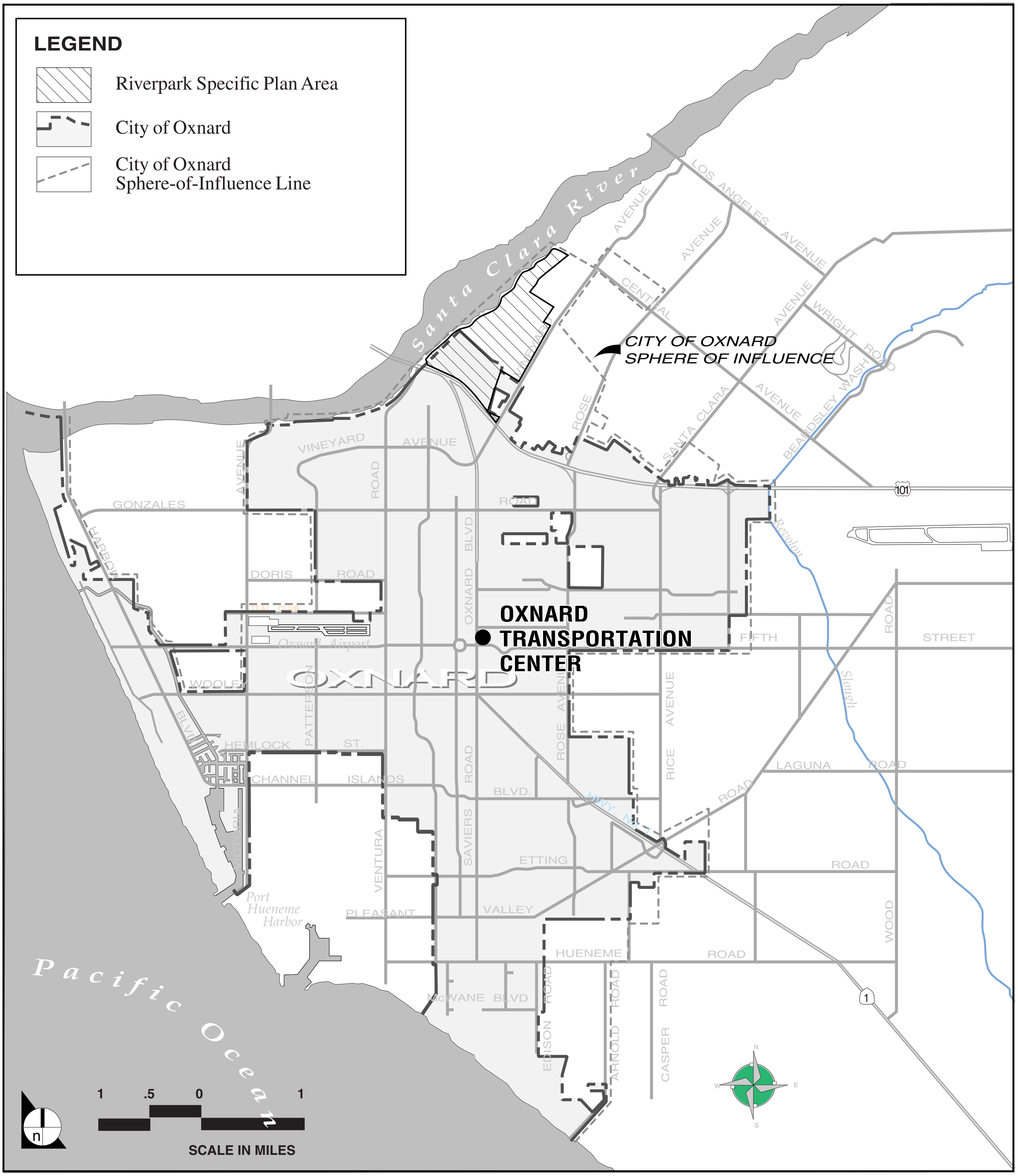

FIGURE **4.7-1**

Existing Circulation System

Ventura Road

Ventura Road is designated a four-lane city street in the vicinity of the project site. This roadway extends in a north-south direction from the project site east of the Ventura Freeway to Port Hueneme Road.

Wagon Wheel Road

Wagon Wheel Road is a two-lane "loop" roadway adjacent to the Esplanade commercial area. It also extends northerly to the west of and parallel to Oxnard Boulevard where it terminates at Ventura Road. The Ventura Freeway southbound off-ramp is also connected to Wagon Wheel Road.

Town Center Drive

Town Center Drive is a short roadway located east of the Ventura Freeway. It currently provides Ventura Freeway northbound on and off-ramp access. However, these ramps will be removed as part of the reconstruction of the interchange at Ventura Freeway/Oxnard Boulevard.

Esplanade Drive

Esplanade Drive is a short two-lane roadway that extends from Wagon Wheel Road to Vineyard Avenue. It also extends east of Vineyard Avenue for approximately 1,000 feet.

Central Avenue

Central Avenue is designated a two-lane rural highway. This roadway extends from Vineyard Avenue to SR-101.

Los Angeles Avenue

Los Angeles Avenue is designated a rural two-lane highway between Saticoy and Moorpark. This roadway is located northeast of the project site and generally extends easterly.

Ventura Boulevard

Ventura Boulevard is a short frontage road that extends east of Ventura Freeway. It extends southeasterly from Vineyard Avenue for approximately one mile.

Gonzales Road

Gonzales Road is designated a rural two-lane highway between Victoria Avenue and Patterson Road. From Patterson Road to Rice Avenue, this facility is a four-lane city street.

Stroube Street

Stroube Street is a two-lane roadway located to the east of the project site. It extends southeasterly from Detroit Drive to Rose Avenue.

El Rio Drive

El Rio Drive extends parallel and to the east of Ventura Freeway. This roadway extends southeasterly from Town Center Drive for approximately 0.8 miles and bends northerly where it becomes Colonia Avenue. El Rio Drive will be removed as a part of the proposed project.

Johnson Drive

Johnson Drive is an arterial that extends in a north-south direction in Ventura. Johnson Drive provides access to the Ventura Freeway southbound on and off ramps located immediately to the north of the Santa Clara River Bridge. This roadway extends north from the Ventura Freeway ramps for approximately two miles where it terminates south of SR-126. The Johnson Drive interchange is being reconstructed and the freeway ramps aligned as a full interchange as part of a separate interchange reconstruction project.

North Bank Drive

North Bank Drive is a short roadway located north of the Santa Clara River Bridge and east of the Ventura Freeway. This roadway provides access from Johnson Drive to the Ventura Freeway northbound ramps.

Victoria Avenue

Victoria Avenue generally extends in a north-south direction. Victoria Avenue is a four-lane roadway between Valentine Road and Olivas Park Drive, provides five lanes between Ventura Freeway and Valentine Road and is a six-lane roadway between Webster Street and Ventura Freeway.

Telephone Road

Telephone Road is a six-lane roadway near Victoria Avenue. This roadway generally extends from south of Olivas Park Drive and pass Wells Road where it becomes a local street.

Ralston Street

Ralston Street is a two-lane roadway that extends in an east-west direction and to the north of the Ventura Freeway. This roadway extends from Portola Road to approximately 500 feet to the east of Ramelli Avenue.

Valentine Road

Valentine Road is a local roadway that extends parallel to the Ventura Freeway on its south side. This roadway provides southbound on and off-ramp access to the Ventura Freeway near Victoria Avenue.

Existing Roadway Levels of Service

Based on recent (2000) traffic counts, morning and afternoon peak-hour traffic volumes at the 33 study intersections are shown in Figures 4.7-2 and 4.7-3.

The Intersection Capacity Utilization (ICU) methodology used for the is based on procedures outlined in the County's Congestion Management Program. In the discussion of the ICU method for signalized intersections, procedures have been developed for grading the operational quality of an intersection in terms of the "Level of Service" (LOS) which describes different traffic flow characteristics. LOS A to C operate quite well. (The City of Oxnard has adopted LOS C as their standard.) LOS D typically is the level for which a metropolitan area street system is designed. LOS E represents volumes at or near the capacity of the street which might result in stoppage of momentary duration and fairly unstable flow. LOS F occurs when a facility is overloaded and is characterized by stop-and-go traffic with stoppages of long duration.

A determination of the LOS at an intersection, where traffic volumes are known or have been projected, can be obtained through a summation of the critical movement volumes: the highest combination of conflicting movements which must be accommodated at that intersection.

"Capacity" represents the maximum volume of vehicles in the critical lanes which has a reasonable expectation of passing through an intersection in one hour, under prevailing roadway and traffic conditions. For planning purposes, capacity equates to the maximum value of LOS E or 1,600 vehicles per hour per lane. The ICU values used in this study were calculated by dividing the critical movement volumes in the ICU calculations by this capacity value. The Level of Service values are defined as a range of ICU values and are shown in Table 4.7-1.

Table 4.7-1
Level of Service as a Function of V/C Values

Level of Service	Description of Operating Characteristics	Range of V/C Values
A	Uncongested operations; all vehicles clear in a single cycle.	< 0.60
B	Same as above.	>0.60 < 0.70
C	Light congestion; occasional backups on critical approaches.	>0.70 < 0.80
D	Congestion on critical approaches, but intersection functional. Vehicles required to wait through more than one cycle during short peaks. No long-standing lines formed.	>0.80 < 0.90
E	Severe congestion with some long-standing lines on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements.	>0.90 < 1.00
F	Forced flow with stoppages of long duration.	> 1.00

Table 4.7-2, below, shows a summary of the existing traffic conditions at the 33 study intersections. As shown in this table, all existing study intersections in the project area are operating at Level of Service C or better. Similarly, the study intersections in the City of Ventura are also currently operating at LOS C or better.

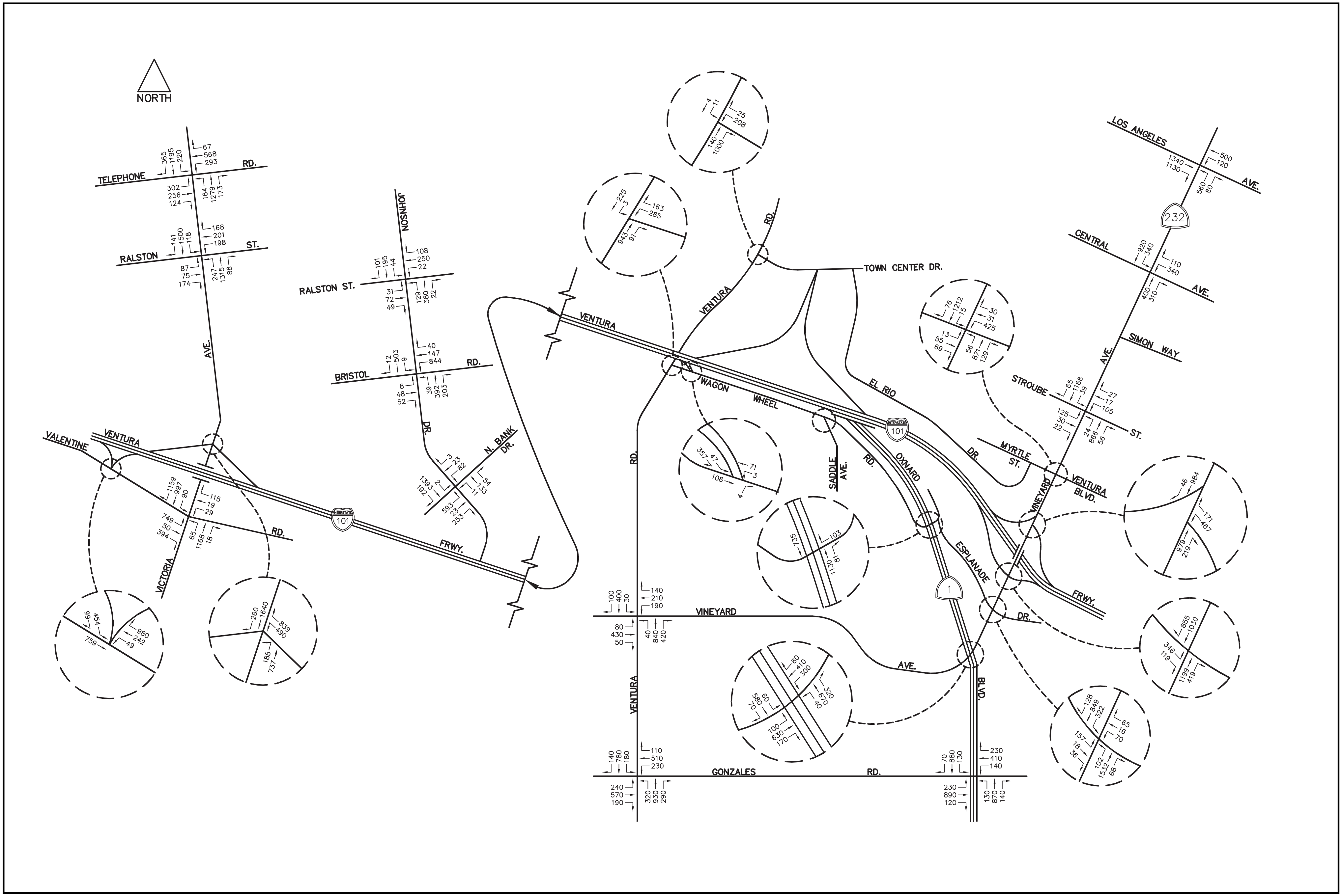

FIGURE 4.7-2

AM Peak Hour Existing (2000) Traffic Volumes

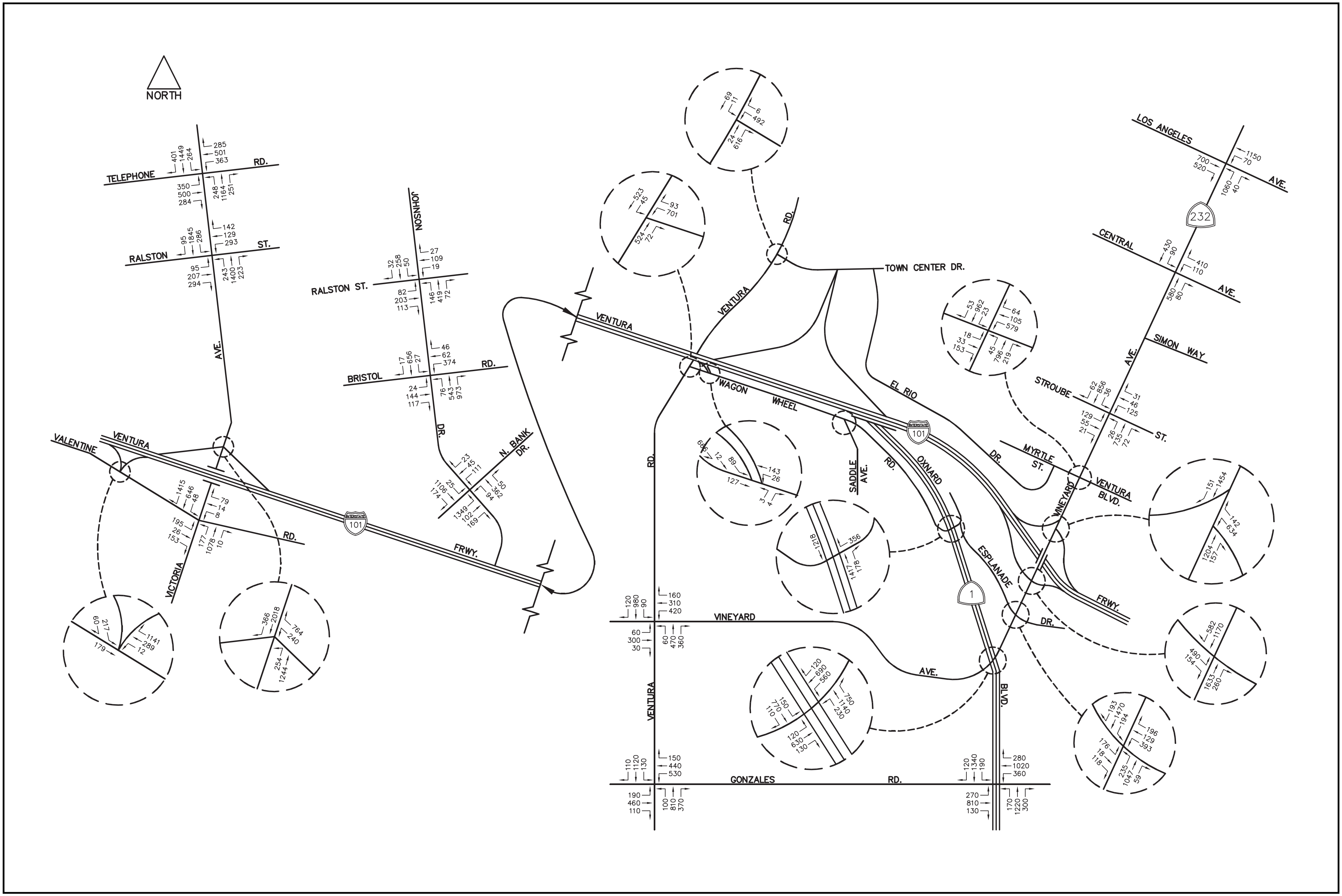

FIGURE 4.7-3

PM Peak Hour Existing (2000) Traffic Volumes

Table 4.7-2(a)
Intersection Volume/Capacity Summary - Existing (2000) Conditions, Project Area Intersections

No.	Intersection	AM Peak Hour V/C	AM Peak Hour LOS	PM Peak Hour V/C	PM Peak Hour LOS
1	Los Angeles Avenue and Vineyard Avenue	0.781	C	0.691	B
2	Central Avenue and Vineyard Avenue	0.647	B	0.491	A
3	North Park Drive and Oxnard Boulevard	--	--	--	--
4	Simon Way/North Park Drive and Vineyard Avenue	--	--	--	--
5	Oxnard Boulevard and South Park Drive	--	--	--	--
6	Oxnard Boulevard and Santa Clara River Boulevard	--	--	--	--
7	South Park Drive/Myrtle St. and Santa Clara River Blvd.	--	--	--	--
8	Vineyard Avenue and Santa Clara River Boulevard	--	--	--	--
9	Vineyard Avenue and Stroube Street	0.512	A	0.432	A
10	Ventura Road and Town Center Drive	0.122	A	0.191	A
11	Oxnard Boulevard and Town Center Drive	--	--	--	--
12	Vineyard Avenue and Ventura Boulevard	0.599	A	0.624	B
13	Oxnard Boulevard and US 101 Northbound Ramps	--	--	--	--
14	Oxnard Boulevard and US 101 Southbound Ramps	--	--	--	--
15	Vineyard Avenue and US 101 Northbound Ramps	0.468	A	0.672	B
16	Vineyard Avenue and US 101 Southbound Ramps	0.607	B	0.596	A
17	Ventura Road and Wagon Wheel Road	0.692	B	0.597	A
18	Wagon Wheel Road and US 101 Southbound Off-ramp	0.100	A	0.151	A
19	Wagon Wheel Road and US 101 Southbound On-ramp	--	--	--	--
20	Oxnard Boulevard and Esplanade Drive	0.379	A	0.499	A
21	Vineyard Avenue and Esplanade Drive	0.526	A	0.611	B
22	Vineyard Avenue and Ventura Road	0.496	A	0.591	A
23	Vineyard Avenue and Oxnard Boulevard	0.393	A	0.754	C
24	Gonzales Road and Ventura Road	0.736	C	0.687	B
25	Gonzales Road and Oxnard Boulevard	0.554	A	0.715	C

-- Intersection does not currently exist.

Table 4.7-2(b)
Intersection Volume/Capacity Summary - Existing (2000) Conditions, City of Ventura Intersections

No.	Intersection	AM Peak Hour V/C	AM Peak Hour LOS	PM Peak Hour V/C	PM Peak Hour LOS
26	Victoria Avenue and Telephone Road	0.524	A	0.593	A
27	Victoria Avenue and Ralston Street	0.591	A	0.767	C
28	Victoria Avenue and U.S.-101 Northbound Ramps	0.507	A	0.541	A
39	U.S.-101 Southbound Ramps and Valentine Road	0.410	A	0.158	A
30	Victoria Avenue and Valentine Road	0.587	A	0.345	A
31	Ralston Street and Johnson Drive	0.441	A	0.432	A
32	Johnson Drive and Bristol Road	0.699	B	0.760	C
33	Johnson Drive and North Bank Drive	0.622	B	0.748	C

Analysis of Existing Freeway Conditions

An examination of the freeway conditions was made along the Ventura Freeway and Route 1. These five study segments are listed below:

1. Ventura Freeway (US 101) at the Santa Clara River Bridge;
2. Ventura Freeway (US 101) between Route 1 and Vineyard Avenue;
3. Ventura Freeway (US 101) between Vineyard Avenue and Rose Avenue;
4. Route 1 (Oxnard Boulevard) between Vineyard Avenue and US 101; and
5. Ventura Freeway (US 101) south of Central Avenue.

Current traffic volumes were used to determine existing traffic flow conditions on these freeway segments. Traffic counts were obtained from the most recent Caltrans publication, *1998 Traffic Volumes on California State Highways*. All 1998 traffic volumes were growth factored one percent per year to establish current 2000 traffic volumes, per CMP traffic forecasting procedures.

Existing freeway geometrics (e.g., number of mainline travel lanes) for each of the segments analyzed were determined from CMP data, City plans, and field surveys. Segment peak hour traffic capacities were computed for each direction using established Highway Capacity Manual (HCM) methodology. As detailed in procedures discussed in the HCM Chapter 3, each mainline travel lane was assumed to have a capacity of 2,000 vehicles per hour (VPH). The total directional capacities were then computed, and used in conjunction with the previously determined peak hour directional freeway segment volumes to calculate the existing year 2000 freeway levels of service. The Level of Service values used for freeway segment analyses are estimated by calculating the demand-to-capacity (D/C) ratio and using the LOS definitions shown in Table 4.7-3.

Table 4.7-3
Freeway Mainline Level of Service Definitions*

D/C Ratio	LOS
0.000 - 0.304	A
>0.304 - 0.487	B
>0.487 - 0.715	C
>0.715 - 0.876	D
>0.876 - 1.000	E
>1.000	F

** 70 MPH design speed. Source: Transportation Research Board, 1994.*

The existing level of services for the freeway study segments were determined based on the definitions summarized in Table 4.7-3. As shown in Table 4.7-4, existing traffic conditions range from level of services A to E at most segments studied with the exception of the Ventura Freeway west of Ventura Road (the Santa Clara River Bridge) which is at LOS F in the northbound direction during the AM and PM peak hours and the Ventura Freeway south of Central Avenue, which is operating at LOS F in the northbound direction during the PM peak hour.

Table 4.7-4
Existing (2000) Freeway Volumes and Level of Service

Freeway Segment	Dir.	Peak Hour	Freeway Capacity	Daily Volume	Peak Hour Volume	D/C Ratio	LOS
US 101 at the Santa Clara River Bridge	N/B	AM	6,000	158,100	6,990	1.165	F(0)
		PM	6,000		7,110	1.185	F(0)
	S/B	AM	8,000		5,530	0.691	C
		PM	8,000		6,270	0.784	D
US 101 between Route 1 and Vineyard Avenue	N/B	AM	6,000	122,400	5,410	0.902	D
		PM	6,000		5,510	0.918	D
	S/B	AM	6,000		4,280	0.713	C
		PM	6,000		4,850	0.808	D
US 101 between Vineyard Avenue and Rose Avenue	N/B	AM	6,000	132,600	5,860	0.977	E
		PM	6,000		5,970	0.995	E
	S/B	AM	6,000		4,640	0.773	D
		PM	6,000		5,260	0.877	D
Oxnard Blvd. (Route 1) between Vineyard Avenue and US 101	N/B	AM	4,000	26,500	1,010	0.253	A
		PM	4,000		1,060	0.265	A
	S/B	AM	4,000		910	0.228	A
		PM	4,000		1,200	0.300	A
US 101 south of Central Avenue	N/B	AM	6,000	140,000	5,960	0.993	E
		PM	6,000		6,170	1.028	F(0)
	S/B	AM	6,000		4,720	0.787	D
		PM	6,000		5,430	0.905	D

Public Transportation

While travel by private automobiles is the predominant mode of transportation in the City, alternative modes, including pedestrian, bicycle, rail and transit are becoming more important as increasing traffic volumes result in congestion at major intersections, travel delays along major routes and adverse effects on local and regional air quality. All major roadways presently contain, or are planned to contain, bicycle paths in the 2020 General Plan.

The Southern Coast Area Transit (SCAT), with its extensive network of bus routes throughout Ventura County, is the primary service provider in the City of Oxnard and has several routes that serve the project area. In addition, Metrolink, the commuter rail service operated by the Southern California Regional Rail Authority (SCRRA), has a line which serves the Oxnard Metrolink Station. This station is located south of the project site on East Fourth Street and Meta Street. SCAT Lines 6 A/B and 15 provide service from the Oxnard Metrolink Station to the project site, as well as providing service from other portions of Oxnard and El Rio, as described below. In addition, Metrolink, the commuter train that connects Ventura with Los Angeles and other areas in Southern California, has a lay-over facility in Montalvo to serve the west county. At present, there are two Metrolink runs daily with additional runs funded and anticipated to begin in the future. Moreover, Union Pacific runs 12 trains a day through Ventura, providing freight service out of Los Angeles.

SCAT 6A/B – Line 6A/B provide services between the Oxnard Transportation Center and City of Ventura, via Ventura College. Service in the project vicinity is along Esplanade Drive with a stop at the Esplanade Center. Weekday service for both Line 6A and 6B operate at approximately 40 minute headways between 5:00 AM and 9:30 PM. Weekend and holiday service is also provided via buses that operate at one hour headways.

SCAT 15 – Line 15 provides service between the Oxnard Transportation Center and El Rio. Service for Line 15 includes Vineyard Avenue and Simon Way, located within walking distance from the project site. Weekday service is provided from approximately 6:00 AM to 7:00 PM, with headways ranging from approximately 40 minutes during peak commute times to one hour during off-peak times. Weekend and holiday service is also provided from approximately 7:00 AM to 7:00 PM, with headways ranging from 50 minutes to one hour.

Discussion with SCAT staff indicate that one or more lines may be re-routed to directly serve the project.

The above bus lines provide opportunities to connect with the Metrolink commuter rail system. These services also provide key linkages to Downtown Los Angeles' Union Station, the regional bus and rail transit hub. Furthermore, the rail stations directly served are within walking distance of the bus routes described above and tend to be mini-transit hubs that provide transfers to other local bus routes. When transfer opportunities are considered, many areas within the Southern California region are linked via public transit to the project vicinity. Thus, some of the vehicle trips generated by the project, especially by employees, could be reduced by the utilization of public transportation. However, for purposes of determining project impacts (as discussed in a later section), a "more-than-typical case" assumption was made that nearly all trips would be auto-oriented.

IMPACT ANALYSIS

Methodology

As described in Section 3.0, Project Description, The applicant's current objective is to complete the construction of the Phase One site improvements by the third quarter of 2002 with the first occupancy of residences or commercial buildings in 2003. The Phase Two site improvements would be built when there is market demand for the property served by these improvements. It is anticipated that the community would take between 12 and 15 years to be fully built, depending on economic conditions. For purposes of analysis in this EIR, it is assumed that the Specific Plan Area would be fully developed by the year 2020. Accordingly, the traffic analysis examines future year 2020 traffic conditions, assuming full development of the uses that would be allowed by the proposed Specific Plan.

Future year 2020 traffic conditions in the City of Oxnard and surrounding areas were analyzed using the City's Oxnard Transportation Model (OTM), which is based on the Ventura County Transportation Commission (VCTC) model. The VCTC model was prepared using Southern California Association of Governments (SCAG) land use data and is updated regularly as new land use projections are made available. Existing and future freeway traffic volumes projected by the VCTC model for freeway segments were used, as the VCTC is the most accepted model for transportation planning in Ventura County. Future freeway traffic volumes were determined by adding the growth between the VCTC's future model volumes and the existing model volumes to the existing traffic volumes. As the VCTC model does not provide information on intersection turning movements, the OTM was modified to provide this information. In addition to fully reflecting projected regional growth, the OTM reflects full development of all the uses allowed by the City's 2020 General Plan.

The OTM also includes those transportation improvements considered reasonably assured to be in place by 2020. These improvements include those in the State Route 101 Improvement and Santa Clara River Bridge Replacement Project. This project will include the replacement of the existing bridges across the Santa Clara River and the widening of the freeway from three to six lanes in each direction from Vineyard Avenue in Oxnard to the Montalvo Spur Overhead, located just north of Johnson Drive in Ventura. The existing 7-lane bridges will be replaced with a single 12 lane bridge. Minor reconfiguration of the existing freeway ramps at Johnson Drive in Ventura is also planned.

In Oxnard, this project will include the reconstruction of the existing Oxnard Boulevard Interchange and the Ventura Road undercrossing of the freeway, which will be widened from two to five lanes. The new Oxnard Boulevard Interchange will be a tight diamond interchange design providing access from Oxnard Boulevard to the proposed RiverPark Specific Plan Area and existing commercial areas to the south of the freeway. The existing northbound Route 1 (Oxnard Boulevard) connector to the northbound Ventura Freeway will be removed to eliminate this non-standard "flyover" and left-side merge section. Oxnard Boulevard will be reconstructed to extend across the Ventura Freeway. In addition, the Oxnard Boulevard interchange to the Ventura Freeway will provide northbound and southbound on/off-ramp access. Oxnard Boulevard will provide four lanes in each direction at the Ventura Freeway ramps. The northbound off-ramp is proposed to include an auxiliary (exit-only) lane flaring into separate right and left-turn lanes at Oxnard Boulevard. The northbound on-ramp will consist of three lanes at Oxnard Boulevard, tapering to two lanes prior to joining the Ventura Freeway mainline at the Santa Clara

River Bridge. The southbound off-ramp will include one auxiliary lane and one diverge lane, flaring to two left-turn and one free right-turn lane at Oxnard Boulevard. The southbound on-ramp will merge from two lanes at Oxnard Boulevard to a single auxiliary lane on the freeway mainline where it will extend to the Vineyard Avenue off-ramp.

The current Caltrans schedule calls for construction of these improvements to begin in early 2002 with completion in mid-2006. Completion of the four northbound lanes of the Ventura Freeway, including the new replacement bridge over the Santa Clara River, is scheduled for completion in the second quarter of 2003 with the new Oxnard Boulevard Interchange with the freeway schedule for completion in the third quarter of 2003. As discussed above, the first occupancy of residences or commercial buildings in the Specific Plan Area would be in 2003.

Other physical improvements planned in the area and included in the City's Circulation Master Plan were also assumed in the model. These improvements will be funded by the City's Traffic Impact Fee and constructed through the City's CIP. Major improvements to the roadway network planned include improvements to the Route 1/Pleasant Valley interchange, Rice Avenue/Route 101 interchange, Del Norte Boulevard/Route 101 interchange and Rice Avenue redesignation as Route 1, and development to expressway standards from Fifth Street to Route 101.

In addition, a "hook" ramp along Wagon Wheel Road is planned. This ramp will provide direct access from Wagon Wheel Road to the southbound Ventura Freeway. The construction of this ramp will alleviate traffic that crosses to the east of the Ventura Freeway to access the southbound on-ramp from Oxnard Boulevard. In addition, a connection between southbound Oxnard Boulevard and this hook-ramp will be provided. Upon completion of the hook-ramp and connector, left-turns from southbound Oxnard Boulevard to the southbound Ventura Freeway diamond on-ramp will be prohibited. This connector will also allow access from Wagon Wheel Road to northbound Oxnard Boulevard. As part of the current freeway improvement project, the Oxnard Boulevard overcrossing will be constructed with sufficient length to accommodate the later installation of the hook.

The projected 2020 traffic volumes from the model reflect the expected future traffic conditions without the RiverPark Project. These 2020 traffic volumes were used as the "baseline" for purposes of evaluating and identifying the impacts of the proposed project. These forecasted volumes fully reflect all projected regional and local growth and, and for this reason, provide a basis for assessing the full cumulative impact of projected growth. Additional traffic model forecasts were prepared by adding the RiverPark Specific Plan to the model to determine the incremental project traffic impacts on the 2020 roadway network. This analysis methodology ensures a comprehensive evaluation of project and cumulative traffic impacts on the local roadway network and allows for identification of improvements to the planned roadway network required to mitigate these impacts.

Thresholds of Significance

As discussed above, the City of Oxnard and the County of Ventura have entered into a Reciprocal Traffic Mitigation Agreement. Under this agreement, the City reviews proposed projects to determine traffic impacts on County roads within the City's Area of Interest. The City has agreed to compensate the County an amount determined by the County based on a project's pro-rata share of the cost of mitigation to the County roads within the City's Area of Interest. The County determines the project's pro-rata share by comparing a project's projected traffic on County roads to the estimated 2010 traffic volume total as determined by the Ventura County Transportation Commission traffic model. Similarly, projects located within unincorporated County territory but within the City's area of interest are required to pay a pro-rata share of improvements to City roadways subject to the requirements of this agreement. This agreement ensures that all improvements needed to mitigate the impacts of proposed projects on the County's roadway network are funded.

Consistent with this agreement, the City of Oxnard considers the traffic impact of a project on intersections in the City of Oxnard or the County of Ventura to be significant if:

- The project adds 75 or more trips per hour that result in a level of service of D, E or F.

At these locations, improvements are identified to restore conditions to LOS C or better consistent with City and County policies. These improvements are funded and implemented through the existing City and County fee and improvement programs.

For intersections in other jurisdictions, the City of Oxnard considers the traffic impact of a project to be significant if:

- Project traffic would cause the V/C ratio at any intersection to increase by 0.020 or more with a resulting LOS of E or F.

The City requires that improvements be implemented by a project to mitigate any impacts by restoring operating conditions to pre-project conditions at intersections outside of the jurisdiction and control of the City of Oxnard and County of Ventura.

Project Roadway Improvements

The RiverPark Project will include development of an extensive roadway network within the Specific Plan Area as shown in Figure 4.7-4. These improvements were added to the OTM and are reflected in the traffic analysis. These roadway improvements are listed below:

- Oxnard Boulevard -- This roadway will be extended north of the Ventura Freeway. This roadway will be constructed as a six lane arterial between the Ventura Freeway and Town Center Drive, a four lane arterial between Town Center Drive and Santa Clara River Boulevard, a four lane collector street between Santa Clara River Boulevard and the traffic circle located north of North Park Drive, and a two-lane collector street north of the traffic circle.

- Town Center Drive -- This roadway will be improved as a four-lane arterial between Ventura Road and Oxnard Boulevard.

- Ventura Road -- This roadway will be extended northerly to Santa Clara River Boulevard.

- Santa Clara River Boulevard -- This roadway will be constructed as a four lane arterial from Ventura Road to Vineyard Avenue where if aligns with Simon Way. Traffic circles are planned at the intersections of Ventura Road, Oxnard Boulevard, and RiverPark Avenue. These traffic circles will have a minimum outside diameter of 180 feet.

- South Park Drive/Myrtle Street -- This roadway will serve primarily as a four lane collector street in the Specific Plan Area. It will generally extend in the northwest direction from Vineyard Avenue just north of the Ventura Freeway to Santa Clara River Boulevard. The name will change to South Park Drive at Santa Clara River Boulevard where it will bend and extend westerly to Oxnard Boulevard. In addition, a short segment of South Park Drive will be constructed as a two-lane collector street west of Oxnard Boulevard.

- North Park Drive -- This roadway will be constructed as a four lane collector street between Oxnard Boulevard and Vineyard Avenue, and a two-lane collector street west of Oxnard Boulevard.

Project Trip Generation

The trip generation rates and equations used were selected in accordance with City of Oxnard procedures, and were approved by City staff. The rates selected were those most appropriate for the proposed land uses. The daily, AM and PM peak hour trip rates used for determining the project's trip generation are contained in Table 4.7-5.

Table 4.7-5
City of Oxnard Vehicle Trip Generation Rates

Land Use Type	Units	ITE LU Code	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour In	PM Peak Hour Out	ADT
1 Single-Family Residential	DU	210	0.20	0.56	0.66	0.36	9.55
2 Multi-Family Residential	DU	210 & 220	0.20	0.46	0.53	0.33	8.01
7 Neighborhood Commercial	TSF	820	1.28	.61	3.68	3.82	81.16
9 Regional Commercial	TSF	820	0.46	0.20	1.50	1.56	32.83
16 Hotel/Motel	Rooms	310 & 320	0.32	0.37	0.43	0.33	9.45
19 Office (100 TSF+)	TSF	710	1.69	0.21	0.32	1.55	14.03
26 Elementary/Middle School	Student	520	0.17	0.11	0.14	0.11	1.09
33 Park	Acre	411	0.00	0.00	0.00	0.00	2.23
-- Ballpark*	Seat	--	0.00	0.00	0.04	0.01	0.83

* *Rate is based on studies in* Ventura Baseball Stadium Project Traffic Circulation and Parking Study, *Associated Transportation Engineers, June 1996.*

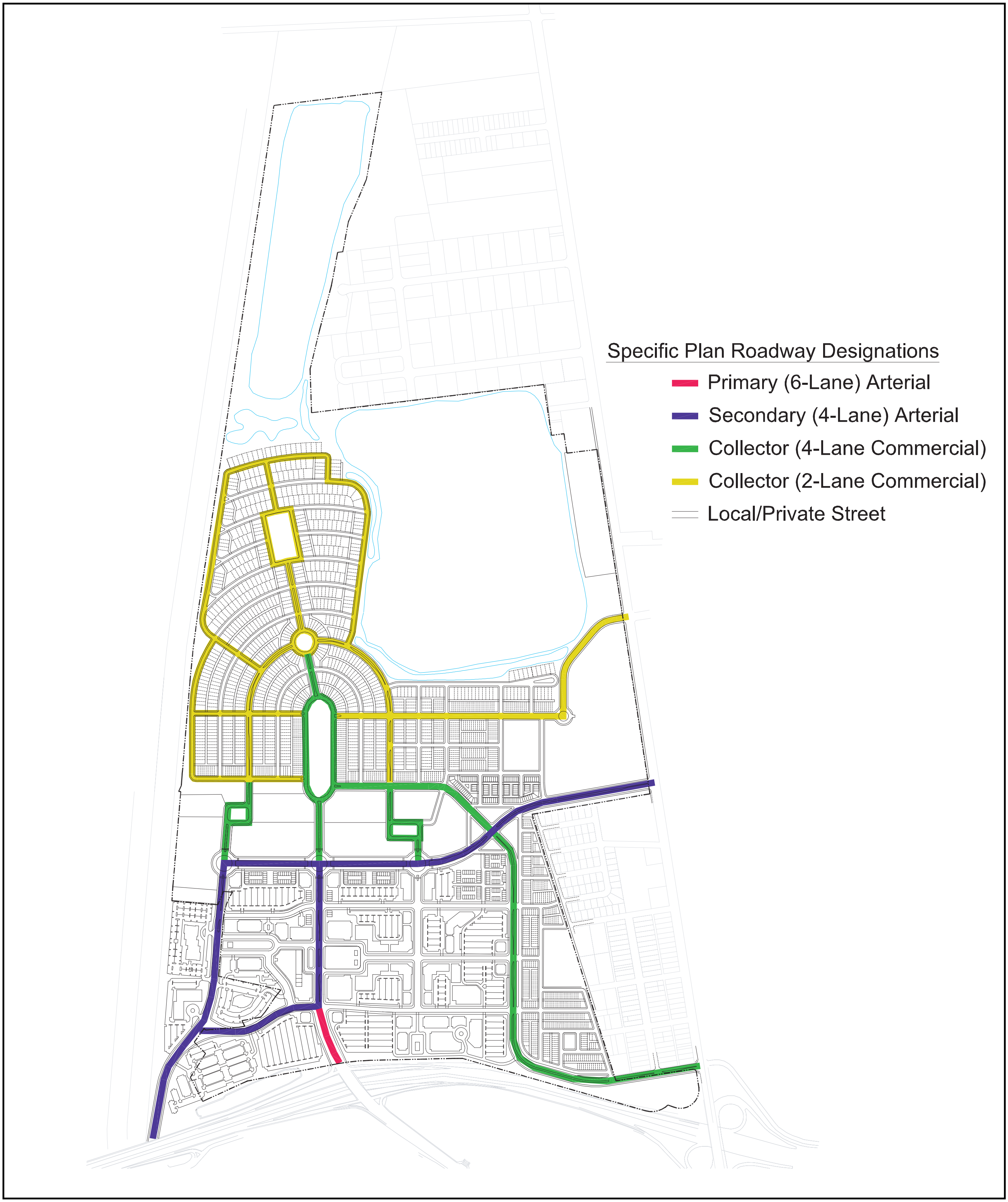

FIGURE 4.7-4

Specific Plan Roadway Network

In Planning Districts D, F, G, J and K of the proposed Specific Plan, specially permitted land uses are allowed in certain locations. Wherever the Specific Plan would allow a permitted or specially permitted land use, the traffic analysis assumed the use with higher peak-hour ensure a "worst-case" traffic analysis. For example, within Planning District D the proposed Specific Plan would allow the development of a 5,000 seat ballpark facility with approval of a Special Use Permit. If this facility is built then the total amount of commercial uses allowed in this Planning District is reduced by 80,000 square feet. This development scenario would result in an overall decrease in the total AM and PM peak hour trips from the analyzed scenario. Therefore, the total amount of commercial uses allowed in this Planning District without the ballpark was assumed in the traffic analysis.

Project traffic, based on the City's trip rates, is shown in Table 4.7-6. As this table shows, the project is expected to generate approximately 94,174 net daily trips, including 5,807 trips in the morning peak hour and 9,859 trips in the afternoon peak hour. It should be noted that due to the mix of uses allowed by the proposed Specific Plan a substantial amount of the trips generated by the individual uses will remain within the Specific Plan Area. For example, trips between the proposed residential and commercial uses have two ends and are counted twice in the following table, but will remain within the Specific Plan Area.

Table 4.7-6
RiverPark Project Trip Generation

Land Use Type	Units	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour In	PM Peak Hour Out	ADT
Single-Family Residential	1,416 DU	283	793	935	510	13,523
Multi-Family Residential	1,324 DU	265	609	702	437	10,605
Neighborhood Commercial	40 ksf	51	24	147	153	3,246
Regional Commercial	1,345 ksf	619	269	2,018	2,098	44,156
Hotel/Motel	600 Room	192	222	258	198	5,670
Office (100 TSF+)	1,030 ksf	1,741	216	330	1,597	14,451
Elementary/Middle School	1,600 Students	272	176	224	176	1,744
Park/Open Space	257 Ac.	0	0	0	0	213
TOTAL		3,488	2,319	4,631	5,228	94,174

Trip Distribution and Traffic Assignment

Both the project-generated traffic and the non-project traffic were distributed and assigned by the City's Oxnard Traffic Model. To determine the directional distribution for the Project's traffic, a cordon was drawn around the Specific Plan Area and the Project's daily vehicle trips that crossed the cordon were counted. Table 4.7-7 shows the number of daily trips that will leave the Specific Plan Area and summarizes the directional distribution of this project traffic. As shown, approximately 78,840 of the 94,175 daily project trips will leave the Specific Plan Area. Approximately 15,335 daily trips, 16 percent of the total daily trips generated by the project, will remain within the Specific Plan Area.

Table 4.7-7
Directional Distribution of Project Traffic - Average Daily Traffic, Study Year: 2020

Direction	ADT Vehicle Trips	Percent of Total Traffic
North on surface streets	6,873	8.6%
South on surface streets	27,985	35.5%
East on surface streets	3,032	3.8%
West on surface streets	0	0.0%
East on Freeway (US 101)	18,087	23.0%
West on Freeway (US 101)	22,955	29.1%
Total	78,842	100.0%

Future Traffic Conditions

Future (2020) Traffic Conditions with Build-out of the Specific Plan

Future 2020 traffic volumes with the addition of the RiverPark Project were evaluated by adding project traffic generation to the “Without Project” scenarios. The traffic growth as a result of the project is used to determine the potential project traffic impact in the surrounding area. The future year “With Project” traffic volumes were determined by adding the incremental growth determined from a comparison of the “With Project” and “Without Project” scenarios to the “Without Project” traffic volumes in the study area. Future intersection traffic volumes for the “Without Project” and “With RiverPark Project” scenarios are shown on Figures 4.7-5, 4.7-6, 4.7-7, and 4.7-8, respectively. Summaries of the ICU and LOS “Without Project” and “With Project” conditions at the 33 study intersections for the future year 2020 are shown in Table 4.7-8. As shown in Table 4.7-8, the RiverPark Project will have significant operational and cumulative impacts at seven study intersections in the City of Oxnard or under the jurisdiction of the County of Ventura and one study intersection in the City of Ventura.

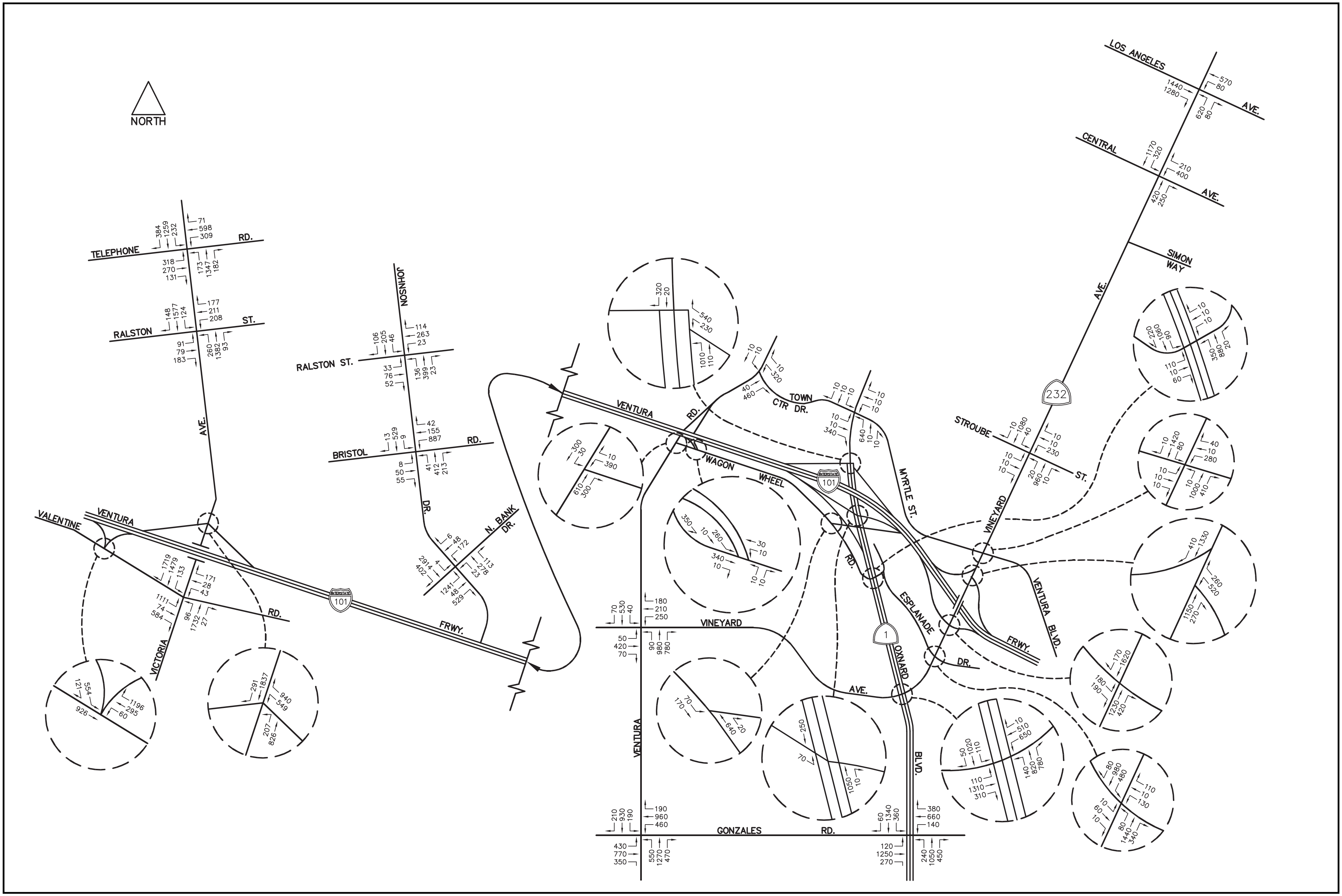

FIGURE **4.7-5**

AM Peak Hour Future (2020) Traffic Volumes, Without Project

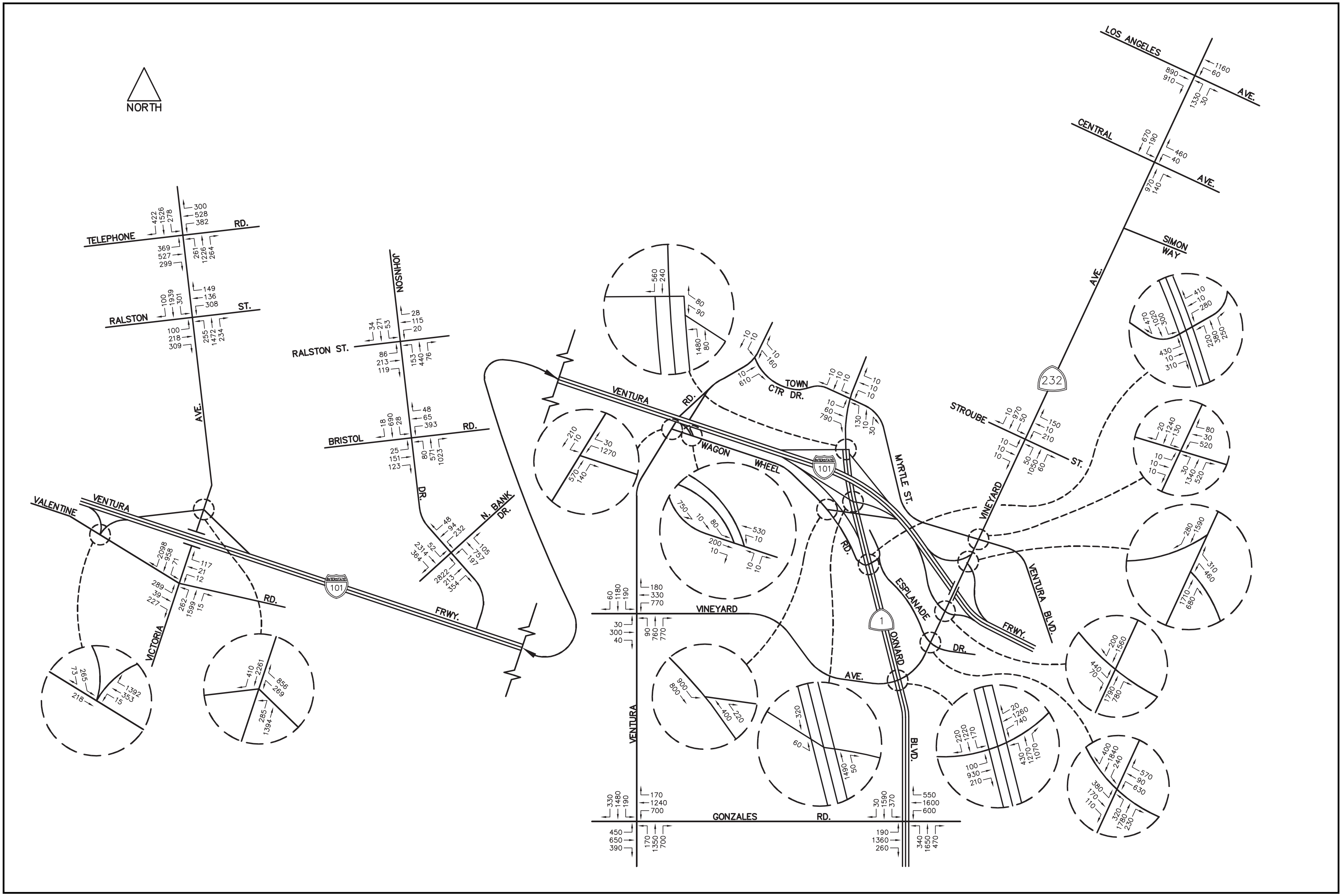

FIGURE **4.7-6**

PM Peak Hour Future (2020) Traffic Volumes, Without Project

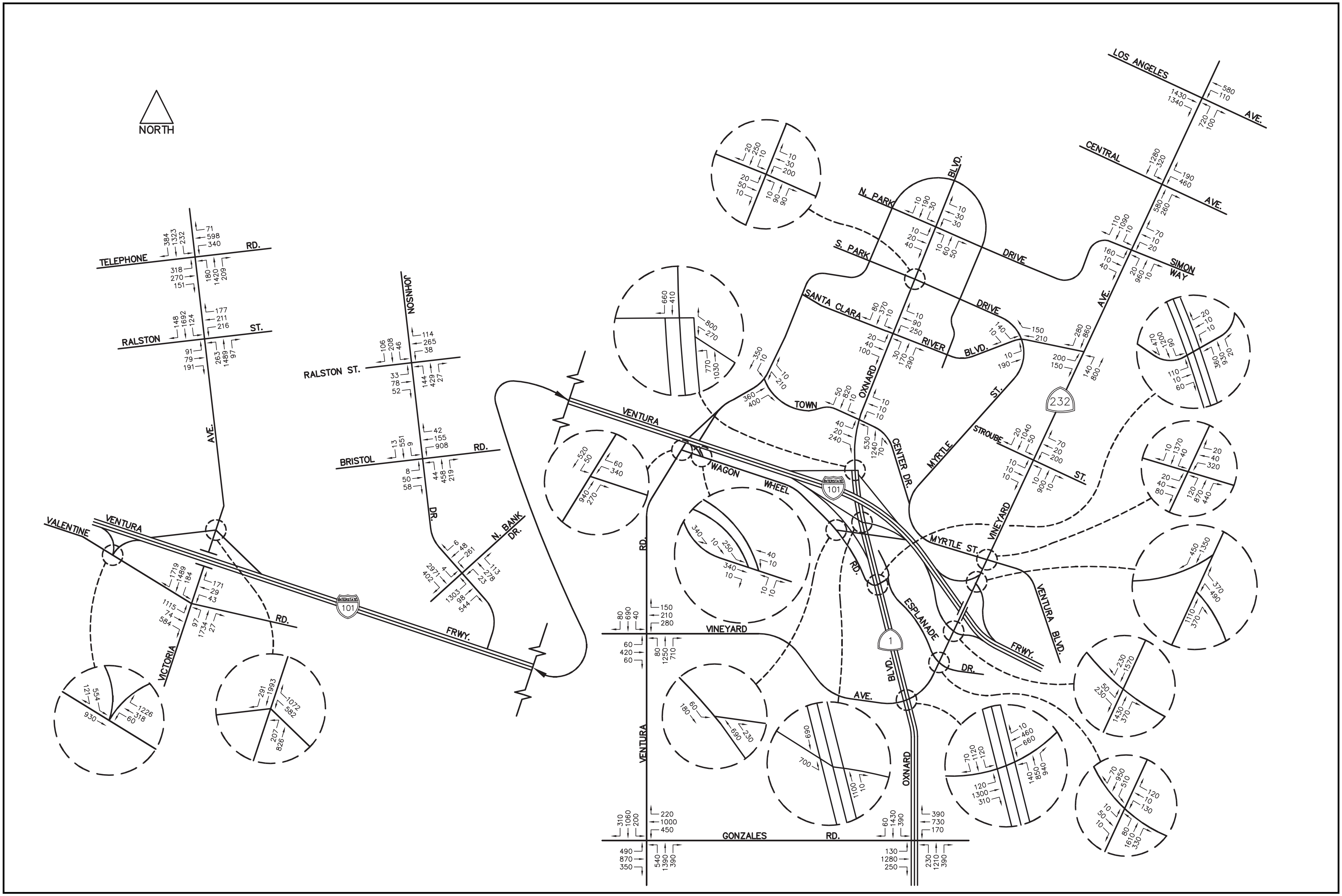

FIGURE **4.7-7**

AM Peak Hour Future (2020) Traffic Volumes, With Project

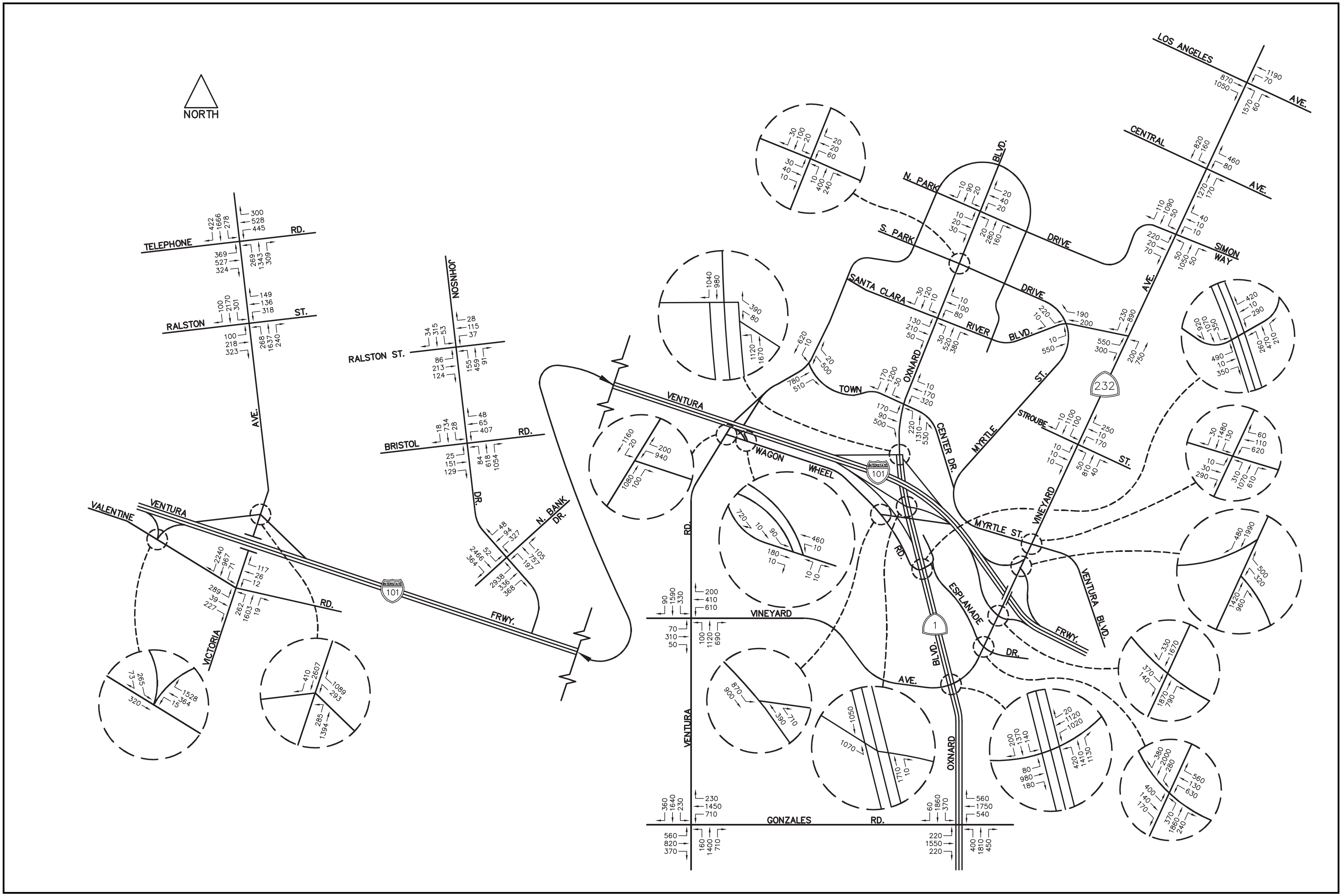

FIGURE**4.7-8**

PM Peak Hour Future (2020) Traffic Volumes, With Project

Table 4.7-8(a)
Intersection Volume/Capacity Summary
Future (2020) Peak Hour Traffic Conditions, Project Area Intersections

No.	Intersection	Peak Hour	Without Project V/C	Without Project LOS	With Project V/C	With Project LOS
1	Los Angeles Avenue and Vineyard Avenue	AM	0.850	D	0.906	E*
		PM	0.778	C	0.863	D*
2	Central Avenue and Vineyard Avenue	AM	0.659	B	0.750	C
		PM	0.694	B	0.788	C
3	North Park Drive and Oxnard Boulevard	AM	N/A	N/A	0.188	A
		PM	N/A	N/A	0.231	A
4	Simon Way/North Park Drive and Vineyard Avenue	AM	N/A	N/A	0.473	A
		PM	N/A	N/A	0.541	A
5	Oxnard Boulevard and South Park Drive	AM	N/A	N/A	0.253	A
		PM	N/A	N/A	0.281	A
6	Oxnard Boulevard and Santa Clara River Boulevard	AM	N/A	N/A	0.213	A
		PM	N/A	N/A	0.428	A
7	South Park Drive/Myrtle St. and Santa Clara River Blvd.	AM	N/A	N/A	0.206	A
		PM	N/A	N/A	0.367	A
8	Vineyard Avenue and Santa Clara River Boulevard	AM	N/A	N/A	0.366	A
		PM	N/A	N/A	0.499	A
9	Vineyard Avenue and Stroube Street	AM	0.387	A	0.354	A
		PM	0.387	A	0.374	A
10	Ventura Road and Town Center Drive	AM	0.124	A	0.154	A
		PM	0.063	A	0.341	A
11	Oxnard Boulevard and Town Center Drive	AM	0.422	A	0.480	A
		PM	0.339	A	0.694	C
12	Vineyard Avenue and Ventura Boulevard	AM	0.404	A	0.468	A
		PM	0.546	A	0.762	C
13	Oxnard Boulevard and US 101 Northbound Ramps	AM	0.494	A	0.497	A
		PM	0.602	B	0.588	A
14	Oxnard Boulevard and US 101 Southbound Ramps	AM	0.188	A	0.412	A
		PM	0.253	A	0.635	B
15	Vineyard Avenue and US 101 Northbound Ramps	AM	0.439	A	0.452	A
		PM	0.517	B	0.566	A
16	Vineyard Avenue and US 101 Southbound Ramps	AM	0.456	A	0.471	A
		PM	0.533	A	0.549	A
17	Ventura Road and Wagon Wheel Road	AM	0.343	A	0.442	A
		PM	0.621	B	0.673	B
18	Wagon Wheel Road and US 101 Southbound Off-Ramp	AM	0.384	A	0.378	A
		PM	0.806	D	0.744	C
19	Wagon Wheel Road and US 101 Southbound On-Ramp	AM	0.424	A	0.452	A
		PM	0.559	A	0.743	C
20	Oxnard Boulevard and Esplanade Drive	AM	0.561	A	0.648	B
		PM	0.808	D	.932	E*
21	Vineyard Avenue and Esplanade Drive	AM	0.617	B	0.654	B
		PM	0.887	D	0.944	E*
22	Vineyard Avenue and Ventura Road	AM	0.687	B	0.648	B
		PM	0.826	D	0.866	D*
23	Vineyard Avenue and Oxnard Boulevard	AM	0.798	C	0.899	D*
		PM	0.893	D	0.940	E*
24	Gonzales Road and Ventura Road	AM	0.731	C	0.783	C
		PM	0.829	D	0.891	D*
25	Gonzales Road and Oxnard Boulevard	AM	0.690	B	0.674	B
		PM	0.874	D	0.946	E*

N/A *Intersections do not exist in the "Without Project" Scenario.*
* *Denotes a significant impact prior to mitigation.*

Table 4.7-8(b)
Intersection Volume/Capacity Summary
Future (2020) Peak Hour Traffic Conditions, City of Ventura Intersections

			Without Project		With Project		
No.	Intersection	Hour	V/C	LOS	V/C	LOS	Impact
26	Victoria Avenue and Telephone Road	AM	0.552	A	0.568	A	0.016
		PM	0.625	B	0.672	B	0.047
27	Victoria Avenue and Ralston Street	AM	0.621	B	0.641	B	0.020
		PM	0.807	D	0.858	D	0.051
28	Victoria Avenue and US 101 Northbound Ramps	AM	0.568	A	0.615	B	0.047
		PM	0.607	B	0.697	B	0.090
29	Valentine Road and US 101 Southbound Ramps	AM	0.500	A	0.501	A	0.001
		PM	0.193	A	0.196	A	0.003
30	Valentine Road and Victoria Avenue	AM	0.871	D	0.874	D	0.003
		PM	0.511	A	0.513	A	0.002
31	Ralston Street and Johnson Drive	AM	0.463	A	0.483	A	0.200
		PM	0.454	A	0.476	A	0.022
32	Johnson Drive and Bristol Road	AM	0.735	C	0.759	C	0.024
		PM	0.799	C	0.837	D	0.038
33	Johnson Drive and North Bank Drive	AM	1.302	F	1.357	F	0.055*
		PM	1.566	F	1.669	F	0.103*

* *Denotes a significant impact prior to mitigation.*

Freeway Evaluation

The Congestion Management Program (CMP) was enacted by Proposition 111 in 1990. The intent of the CMP is to provide the analytical basis for transportation decisions through the State Transportation Improvement Program (STIP) process. A Countywide approach has been established by the Ventura County Transportation Commission, the Local CMP agency, to implement the statutory requirements of the CMP. The Countywide approach includes designating a highway network that includes all state highways and principal arterial roadways within the County and monitoring the network's Level of Service standards. This monitoring of the CMP network is one of the responsibilities of local jurisdictions. If level of service standards deteriorate, then local jurisdictions must prepare a deficiency plan to be in conformance with the Countywide plan.

Five segments along the Ventura Freeway and on Route 1 in the project study area were examined as the regional facility segments most likely to be significantly impacted by the project. These are the same segments identified in the discussion of existing freeway conditions.

Traffic volumes attributable to the RiverPark project, as determined earlier, were then analyzed as an incremental increase to the "Without Project" conditions. This methodology allowed for both an assessment of overall future freeway conditions and a determination of the project impacts to these regional transportation facilities. The Level of Service values used for Freeway segment analyses are estimated by calculating the demand-to-capacity (D/C) ratio and using the LOS definitions shown in

Table 4.7-4. Freeway traffic conditions in the study area were forecast for future year 2020. Using capacities calculated based on the HCM methodology as discussed previously, the level of service at the freeway segments was computed and is shown in Table 4.7-9.

As shown, all study freeway segments are projected to operate at level of service D and better with the exception of the Ventura Freeway south of Central Avenue, where traffic conditions are projected at LOS F in the northbound direction during the morning peak hour and in the southbound during the evening peak hour with all projected cumulative growth. As this level of service exceeds the CMP standard, this cumulative impact is significant. Improvements necessary to achieve an acceptable level of service on the Ventura Freeway will be identified and addressed through the Ventura County CMP program.

Neighborhood Traffic Impacts

The roadway system for the RiverPark Development has been designed to minimize increases in traffic in existing surrounding residential neighborhoods. First, connections to existing residential streets were minimized. As proposed, the RiverPark Specific Plan circulation system connects to Vineyard Avenue at three points: Myrtle Street, South Park Drive and North Park Drive. The proposed circulation system would also connect to Ventura Road and Oxnard Boulevard. With this circulation system design, most access will be concentrated along Ventura Road across the 101 Freeway, Oxnard Boulevard across and/or to the Ventura Freeway and Myrtle Street leading to and from Vineyard Avenue near the 101 Freeway.

There are no direct street connections to the El Rio West Neighborhood. As a result project traffic will no impact the existing streets in the El Rio West Neighborhood. The only new street connection to the El Rio Community to the east of Vineyard Avenue will be North Park Drive, which is aligned to join Vineyard Avenue at the existing intersection of Vineyard Avenue and Simon Way. North Park Drive has been designed as a discontinous street with 90 degree bend at a traffic circle intersection at the entrance to the planned elementary/intermediate school site. Significant traffic increases on Simon Way are not anticipated. As shown in Table 4.7-7 above, the Oxnard Traffic Model shows less than 4 percent of project trips traveling east on surface streets. As shown on Figure 4.7-7 and Figure 4.7-8, a small amount of trips will travel east and west on Simon Way during the peak travel hours. This is the result of the design of North Park Drive. As shown on these figures the majority of the 4 percent of the project trips projected to travel eastbound surface streets will use Myrtle Street/Ventura Boulevard. Based on the traffic analysis, no significant traffic impacts on streets in the El Rio West or El Rio Community have been identified.

Table 4.7-9
Future (2020) Freeway Volumes and Level of Service

				Future (2020) Without Project Traffic Conditions				Future (2020) With Project Traffic Conditions				
CMP Station	Dir.	Peak Hour	Freeway Capacity	Daily Volume	Peak Hour Volume	D/C Ratio	LOS	Daily Volume	Peak Hour Volume	D/C Ratio	LOS	Project Impact
US 101 at the Santa Clara River Bridge	N/B	AM	12,000	199,600	8,530	0.711	C	214,100	8,833	0.736	C	0.025
		PM	12,000		9,460	0.788	D		10,072	0.839	D	0.051
	S/B	AM	12,000		8,310	0.693	C		8,828	0.736	C	0.043
		PM	12,000		6,400	0.533	B		7,188	0.599	C	0.066
US 101 between Route 1 and Vineyard Avenue	N/B	AM	10,000	169,000	6,610	0.661	C	180,000	7,143	0.714	C	0.053
		PM	10,000		8,290	0.829	D		9,077	0.908	D	0.079
	S/B	AM	10,000		6,010	0.601	C		6,156	0.616	C	0.015
		PM	10,000		6,780	0.678	C		7,122	0.712	C	0.034
US 101 between Vineyard Avenue and Rose Avenue	N/B	AM	10,000	177,600	7,050	0.705	C	187,400	7,533	0.753	C	0.048
		PM	10,000		8,350	0.835	D		8,661	0.866	D	0.031
	S/B	AM	10,000		6,510	0.651	C		6,794	0.679	C	0.028
		PM	10,000		7,190	0.719	C		7,724	0.772	D	0.053
Oxnard Boulevard (Route 1) between Vineyard Ave. and US 101	N/B	AM	4,000	32,300	1,230	0.308	A	35,100	1,296	0.324	A	0.016
		PM	4,000		1,290	0.323	A		1,374	0.344	A	0.021
	S/B	AM	4,000		1,240	0.310	A		1,413	0.353	B	0.043
		PM	4,000		1,330	0.333	A		1,443	0.361	B	0.028
US 101 south of Central Avenue	N/B	AM	8,000	182,4000	7,940	0.993	E	187,700	8,258	1.032	F(0)	0.039*
		PM	8,000		7,110	0.889	D		7,250	0.906	D	0.017
	S/B	AM	8,000		5,980	0.748	C		6,086	0.761	C	0.013
		PM	8,000		8,000	1.000	E		8,287	1.036	F(0)	0.036*

Consistency with Relevant Transportation Plans and Policies

Ventura County General Plan Policy Consistency

As mentioned earlier in this section, the City of Oxnard and Ventura County have executed a Reciprocal Traffic Mitigation Agreement, by which each agency agrees that a pro-rata share of mitigation costs will be collected by each agency for identified traffic impacts in the other jurisdiction. The project would be consistent with the Ventura County General Plan by complying with the terms of the above-mentioned agreement between the two agencies.

Ventura County Congestion Management Program

According to the County's CMP, the minimum acceptable standard for traffic operations is LOS E. However, so that local jurisdictions are not unfairly penalized for existing congestion, CMP locations currently operating in the LOS F range are considered acceptable. As mentioned, fourteen of the study intersections are CMP intersections. As shown in Table 4.7-8, none of the LOS of these intersections will be less than "E" with the implementation of the project. Because the proposed project would not cause these intersections to exceed an acceptable LOS, and would be consistent with the CMP.

Other Circulation Plans

As previously discussed, an extension of Kimball Road in Ventura across the Santa Clara River is currently shown on the City of San Buenaventura and County circulation master plans. No alignment study has been completed for this proposal and this roadway connection is not a component of the Oxnard 2020 Circulation Master Plan. The traffic analysis shows that, with mitigation, acceptable levels of service can be maintained in the area with all projected growth without this roadway connection. Analysis of the effect of this connection on area traffic conditions is provided in Appendix A to the traffic study in Appendix 4.7. This analysis shows no substantial benefit from this connection. Additionally, this analysis shows that none of the identified significant impacts of the RiverPark Project would be avoided.

MITIGATION MEASURES

As stated previously, significant impacts have been identified at 8 of the 33 study intersections. The following measures, 4.7-2 to 4.7-13, are proposed to mitigate these impacts. Table 4.7-10 shows the effectiveness of the proposed mitigation. As shown in this table, all identified significant impacts on intersection operations will be mitigated to a level that is less than significant by these measures.

Table 4.7-10(a)
Intersection Volume/Capacity Summary - Future (2020) Peak Hour Traffic Conditions With Project and Mitigation, Project Area Intersections

		Peak	Without Project		With Project		With Project + Mitigation	
No.	Intersection	Hour	V/C	LOS	V/C	LOS	V/C	LOS
1	Los Angeles Avenue and Vineyard Avenue	AM	0.850	D	0.906	E*	0.670	B
		PM	0.778	C	0.863	D*	0.739	C
20	Oxnard Boulevard and Esplanade Drive	AM	0.561	A	0.648	B	0.519	A
		PM	0.808	D	0.932	E*	0.623	B
21	Vineyard Avenue and Esplanade Drive	AM	0.617	B	0.654	B	0.550	A
		PM	0.887	D	0.944	E*	0.786	C
22	Vineyard Avenue and Santa Clara River Boulevard	AM	0.687	B	0.648	B	0.600	B
		PM	0.826	D	0.866	D*	0.746	C
23	Vineyard Avenue and Oxnard Boulevard	AM	0.798	C	0.899	D*	0.719	C
		PM	0.893	D	0.940	E*	0.793	C
24	Gonzales Road and Ventura Road	AM	0.731	C	0.783	C	0.688	B
		PM	0.829	D	0.891	D*	0.762	C
25	Gonzales Road and Oxnard Boulevard	AM	0.690	B	0.674	B	0.592	A
		PM	0.874	D	0.946	E*	0.646	B

* *Denotes a significant impact prior to mitigation.*
[1] *To be provided in the next draft of the report.*
**

Table 4.7-10(b)
Intersection Volume/Capacity Summary - Future (2020) Peak Hour Traffic Conditions With Project and Mitigation, City of Ventura Intersections

		Peak	Without Project		With Project			With Project + Mitigation		
No.	Intersection	Hour	V/C	LOS	V/C	LOS	Impact	V/C	LOS	Impact
33	Johnson Drive and North Bank Drive	AM	1.302	F	1.357	F	0.055*	1.131	F	-0.171
		PM	1.566	F	1.669	F	0.103*	1.488	F	-0.078

* Denotes a significant impact prior to mitigation.

City of Oxnard and County of Ventura Facilities

4.7-1 City/County Transportation Fees -- All applicable City of Oxnard and County of Ventura traffic impacts fees shall be paid prior to the issuance of building permits for individual building projects within the Specific Plan Area. These fees will be used, in part, to fund the construction of the specific improvements identified in measures 4.7-2 to 4.7-12 by the City of Oxnard and County of Ventura when warranted by traffic conditions. Any of the improvements in measures 4.7-2 to 4.7-12 implemented by the project will be subject to reimbursement/credit as applicable. Based on the estimate of the number of trips that will be generated by the project the estimated total amount of fees to be paid is:

	City of Oxnard	County of Ventura
Daily Trip Ends	94,174	94,174
Percent Using Jurisdiction Roads	100%	10%
Fee/Trip	$173.90	$139.00
Total Fee	$16,376,858	$1,309,019

The following roadway improvements need to be constructed by the City of Oxnard or the County of Ventura when warranted by traffic conditions:

City of Oxnard Improvements

4.7-2 Oxnard Boulevard and Town Center Drive – Construct this intersection to provide the following: dual left-turn lanes and one through/right shared lane in the westbound direction; dual left-turn lanes, one through lane, and two right-turn lanes in the eastbound direction; dual left-turn lanes, two through lanes, and one right-turn lane in the northbound direction; and one left-turn lane, one through lane, and one through/right shared lane in the southbound direction. In addition, provide a green phase for the eastbound right-turn movement concurrent with the northbound left-turn phase.

4.7-3 Oxnard Boulevard and US 101 Northbound Ramps – Improve this intersection to provide the following: one left-turn lane and one 'free' right-turn lane in the westbound direction, dual left-turn lanes and two through lanes in the northbound direction, and four through lanes and one right-turn lane in the eastbound direction.

4.7-4 Ventura Freeway SB On/Off-ramps and Oxnard Boulevard – When sufficient redevelopment occurs to the Wagon Wheel Road area, a "hook" ramp along Wagon Wheel Road will be constructed. This ramp will provide direct access from Wagon Wheel Road to the southbound

Ventura Freeway. The construction of this ramp will alleviate traffic that crosses to the east of the Ventura Freeway to access the southbound on-ramp from Oxnard Boulevard. In addition, a connection between southbound Oxnard Boulevard and this hook-ramp will be provided. Upon completion of the hook-ramp and connector, left-turns from southbound Oxnard Boulevard to the southbound Ventura Freeway diamond on-ramp will be prohibited. This connector will also allow access from Wagon Wheel Road to northbound Oxnard Boulevard. As part of the immediate roadway improvement project, the Oxnard Boulevard overcrossing will be constructed with sufficient length to accommodate the later installation of the hook ramp.

4.7-5 Wagon Wheel Road and US 101 Southbound On-Ramp – Restripe Wagon Wheel Road to provide one through/right shared lane and one right-turn lane in the northbound direction.

4.7-6 Oxnard Boulevard and Esplanade Drive – Improve this intersection to provide dual left-turn lanes in the westbound and eastbound directions, and one left-turn lane, two through lanes, one through/right lane, and one right-turn lane in the southbound direction.

4.7-7 Vineyard Avenue and Esplanade Drive – Reconstruct the west and east legs of the Vineyard Avenue and Esplanade Drive intersection to provide two left-turn lanes, one left-through shared lane, and one right-turn only lane in the eastbound direction and one left-turn lane, one left-through shared lane, one right-though shared lane, and one right-turn only lane in the westbound direction. Widen Vineyard Avenue along the west and east curb and relocate the median island to provide dual left-turn lanes four through lanes and one right-turn-only in the southbound direction and duel left-turn lanes, three through lanes, and one right-through shared lane in the northbound direction. This will require additional right-of-way to be obtained from the Esplanade Plaza.

4.7-8 Vineyard Avenue and Ventura Road – Restripe Ventura Road to provide one left-turn lane, three through lanes, and one right-turn lane in the northbound direction and one left-turn lane, two through lanes, and one through/right turn lane in the southbound direction. In addition, modify signal phasing to provide a green phase for the northbound right-turn movement during the westbound left-turn phase.

4.7-9 Vineyard Avenue and Oxnard Boulevard – Modify the median islands and restripe Oxnard Boulevard to provide dual left-turn lanes, three through lanes, and two right-turn lanes in the northbound direction and two left-turn lanes, four through lanes, and one right-turn lane in the southbound direction. In addition, flare and modify the median islands and restripe Vineyard Avenue to provide three left-turn lanes, three through lanes, and one right-turn lane in the westbound direction and restripe the eastbound approach to provide one left-turn lane, three through lanes, and one right-turn lane.

4.7-10 Gonzales Road and Ventura Road – Restripe and widen this intersection to provide the following: dual left turn lanes, three through lanes, and one right-turn-only lane in the eastbound direction; dual left-turn lanes, three through lanes, one through/right shared lane, and one right-turn-only lane in the northbound direction; and dual left-turn lanes, four through lanes and one right-turn-only lane in the westbound and southbound directions.

4.7-11 Gonzales Road and Oxnard Boulevard – The City of Oxnard General Plan calls for this intersection to either be grade separated with an urban interchange or to have other specialized treatment. The other treatments could be to require left-turn movements to be accommodated as U-turns beyond the intersection and "free right-turns" upon returning to the intersection. Other methods of removing left-turns from the critical movements at the intersection are also being considered. With this project, this intersection will continue to need one of those options to be implemented. For analysis purposes, it has been assumed that an urban interchange, including a grade separated crossing of Gonzales Road and the railroad tracks paralleling Oxnard Boulevard, would be constructed. However, other alternative improvements may be constructed which will still allow the City to achieve the General Plan performance standards.

County of Ventura Improvements

4.7-12 Los Angeles Avenue and Vineyard Avenue – Widen and restripe Los Angeles Avenue to provide one left-turn lane, two through lanes, and one through/right shared lane in the westbound direction and one left-turn lane, two through lanes, one through/right shared lane and one right-turn lane in the eastbound direction.

City of Ventura Facilities

The project applicant shall implement the following measure to mitigate traffic impacts in the City of Ventura:

4.7-13 Johnson Drive and North Bank Drive – Flare and restripe Johnson Drive to provide one left-turn lane, two through lanes and one through/right shared lane in the southbound direction.

Transit Improvements

The closest existing transit service to the Specific Plan Area is on Vineyard Avenue north of the Ventura Freeway to Simon Way. This route and the route serving the Esplanade area south of the freeway provide service to the Cities of Oxnard and Ventura as well as the County of Ventura, making the entire region accessible by transit.

Future transit routes are not yet planned for the project area. While the shifting of a route appears to provide the most immediate option, over time more than one route will be shifted and several new routes may be formed. It is not appropriate to speculate on which areas may have direct transit service by the time that the project is completed. However, it is appropriate to design the roadways throughout the Specific Plan Area in such a way as to accommodate transit vehicles. In addition, sufficient room should be provided to make the commercial center a transit hub.

The RiverPark Specific Plan will provide sufficient density to make transit a workable and necessary travel alternative. To facilitate transit service in the Specific Plan Area, development of a transit hub is recommended in the center of the commercial planning districts.

The following additional mitigation measures are proposed to develop this transit hub:

4.7-14 Oxnard Boulevard should have concrete bus pads and sheltered stops along the curbs, immediately beyond (north of) the Town Center Drive intersection.

4.7-15 Additional transit stops should be provided along Oxnard Boulevard between Ventura Road and the Ventura Freeway and along Santa Clara River Boulevard between Oxnard Boulevard and Vineyard Avenue in locations South Coast Area Transit (SCAT) is willing to commit to providing transit service and the City of Oxnard deems feasible.

4.7-16 Up to 5 bays in each direction should be provided to the southeast of the intersection of Oxnard Boulevard and Santa Clara River Boulevard. This hub may be on parking or other roadways, but should provide layover and turnout space for full size (40 foot length) buses.

As discussed above, SCAT is unable to forecast its service for the next 20 years. However, the project will be constructed so that it will be able to utilize SCAT service, should it be provided.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant traffic or circulation impacts will result from the RiverPark Project.

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4.8 AIR QUALITY

INTRODUCTION

This section describes the existing air quality environment in the vicinity of the RiverPark Specific Plan Area, evaluates potential impacts from the construction and operation of the proposed project, and identifies mitigation measures to reduce impacts. The analysis in this section has been prepared in accordance with Ventura County Air Pollution Control District Guidelines for the Preparation of Air Quality Impact Analysis, *November 2000.*

ENVIRONMENTAL SETTING

Climate and Meteorology

Southern California lies in a semi-permanent high-pressure zone of the Eastern Pacific region. Summertime weather is dominated by the movement and intensity of the semi-permanent high pressure system that is normally centered several hundred miles southwest of California. In the spring, summer, and fall, the climate is heavily influenced by marine air. Light winds in the region allow marine air to dominate temperatures and airflow during these periods. In the winter, low-pressure weather systems originating in the northern Pacific Ocean bring clouds, wind, and rain into southern California. Santa Ana winds caused by high pressure in the high plateau region northeast of California occur intermittently during winter and fall.

The southern California area has been divided into several geographical air basins. The County of Ventura is located within the South Central Coast Air Basin (herein referred to as the Basin), that is comprised of Ventura, Santa Barbara, and San Luis Obispo Counties. The Specific Plan Area is located within the Oxnard Plain Airshed, a sub-area of the Basin. The Oxnard Plain experiences the mild, Mediterranean climate typical of southern California. Average temperatures in the Oxnard area are a 70.7°F high, a 49.9°F low, and an overall mean temperature of 60.3°F. Precipitation averages 14.45 inches per year, with the majority of rainfall occurring from November through March. Prevailing winds along the Ventura coast and Oxnard Plain are westerly and northwesterly. During the fall, Santa Ana winds reverse the prevailing airflow and bring dry, hot gusts which often have greater air movement.[1]

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1 Ventura County Air Pollution Control District. Guidelines for the Preparation of Air Quality Impact Analysis, November 2000.

The topography and climate of Ventura County combine to make it an area of smog potential. Temperature inversions occur frequently at approximately 800-1,000 feet above mean sea level in Ventura County, and are most persistent during late summer and early fall. Temperature inversions are created when a warm air mass descends over a lower, cooler, moist marine air layer. The warm upper layer forms a cap over the marine layer and inhibits the air pollutants generated near the ground from dispersing upward. Light summer winds and the surrounding mountains further limit the horizontal disbursement of the pollutants. Concentrating volumes of pollutants in this manner allows the summer sunlight to generate high levels of photochemical smog. In the winter, cool ground temperatures and very light winds can cause extremely low inversions and air stagnation, trapping pollutants during the late night and early morning hours.

Characteristics and Causes of Air Pollution

Air pollutants are emitted from a mix of “mobile sources” and “stationary sources.” Mobile sources are motor vehicles, including cars, trucks, trains, airplanes, construction vehicles, etc. Stationary sources include electricity generation facilities, oil wells, gas flaring facilities, gas burning appliances, fireplaces, evaporation from organic solvents, pesticides, and paints, the release of landfill gases, and other sources. Windblown dust and soil materials also contribute to air pollution. A cumulative mix of air pollutants often results in the formation of a brownish haze in the air known as “smog.” Common air pollutants include reactive organic compounds (ROC), oxides of nitrogen (NO_X), particulate matter, carbon monoxide (CO), oxides of sulfur (SO_X), and toxic air emissions such as lead.

Ozone (O_3) and particulate matter are the two main air pollutants of concern in southern California, as ambient levels of these pollutants often exceed State and Federal standards within the region. Ozone is formed by photochemical reactions involving sunlight energy and the precursor air emissions ROC and NO_X. In the upper atmosphere, ozone helps to shield the Earth from harmful radiation. However, in the lower atmosphere where people live, ozone poses health risks and damages plant tissues and man-made materials (e.g., paint, rubber, metals). Particulate matter is comprised of finely divided solids or liquids such as dust, soot, aerosols, fumes, and mists. Particulate matter in the air can be inhaled by persons and other animals, and is harmful to the tissues of the respiratory system. The particulates of primary concern are those less than 10 microns in diameter (PM_{10}), which are able to penetrate deeper into the lungs than are larger particulates.

Regulatory Agencies and Responsibilities

Air quality within the Basin is addressed through the efforts of various Federal, State, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies primarily responsible for improving the air quality within the Basin are discussed below along with their individual responsibilities.

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (U.S. EPA) is responsible for enforcing the 1990 amendments to the Federal Clean Air Act (CAA) and the national ambient air quality standards (Federal standards) that the Act establishes. These standards identify levels of air quality for six "criteria" pollutants which are considered the maximum levels of ambient (background) air pollutants that provide an adequate margin of safety in protecting the public health and welfare. The six criteria pollutants include ozone, CO, nitrogen dioxide (NO_2, which is a form of NO_X), sulfur dioxide (SO_2), PM_{10}, and lead. In July 1997, the EPA approved new federal standards for particulate matter less than or equal to 2.5 microns in size ($PM_{2.5}$).

The U.S. EPA also has regulatory and enforcement jurisdiction over emission sources beyond State waters (outer continental shelf), and those that are under the exclusive authority of the Federal government, such as aircraft, locomotives, and interstate trucking. In response to its enforcement responsibilities, the U.S. EPA requires each state to prepare and submit a State Implementation Plan (SIP) that describes how the state will achieve the Federal standards by specified dates, depending on the severity of the air quality within the state or air basin. The Ventura County portion of the SIP consists of the Ventura County Air Quality Management Plan (discussed later in this EIR section) and the Ventura County Air Pollution Control District Rules and Regulations.

California Air Resources Board

The California Air Resource Board (ARB), a department of the California Environmental Protection Agency (CALEPA), oversees air quality planning and control throughout California. It is primarily responsible for ensuring implementation of the 1989 amendments to the California Clean Air Act (CCAA), responding to the Federal CAA requirements, and for regulating emissions from motor vehicles and consumer products within the State. The ARB has established emission standards for vehicles sold in California and for various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

The amendments to the CCAA establish ambient air quality standards for the State and a legal mandate to achieve these standards by the earliest practicable date. These standards apply to the same six criteria pollutants as the Federal CAA, and also include sulfates, visibility reducing particles, hydrogen sulfide, and vinyl chloride. State standards are also more stringent than the Federal standards and, in the case of PM_{10} and SO_2, far more stringent. Based on monitored pollutant levels, the CCAA divides non-attainment areas into three categories—moderate, serious, and severe—to which progressively more stringent requirements apply. Ventura County is classified as a severe non-attainment area for the State ozone standard. Levels of PM_{10} also exceed State standards throughout Ventura County.

Ventura County Air Pollution Control District

The management of air quality in Ventura County is the responsibility of the Ventura County Air Pollution Control District (APCD). The APCD is responsible for bringing air quality in the County into conformity with Federal and State air quality standards. Specifically, the APCD has the responsibility to monitor ambient air pollutant levels throughout the County and to develop and implement attainment strategies to ensure that future emissions will be within Federal and State standards.

As discussed previously, the Federal and State Clean Air Acts require the preparation of plans to reduce air pollution to acceptable levels. The APCD has responded to this requirement by preparing a series of Air Quality Management Plans (AQMPs), the most recent and rigorous of which was approved by the Ventura County Air Pollution Control Board on November 8, 1994 and by the ARB on November 15, 1994. The 1994 AQMP was later revised to incorporate changes in rules and anticipated air quality controls. The revisions were approved by the County of Ventura and the ARB in December 1995. The 1994 AQMP and the 1995 AQMP Revision are designed to comply with the provisions of the 1990 amendments to the Federal CAA and the 1988 CCAA, to accommodate growth, to reduce the levels of pollutants within the county, and to identify a control strategy to reduce ozone forming emissions from mobile and stationary sources. Based upon the emission control strategies proposed in the 1995 AQMP Revision, it is predicted that Ventura County will attain the Federal ozone standard by the year 2005, as mandated by the CAA. Subsequently, a 1997 AQMP revision was also approved. This revision proposed that the adoption and implementation dates for nine control measures be revised. These control measures are contained in Alternative 2 of the 1995 AQMP Revision.

The APCD is responsible for limiting the amount of emissions that can be generated throughout the County by various stationary and mobile sources. Specific rules and regulations have been adopted by the Ventura County Air Pollution Control Board which limit the emissions that can be generated by various uses and/or activities, and identify specific pollution reduction measures which must be implemented in association with various uses and activities. These rules not only regulate the emissions of the six criteria pollutants, but also toxic emissions and acutely hazardous materials.[2] The rules and regulations are also subject to ongoing refinement by the APCD. Emissions sources subject to these rules are regulated through the APCD's permitting process. Through this permitting process, the APCD also monitors the amount of stationary emissions being generated and uses this information in developing the AQMP. The proposed project would be subject to APCD rules and regulations to reduce project emissions and to mitigate potential air quality impacts.

In 2000, the Air Quality Planning and Evaluation Section of the APCD prepared its *Guidelines for the Preparation of Air Quality Impact Analyses* as a guidance document to assist local government agencies and consultants in preparing environmental documents for projects subject to the California Environmental Quality Act (CEQA). This document describes the criteria that the APCD uses when reviewing and commenting on the adequacy of environmental documents, such as this EIR. It recommends thresholds for use in determining whether projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts. This EIR was prepared following the recommendations of the APCD presented in the *Guidelines for the Preparation of Air Quality Impact Analyses*.

Local Governments

Local governments, such as the City of Oxnard, have the authority and responsibility to reduce air pollution through their police power and land use decision-making authority. Specifically, local governments are responsible for the mitigation of emissions resulting from land use decisions and for the implementation of transportation control measures as outlined in the AQMP. The AQMP assigns local governments certain responsibilities to assist the County in meeting air quality goals and policies. In general, a first step toward implementation of a local government's responsibility is accomplished by identifying air quality goals, policies, and implementation measures in its general plan. Through capital improvement programs, local governments can fund infrastructure that contributes to improved air quality, by requiring such improvements as bus turnouts, energy-efficient street lights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, local governments assess air quality impacts, require mitigation of potential air quality impacts by conditioning discretionary permits, and monitor and enforce implementation of such mitigation.

2 Defined by the Federal government as an air pollutant to which no ambient air quality standard is applicable and which, in the judgment of the administrator of the U.S. EPA, may result in an increase in mortality, serious irreversible illness, or incapacitating reversible illness.

Regional Air Quality

To identify ambient concentrations of the six criteria pollutants, the APCD operates eight air quality monitoring stations throughout Ventura County. These stations are located in Thousand Oaks, El Rio, Ventura (2 stations), Piru, Ojai, Simi Valley, and on Anacapa Island. In addition, the ARB operates a ninth monitoring station in western Ventura County. The monitoring station located closest to the Specific Plan Area and most representative of air quality within the City is the El Rio station. This station presently monitors the emission levels of O_3, CO, NO_2, PM_{10} and $PM_{2.5}$.

Table 4.8-1, below, lists the concentrations registered and the violations of State and Federal standards that have occurred at the El Rio monitoring station from 1996 through 2000.[3] As shown, the local air monitoring stations have registered values above State and Federal standards for both ozone, and PM_{10}. No other monitored air quality standard has been violated at the El Rio Station. Concentrations of SO_2 registered in Ventura County have not exceeded State or Federal standards in recent years and lead is no longer monitored in Ventura County.

Local Emissions

Air emissions are generated by a variety of sources in the area surrounding the Specific Plan Area. Motor vehicles traveling along local roadways such as Vineyard Avenue and Ventura Road are one such source. As agricultural uses exist in the local vicinity of the site, diesel and gasoline powered equipment (i.e., tractors, trucks) as well as pesticide spraying are used near by; each of which emit air pollutants. Finally, the residential land uses in proximity to the site also emit air pollutants.

Traffic-congested roadways and intersections have the potential for the generation of high, localized CO levels within approximately 1,000 feet of a roadway. Localized areas where ambient concentrations exceed state standards are termed CO "hot-spots." The APCD recommends the use of CALINE4, a dispersion model developed by Caltrans, for predicting CO concentrations near roadways. CALINE4 adds roadway-specific CO emissions calculated from peak traffic volumes to ambient CO air concentrations. In evaluating CO concentrations at study area intersections determined in the traffic report conducted for the project (included as Appendix 4.7 of this EIR), a simplified CALINE4 screening procedure was used. This computer model was developed by the Bay Area Air Quality Management District, and has been endorsed for use for analysis of local emission impacts by the APCD.

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3 This is the most recent data available.

Table 4.8-1
Ambient Pollutant Concentrations

Pollutant[1]	Standards[2]	1996	1997	1998	1999	2000
		Year				
OZONE (O_3)						
Maximum 1-hour concentration monitored (ppm)		0.121	0.102	0.106	0.103	0.084
Number of days exceeding State standard	>0.09 ppm	8	2	1	1	0
Number of days exceeding Federal standard	>0.12 ppm	0	0	0	0	0
Number of days with stage 1 ozone episode	≥0.20 ppm	0	0	0	0	0
Number of days with stage 2 ozone episode	≥0.35 ppm	--	--	--	--	--
CARBON MONOXIDE (CO)						
Maximum 1-hour concentration monitored (ppm)		2.2	2.6	3.7	2.4	2.1
Number of days exceeding State 1-hour standard	>20.0 ppm	0	0	0	0	0
Number of days exceeding Federal 1-hour standard	>35.0 ppm	0	0	0	0	0
Maximum 8-hour concentration monitored (ppm)		1.5	1.9	2.0	1.2	1.3
Number of days exceeding Federal and State 8-hour standard	≥9.1 ppm	0	0	0	0	0
NITROGEN DIOXIDE (NO_2)						
Maximum 1-hour concentration monitored (ppm)		.110	0.072	0.088	0.099	0.074
Annual average monitored (ppm)		--	0.014	0.013	0.014	--
Number of days exceeding 1-hour State standard	>0.25 ppm	0	0	0	0	0
SUSPENDED PARTICULATE MATTER (PM_{10})						
Maximum 24-hour concentration (µg/m^3)		64	253	70	51	52
Number of samples		61	60	59	56	61
Number of samples exceeding State standard	>50 µg/m^3	1	3	1	1	1
Number of samples exceeding Federal standard	>150 µg/m^3	0	1	0	0	0
SUSPENDED PARTICULATE MATTER ($PM_{2.5}$)						
Maximum 24-hour concentration (µg/m^3)		--	--	--	36.7	45.7
Number of samples		--	--	--	92	106
Number of samples exceeding Federal standard	>65 µg/m^3	--	--	--	0	0

Sources: California Air Resources Board, Summary of Air Quality Data (for 1996, 1997, 1998, 1999 and 2000). Sacramento, California: California Air Resources Board, 1996, 1997, 1998, 1999 and 2000.

1 Parts by volume per million of air (ppm), micrograms per cubic meter of air (µg/m^3), or annual arithmetic mean (aam).

2 Federal and State standards are for the same time period as the maximum concentration measurement unless otherwise indicated.

The methodology utilized in this CO modeling assumes worst-case conditions (i.e., wind direction is parallel to the primary roadway, 90° to the secondary road, wind speed is less than one meter per second, extreme atmospheric stability) and provides a screening of maximum, worst-case, CO concentrations.

The APCD and Caltrans recommend that the CO analysis focus on "sensitive receptors." Sensitive receptors are populations that are more susceptible to the effects of air pollution than are the population at large. The APCD identifies the following as examples of sensitive receptors: residences, work sites, playgrounds, parks, athletic facilities, rehabilitation centers, childcare centers, retirement homes, convalescent centers, and hospitals.[4]

Maximum CO concentrations were calculated for peak hour traffic conditions at study intersections identified in the project traffic report that have sensitive receptors in their vicinity. CO concentrations at 50, 100, and 300 feet from each roadway edge determined by CO modeling are presented in Table 4.8-2. State of California 1-hour and 8-hour CO standards are 20.0 ppm and 9.1 ppm, respectively. As shown in Table 4.8-2, 1-hour 8-hour CO concentrations at 50 feet are below State standards at all study intersections under existing conditions.

Table 4.8-2
Existing Carbon Monoxide Concentrations

Intersection	50 Feet		100 Feet		300 Feet	
	1-Hour[1]	8-Hour[2]	1-Hour[1]	8-Hour[2]	1-Hour[1]	8-Hour[2]
Gonzales Road and Oxnard Boulevard	6.2	3.8	5.6	3.3	4.7	2.7
Johnson Drive and Bristol Road	5.8	3.5	5.2	3.1	4.4	2.5
Johnson Drive and North Bank Drive	6.1	3.7	5.4	3.2	4.5	2.6
Johnson Drive and Ralston Street	4.5	2.6	4.3	2.4	4.0	2.2
Ralston Street and Victoria Avenue	6.3	3.8	5.6	3.3	4.6	2.6
Telephone Road and Victoria Avenue	6.1	3.7	5.5	3.3	4.6	2.6
Valentine Road and US 101	6.1	5.5	5.0	3.2	4.5	2.6
Valentine Road and Victoria Avenue	6.9	4.3	6.0	3.6	4.8	2.8
Ventura Road and Gonzales Road	6.0	3.6	5.3	3.1	4.5	2.5
Ventura Road and Town Center Drive	5.1	3.0	4.7	2.7	4.2	2.4
Ventura Road and Vineyard Avenue	5.4	3.2	4.9	2.9	4.3	2.4
Ventura Road and Wagon Wheel Road	5.4	3.2	4.9	2.8	4.2	2.4
Vineyard Avenue and Esplanade Drive	6.5	3.9	5.7	3.4	4.7	2.7
Vineyard Avenue and Oxnard Boulevard	6.7	4.1	5.9	3.5	4.8	2.8
Vineyard Avenue and Stroube Street	5.6	3.3	5.0	2.9	4.3	2.4
Vineyard Avenue and Myrtle Street	6.3	3.8	5.5	3.3	4.5	2.6
Wagon Wheel Road and US 101 Southbound Ramps	5.1	3.0	4.7	2.7	4.1	2.3

Source: Impact Sciences, Inc. Emissions calculations are provided in Appendix 4.8.
[1] State standard is 20.0 parts per million. Federal standard is 35 parts per million.
[2] State standard is 9.1 parts per million. Federal standard is 9.5 parts per million.

On-Site Emissions

The Specific Plan Area presently consists of various land uses, including active concrete, asphalt and recycling plants on the mine site, the Ventura County El Rio Maintenance Yard, office buildings,

4 Ventura County Air Pollution Control District, Air Quality Planning and Evaluation Section: Guidelines for the Preparation of Air Guidelines for the Preparation of Air Quality Impact Analyses, p. 6-2.

agricultural uses and commercial uses. Of these uses, the existing Hanson Aggregates Mine Site in RiverPark Area 'B' constitutes the largest land use in terms of size. The Hanson Aggregates Mine Site is one of several sand and gravel mining sites located along the eastern edge of the Santa Clara River. The site includes the plant area, a stockpile area and three open mining pits. Mining of the site began in the early 1950's. While mining activities have ceased, the processing facilities are still in use. The active plant facilities include two ready mix concrete batch plants operated by Associated Ready Mix, an asphalt plant operated by Sully Miller, a recycling plant operated by Hanson Aggregates, and related shop areas and offices. Hanson Aggregates has recently removed some facilities and completed other site maintenance activities in accordance with the approved reclamation plan for the site. Over the past year Hanson Aggregates has removed a rock and sand plant, various equipment in other locations on the property, an underground asphalt oil tank, and three transformers. The remainder of the mine site consists of disturbed open space areas primarily made up of exposed soils and sediment piles. All roads on the mine site are unpaved. These existing conditions result in the generation of fugitive dust during windy conditions.

The agricultural fields within the Specific Plan Area, which are presently under cultivation with strawberries, also generate fugitive dust during periods when the fields are being plowed, prepared for planting and cleared. The remaining existing uses within the Specific Plan Area do not generate fugitive dust or substantial amounts of other air emissions.

Asbestos Containing Building Materials

Structures constructed or remolded between 1930 and 1981 have the potential of asbestos containing building materials (ACBM). These materials can include, but are not limited to: resilient floor coverings, drywall joint compounds, acoustic ceiling tiles, piping insulation, electrical insulation and fireproofing materials.

PROJECT IMPACTS

Thresholds of Significance

For purposes of this analysis, the City of Oxnard is using the following thresholds contained in the November 2000 *Ventura County Air Quality Assessment Guidelines* published by the APCD. The APCD has developed significance threshold criteria to evaluate the potential impacts of proposed projects within Ventura County. Consistent with these thresholds, the proposed project would have a significant project level air quality impact if it would:

- Generate daily operational emissions of greater than 25 pounds per day (ppd) ROC or NO_X;
- Cause an ambient air quality standard (State or Federal) to be exceeded, or make a substantial contribution to an already exceeded air quality standard. In this context, "substantial" is defined as making the ambient pollutant level measurably worse;[5]
- Create a human health hazard by subjecting sensitive receptors to harmful toxic air emissions; or,
- Subject persons to objectionable odors.

Construction Impacts

During construction, on-site stationary sources, heavy-duty construction vehicles, construction worker vehicles, and energy use would generate air emissions. In addition to construction vehicle emissions, fugitive dust would also be generated during grading and construction activities over the entire 701-acre Specific Plan Area. Approximately 10 million yards of earth materials will be graded. A balanced grading program involving excavation and replacement of these 10 million cubic yards of material within the Specific Plan Area is planned. The majority of this grading would consist of the excavation and replacement of earth in RiverPark Area 'B.'

In RiverPark Area 'A,' the existing elevations range from approximately 70 to 90 feet. The maximum cut or fill in RiverPark Area 'A' will be about 7 feet with an average of 5 feet of material that will need to be removed and re-compacted. Overall, approximately 1.9 million cubic yards of earth materials will be excavated in RiverPark Area 'A'. The resulting grades will be 75 to 90 feet.

In RiverPark Area 'B', approximately 7.8 million cubic yards of earth will be excavated. The majority of this material, approximately 5.95 million yards, will be excavated in the southern area of the Specific Plan Area. The existing elevations vary from approximately 70 to 115 feet in RiverPark Area 'B'. After grading, the elevations will vary from 80 to 100 feet. In order to create the planned grades some material will be relocated between areas in RiverPark Areas 'A' and 'B'.

Earthmovers typically generate approximately 21.8 pounds of airborne dust per hour of operation. Assuming an average use of five earthmovers during grading activities, this equates to approximately 872 pounds of dust generated per day. While much of this airborne dust would settle on, or near, the area being graded, smaller particles would remain in the atmosphere, increasing existing particulate levels within the surrounding area. Standard dust control techniques typically reduce the amount of airborne dust generated by construction activities by an average of 70 percent. Some health problems,

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5 Ventura County Air Pollution Control District, Ventura County Air Quality Assessment Guidelines, November 2000, p. 3-5.

particularly those of the eye and respiratory tract (i.e., Coccidioidomycosis or its common name Valley Fever), may be aggravated by fugitive dust. (Valley fever is contracted through breathing spores that become airborne through disturbance of the soil.) However, Ventura County has not been recognized as an area where Coccidioidomycosis is highly endemic.[6] The only large scale outbreak in the County occurred in Simi Valley between January 24 and March 15, 1994 following the Northridge earthquake due to uncontrolled dust clouds created by landslides.[7] Because these construction-related emissions are only temporary, the APCD considers construction related air quality impacts to be less than significant, however, it recommends the implementation of mitigation measures. These measures are identified later in this EIR section.

Demolition of the existing buildings on the mine site and in the El Rio Maintenance Yard could result in the disturbance of friable asbestos containing building materials, given the age of these existing structures. Potential health and safety impacts are associated with the release of asbestos into the air. However, all demolition activities would be subject to regulations. Specifically, demolition activities are required to conform with the National Emissions Standards for Hazardous Air Pollutants (NESHAP) as well as APCD Rule 62.7 on Asbestos, Demolition and Renovation. This rule is intended to limit asbestos emissions from demolition or renovation of structures and the associated disturbance of asbestos-containing waste generated or handled during these activities.[8] Conformance with these regulations would ensure that any emissions of asbestos would be contained and not pose a significant health effect to workers. No significant impact would occur.

With regard to the particulate emissions associated with construction equipment, the ARB has classified diesel exhaust as a toxic air contaminant. The ARB is now studying the matter further. This process is anticipated to take several years before controls and regulations will be introduced for all sources of diesel emissions, including construction equipment, generators, school buses, and passenger vehicles. It will also take several years for the ARB to develop methodologies and/or models to assess the impacts of mobile diesel exhaust sources. The APCD does not require air toxic analyses for diesel sources. When the ARB develops methodologies and/or models for diesel exhaust emissions, the APCD will incorporate them into the *Ventura County Air Quality Assessment Guidelines* as guidance however, as construction operations occur over a relatively short time frame of up to a few years, the APCD does not consider exposure to construction air quality emissions, including diesel exhaust, to cause any significant impacts.

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6 Eileen Schneider and others, "A Coccidioidomycosis Outbreak Following the Northridge, Calif. Earthquake," Journal of American Medicine Vol. 277, No. 11 (March 19, 1997): 904.

7 Ibid.

8 Ventura County Air Pollution Control District, Ventura County Air Quality Assessment Guidelines, November 2000, p. 6-12.

Operational Emissions

After the proposed land uses within the Specific Plan Area are built and occupied, emissions would be generated by both stationary and mobile sources on a regular, day to day basis. Stationary emissions would be generated primarily as a result of natural gas consumption, landscape maintenance and consumer products. Mobile source emissions would be generated by motor vehicles traveling to, from, and within the project area.

Certain design features, consistent with the *ACPD Guidelines*, have been incorporated into the RiverPark Specific Plan. The *APCD Guidelines* state that addressing site design and land use issues at the conceptual stage of development maximizes opportunities to incorporate measures to reduce potential air quality impacts. Land use design features suggested in the *APCD Guidelines* which been incorporated into the RiverPark project include:[9]

- Encourage the development of higher density housing and employment centers near public transit corridors.
- Encourage compact development featuring a mix of uses that locates residences near jobs and services.
- Provide services, such as food services, banks, post offices, and other personal services within office parks and other large developments.
- Encourage infill development.
- Ensure that the design of streets, sidewalks, and bike paths within a development encourage walking and biking.
- Provide landscaping to reduce energy demand for cooling.

An estimate of the ROC and NO_X emissions that would be generated by the uses allowed by the proposed Specific Plan of the proposed project has been calculated using the URBEMIS7G computer model recommended for use by the APCD. This model was utilized as it is the most detailed methodology available to calculate project-related mobile emissions. This model takes into account planning features such as those listed above in the estimate of emissions. The emission estimates are presented below in Table 4.8-3.

As shown, the land uses allowed by the Specific Plan would generate total emissions that would exceed APCD recommended significance thresholds for ROC and NO_X emissions. This is a direct reflection of the amount of development allowed by the Specific Plan. Development of the uses allowed by the

[9] Ventura County Air Pollution Control District, Ventura County Air Quality Assessment Guidelines, November 2000, p. 1-5.

proposed Specific Plan would take place over a number of years. The beginning of construction is anticipated in 2002 with build-out of the allowed uses taking until 2020. As a result, operational emissions would not reach the estimated figures presented in Table 4.8-3 until full, maximum build-out of the land uses permitted by the Specific Plan. As these figures reflect the maximum allowable development within the Specific Plan Area, it is important to note that less development could occur. As such, the total emissions generated could be smaller than the amounts shown in Table 4.8-3. As both the ROC and NO_X emissions would exceed the thresholds of significance used in this analysis, the impact of the project on air quality is significant.

Table 4.8-3
Estimated Operational Emissions - Proposed RiverPark Project, Year 2020

		Emissions in Pounds per Day, Year 2020	
Emissions Source		ROC	NO_X
Mobile Sources		64.13	189.45
Stationary Sources		25.13	8.90
	Totals:	89.26	198.35
	Threshold:	25	25
	Exceeds Threshold?	YES	YES
	Exceeds Threshold by	64.26	173.35

Source: Impact Sciences, Inc. Emissions calculations are provided in Appendix 4.8.

CO Levels at Study Intersections with the Project

Because the APCD has not made future estimates of background CO levels, the background CO levels of 3.7 ppm for 1- hour concentration and 2.0 ppm for 8-hour concentration are used in the analysis of future CO concentrations. These figures represent the highest readings taken from the El Rio monitoring station between the beginning of 1996 and the end of 2000. This methodology assumes a conservative estimate in forecasting future CO background levels as background CO levels in southern California are expected to drop in the future as the use of cleaner technologies (fuel cells, alternative fuels, electric cars, etc.) becomes more prevalent in the vehicle fleet mix. The South Coast Air Quality Management District (SCAPCD) has, for instance, predicted substantial future drops for ambient concentrations of CO and other air pollutants in the South Coast Air Basin, which includes Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. Additionally, the CALINE4 model assumes worst-case conditions with regard to dispersal of pollutants, and traffic inputs to the model represent peak hour, maximum expected volumes.

The CO concentrations at study intersections estimated in this analysis is based on the City's traffic model and assume a cumulative analysis that includes trip generation over existing conditions due to the maximum allowed buildout of the proposed on-site uses, growth anticipated as a result of the *2020 General Plan* build-out of the City of Oxnard as well as regional growth (see Appendix 4.8). Therefore, the cumulative analysis prepared for this project analyzes a larger cumulative scope than typically analyzed. Estimates of future CO levels with the project are presented in Table 4.8-4.

Table 4.8-4
With Project Carbon Monoxide Concentrations

	25 Feet		50 Feet		100 Feet	
Intersection	1-Hour[1]	8-Hour[2]	1-Hour[1]	8-Hour[2]	1-Hour[1]	8-Hour[2]
Off-Site						
Gonzales Road and Oxnard Boulevard	5.7	3.4	5.2	3.1	4.5	2.5
Johnson Drive and Bristol Road	4.9	2.8	4.6	2.6	4.1	2.3
Johnson Drive and North Bank Drive	6.4	3.9	5.6	3.3	4.6	2.7
Johnson Drive and Ralston Street	4.2	2.3	4.0	2.2	3.9	2.1
Ralston Street and Victoria Avenue	5.2	3.1	4.8	2.8	4.2	2.4
Telephone Road and Victoria Avenue	5.1	3.0	4.8	2.7	4.2	2.4
Valentine Road and US 101	5.2	3.1	4.8	2.8	4.2	2.4
Valentine Road and Victoria Avenue	6.2	3.7	5.5	3.3	4.5	2.6
Ventura Road and Gonzales Road	5.7	3.4	5.1	3.0	4.4	2.5
Ventura Road and Town Center Drive	4.8	2.8	4.5	2.6	4.1	2.3
Ventura Road and Vineyard Avenue	5.2	3.1	4.8	2.8	4.2	2.4
Ventura Road and Wagon Wheel Road	5.2	3.0	4.8	2.7	4.2	2.3
Vineyard Avenue and Esplanade Drive	6.2	3.7	5.5	3.3	4.6	2.6
Vineyard Avenue and Oxnard Boulevard	6.1	3.7	5.4	3.2	4.6	2.6
Vineyard Avenue and Stroube Street	4.7	2.7	4.4	2.5	4.0	2.2
Vineyard Avenue and Simon Way	4.4	2.5	4.2	2.4	3.9	2.2
Vineyard Avenue and Myrtle Street	5.8	3.5	5.2	3.1	4.4	2.5
Wagon Wheel Road and US 101 Southbound Ramps	4.7	2.7	4.4	2.5	.0	2.2
On-Site						
Oxnard Boulevard and Town Center Drive	5.5	3.3	5.0	2.9	4.3	2.4
Oxnard Boulevard and Santa Clara River Boulevard	4.3	2.4	4.1	2.3	3.9	2.1
Oxnard Boulevard and South Park Drive	4.1	2.3	4.0	2.2	3.8	2.1
Oxnard Boulevard and North Park Drive	4.0	2.2	3.9	2.2	3.8	2.1
Santa Clara River Boulevard and South Park Drive	4.3	2.4	4.1	2.3	3.9	2.1
Santa Clara River Boulevard and Vineyard Avenue	4.6	2.6	4.3	2.4	4.0	2.2

Source: Impact Sciences, Inc. Emissions calculations are provided in Appendix 4.8.
[1] *State standard is 20.0 parts per million. Federal standard is 35 parts per million.*
[2] *State standard is 9.1 parts per million. Federal standard is 9.5 parts per million.*

As shown, future CO levels at the study intersections are expected to be similar to current levels with the inclusion of vehicle traffic generated by the project and other projects that have been approved or are pending approval. Future CO concentrations at all of the study intersections will be well below

Federal and State standards. As such, no significant CO concentrations will result from the increase in traffic associated with the proposed project.

Odors

Odors associated with the land uses allowed by the proposed Specific Plan Area would be similar in nature to other similar land uses. There are no planned uses that are expected to generate objectionable odors. The existing mine and agricultural uses would cease and odors associated with these uses would also cease. Should objectionable odors be generated by the proposed land uses and drift off the site, there would be the potential for impacts to the residential uses located east of the Specific Plan Area. However, the proposed project would be subject to APCD Rule 51 (Nuisance), which is based on the receipt and confirmation of citizen complaints regarding hazardous, odorous, or nuisance-causing substances that may be emitted by a project. Should the APCD receive a complaint, an APCD inspector would inspect the site and identify both the source(s) of the odor(s) and measures to alleviate the nuisance. Any complaints associated with odors from the Specific Plan Area would be investigated by APCD staff and turned over to the Ventura County Department of Environmental Health if necessary. APCD staff indicates that complaints are seldom received regarding odors from residential developments. Given the above, the potential for the proposed project to generate objectionable odors is not considered to be significant.

Odors created off-site that could potentially drift onto the Specific Plan Area would originate from surrounding residential and agricultural land uses, and the Santa Clara River. As discussed above, residential areas are not generally associated with objectionable odors. Noticeable odors can be generated by fertilizer and pesticide use in agricultural areas. The residential and industrial uses to the east of the Specific Plan Area provide a substantial buffer to the nearest agricultural land. The nearest agricultural land to any residential uses in the Specific Plan Area would be located approximately 1,500 feet to the northeast across Vineyard Avenue. With this physical separation, no odor impacts from the agricultural areas are anticipated. In addition, all aerial spraying of pesticides and fertilizers are subject to permits issued by the County of Ventura Agricultural Commissioner's Office. These conditions restrict spraying activities during high wind conditions. The Santa Clara River directly abuts the Specific Plan Area to the west and produces natural odors associated with microbial activity, flora, and fauna. However, the river is not subject to dumping or chemical treatment, and typically does not produce objectionable odors. In conclusion, proposed on-site land uses would not be subjected to objectionable levels of odor from off-site uses, and related impacts would be less than significant.

Human Health Risk — Off-Site Emissions

The Air Toxic "Hot Spots" Information and Assessment Act of 1987 (AB 2588) was adopted by the California Legislature in response to increasing public concern about emissions of toxic chemicals to the air. Under AB 2588, hot spot facility owners must produce a comprehensive inventory of routine releases of hundreds of toxic compounds to the air. Based on the results of the inventories, some facility owners have been required to perform health risk assessments to evaluate the impact of routine releases of toxins from their facilities. If the health risk assessment shows a significant risk, the facility operator will be required to notify the public of the results of the risk assessment. Further State legislation (SB 1731), effective January 1, 1993, requires emissions reductions from facilities that pose a significant health risk. This legislation does not, however, define what represents a "significant" level of risk. The County of Ventura has established a 10 in one million cancer risk and a 1.0 non-cancer hazard index as the criteria for determining what constitutes a significant level of risk from toxic air emissions facilities.

Per the provisions of AB 2588 and evaluation of the Toxic Air Contaminant Emissions Inventory for Ventura County by the APCD, 21 facilities in the vicinity (within an approximate quarter-mile radius) of the Specific Plan Area are on record. Of these 21 facilities, 15 are listed as 'tracking' while 6 are listed as 'under evaluation.' Based on available data, tracking facilities have been found to be unlikely to pose a significant health risk to nearby residents or workers, while facilities 'under evaluation' have demonstrated insufficient data to determine if the facility could pose a significant health risk to nearby residents or workers. It should be noted that all existing uses within the Toxic Air Contaminant Emissions Inventory have undergone project specific review. Therefore, any existing facility would be consistent with the provisions of AB 2588. Should toxic air emissions issues associated with any of the nearby facilities occur in the future, the obligation for complying with AB 2588 and other related legislation would be the responsibility of the facility in violation. This is due to legislative requirements intended to regulate and enforce against the operator causing the emissions. It should be noted that this analysis is only intended to discuss potential air quality impacts associated with the release of harmful air emissions from nearby stationary sources and not those of hazardous materials stored, handled or used on adjacent properties. Considering the above, toxic air emissions from facilities in the area would have a less than significant impact on the uses proposed by the project.

CUMULATIVE IMPACTS

Thresholds of Significance

For purposes of this analysis, the City of Oxnard is using the following thresholds contained in the November 2000 *Ventura County Air Quality Assessment Guidelines* published by the APCD. The APCD has developed significance threshold criteria to evaluate the potential impacts of proposed projects within Ventura County. Consistent with these thresholds, the proposed project would contribute to a significant cumulative air quality impact if it would:

- Generate operational emissions greater than 25 ppd of ROC or NO_X; or
- Generate more than 2.0 ppd of ROC, or 2.0 ppd of NO_X, and be inconsistent with the AQMP.

Operational Emissions

Referring to the significance thresholds stated above, a project would result in a significant impact if it results in a net increase in ROC and NO_X emissions above 25 pounds per day. Based on the air quality analysis prepared according to APCD standards, total operational emissions were calculated for the proposed project. As shown on Table 4.8-3, the project would exceed the 25 pounds per day threshold for ROC and NO_X by 89.26 and 198.35 pounds, respectively. Consequently, the proposed project would be considered to have cumulatively significant impacts with respect to ROC and NO_X emissions.

CO Concentrations at Study Intersections

Build-out of the uses allowed by the Specific Plan is anticipated by 2020. The analysis of 2020 CO concentrations at the studied intersections accounts for traffic volumes generated by the proposed project, build-out of the *City of Oxnard 2020 General Plan*, and regional growth, as discussed in the traffic study prepared for the project. Accordingly, the CO concentrations presented in Table 4.8-4 are also representative of cumulative CO concentrations. As shown in the table, predicted 2020 CO concentrations at the study intersections with the project and cumulative growth would not exceed the State 1-hour or 8-hour CO standards. Cumulative impacts with regards to CO concentrations would be less than significant.

AQMP Consistency

The November 2000 *Ventura County Air Quality Assessment Guidelines*, Section 4.2, Procedures for Determining Consistency with the AQMP states:

> *"Inconsistent projects are usually those that cause the existing population to exceed the population forecasts contained in the most recently adopted AQMP. In addition to addressing consistency with the population forecasts, the air quality impact assessment should also address project consistency with emission reduction strategies included in the AQMP. The AQMP contains a number of transportation and energy control measures that help to reduce project emissions. These can be used to help reduce a project's indirect emissions. Transportation and energy conservation control measures should be incorporated into the project design early in the planning process."*

Furthermore, Section 4.2.2 of the *Guidelines* states, "Any General Plan Amendment that will result in population growth above that forecasted in the most recently adopted AQMP is inconsistent with the AQMP. It will, therefore, have a significant cumulative adverse air quality impact." Because the proposed project includes a *General Plan* Amendment, the population increase of the RiverPark Project is compared to adopted population projections to determine if the project is inconsistent with current population forecasts and the AQMP.

The *Guidelines* state that the population forecasts contained in the AQMP should be used to determine AQMP consistency. However, if there are more recent population forecasts that have been adopted by the Ventura Council of Governments (VCOG), where the total county population is lower than that included in the most recently adopted AQMP, lead agencies may use the more recent VCOG forecasts for determining AQMP consistency.[10]

The current VCOG population forecasts for the Oxnard Growth Area is 162,623. This figure would then be compared to the growth area population target for the next year. Because the VCOG population figures are provided in five-year increments, the most recent population of the growth area is compared with the 2005 population forecasts. The 2005 VCOG population forecast for the Oxnard Growth Area is 170,215. When the total build-out population expected for the RiverPark Project of 7,217 is added to the current population of 162,623, the total is 169,840. This is below the projected population of 170,215. Therefore, the RiverPark Project would not result growth exceeding adopted population projections. Based on Section 4.2.2 of the *Guidelines*, the project is not considered inconsistent with the population forecast. It should be noted that the methodology for determining consistency with current growth

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10 Ventura County Air Pollution Control District, Ventura County Air Quality Assessment Guidelines, November 2000, p. 4-4, first footnote.

forecasts contained in the *Air Quality Assessment Guidelines* is conservative with respect to the RiverPark Project, as full build-out of the project is not anticipated before 2020.

With regard to transportation and energy control measures that help to reduce project emissions, transportation and energy conservation control measures have been incorporated into the proposed RiverPark Specific Plan. Such measures include, but are not limited to, extensive pedestrian paths and walkways, a complete bicycle circulation system, shade trees along pedestrian and bicycle paths and visually interesting pedestrian and bicycle paths. The mixed-use nature of the project and the planned land use layout emphasizes alternative modes of transportation and energy conservation. Through the integrated pedestrian and bicycle paths, residents will be able to access common destinations without leaving the Specific Plan Area and without using a motor vehicle. These measures have all been included within the proposed Specific Plan and have been accounted for in the air quality modeling air quality modeling through the adopted URBEMIS7G model approved for use by the VCAPCD. Based on Section 4.2 and 4.2.2 of the *Guidelines*, the proposed project does not exceed the VCOG forecasts as described above.

Furthermore, as a *General Plan* Amendment is part of the RiverPark Project, the project would be consistent with the *General Plan* once approved. Because the project is consistent with the AQMP and implements many of the adopted transportation and energy control measures, the project would not result in significant cumulative impacts because of inconsistency with the AQMP.

MITIGATION MEASURES

Construction

As stated previously, the APCD does not consider normal construction-related air quality impacts to be significant. However, the APCD does recommend mitigation measures to reduce emissions generated by construction activities. The following are recommended mitigation measures for construction-related air quality impacts.

Fugitive Dust Mitigation Measures

4.8-1 The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.

4.8-2 Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.

4.8-3 Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities:

- All trucks shall be required to cover their loads as required by California Vehicle Code § 23114
- All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.

4.8-4 Inactive graded and/or excavated areas shall be monitored at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally-safe dust suppressants, to prevent excessive fugitive dust.

4.8-5 Signs shall be posted on-site limiting traffic to 15 miles per hour or less.

4.8-6 During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off-site or on-site. The site superintendent/supervisor shall use his/her discretion in conjunction with the APCD in determining when winds are excessive.

4.8-7 Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

4.8-8 Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.

Valley Fever Mitigation Measures

4.8-9 Hire crews from local populations where possible, since it is more likely that they have been previously exposed to the fungus and are therefore immune.

4.8-10 Require crews to use respirators during project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health regulations.

4.8-11 Require that the cabs of grading and construction equipment be air-conditioned.

4.8-12 Require work crews to work upwind from excavation sites.

4.8-13 Pave construction roads.

4.8-14 Where acceptable to the fire department, control weed growth by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering.

4.8-15 During rough grading and site development, the primary access roads into the Specific Plan Area from adjoining paved roadways should be treated with environmentally-safe dust control agents.

ROC and NOx Mitigation Measures

4.8-16 Minimize equipment idling time.

4.8-17 Maintain equipment engines in good condition and in proper tune as per manufactures' specifications.

4.8-18 Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time.

4.8-19 Use alternatively fueled construction equipment, such as compressed natural gas (CNG), Liquefied natural gas (LNG), or electric, if feasible.

Operations Phase

As discussed earlier in this section, the proposed project would generate total emissions that would exceed APCD recommended significance thresholds for ROC and NO_X emissions. Consistent with the *ACPD Guidelines*, site design and land use features have been incorporated into the RiverPark project to reduce potential air quality impacts. Land use design features suggested by the *APCD Guidelines* which have been incorporated into the RiverPark project include:[11]

- Encourage the development of higher density housing and employment centers near public transit corridors.
- Encourage compact development featuring a mix of uses that locates residences near jobs and services.
- Provide services, such as food services, banks, post offices, and other personal services within office parks and other large developments.
- Encourage infill development.
- Ensure that the design of streets, sidewalks, and bike paths within a development encourage walking and biking.
- Provide landscaping to reduce energy demand for cooling.

Additional mitigation measures that shall be implemented to further reduce air quality impacts include:

4.8-20 Ensure that there will be adequate child-care facilities and services to serve the Specific Plan area.

4.8-21 Incorporate employee locker/shower/changing facilities into all non-residential buildings in the commercial portions of the Specific Plan area.

4.8-22 Plant and maintain shade trees and shrubs to reduce heat build-up on structures.

4.8-23 The master developer shall work with Caltrans to establish a park-and-ride lot in or near the Specific Plan area.

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11 Ventura County Air Pollution Control District, Ventura County Air Quality Assessment Guidelines, November 2000, p. 1-5.

Contribution to an off-site Transportation Demand Management (TDM) Fund is recommended by the APCD only after all feasible recommended measures have been applied to a project and significant emissions remain.

As shown in Table 4.8-5, significant emissions will remain even after all feasible mitigation measures are applied to the project.

Table 4.8-5
Estimated Operational Emission Reductions - Proposed RiverPark Project, Year 2020

Emissions Source	Emissions in Pounds per Day, Year 2020 ROC	NO_x
Project Emission Totals:	89.26	198.35
Emissions after Reduction	77.98	157.99
Threshold:	25	25
Exceeds Threshold?	YES	YES
Exceeds Threshold by	52.98	132.99

Source: Impact Sciences, Inc. Emissions calculations are provided in Appendix 4.8.

Accordingly, the following mitigation measure is recommended:

4.8-24 A TDM Fee Program shall be developed for the project and approved by the City of Oxnard prior to the issuance of the first building permit for any individual development project within the Specific Plan Area. This program shall define a methodology for determining the pro-rata share of the total TDM fee to be paid by each individual building project. The total amount of the TDM fee to be paid shall be based on project emissions calculated prior to approval of the first development project under the Specific Plan.

The TDM fees would be paid to the City of Oxnard for spending on emission reducing technologies and programs. The City has previously expended TDM funds to purchase clean fuel vehicles to replace older vehicles in the city's vehicle fleet and to use as matching grant funds to develop and expand bicycle paths. The City of Oxnard spends TDM Funds in a manner consistent with the most recent *APCD Guidelines*. The current guidelines address appropriate TDM fund expenditures on Page 7-19 of the 2000 *APCD Guidelines* and include funding mitigation projects or programs in areas directly or indirectly impacted by the development as well as establishing timelines for the funds to be spent.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant impacts to air quality will result from the RiverPark Project.

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4.9 NOISE

INTRODUCTION

Noise is usually defined as unwanted sound. It is an undesirable by-product of society's normal day-to-day activities. Generally, sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, or when it has adverse effects on health. The definition of noise as unwanted sound implies that it has an adverse effect on people and their environment.

CHARACTERISTICS OF NOISE

Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). The human ear does not respond uniformly to sounds at all frequencies, being less sensitive to low and high frequencies than to medium frequencies that correspond with human speech. In response to this noise condition, the A-weighted noise level (or scale) has been developed. It corresponds with a person's subjective judgment of sound levels. This A-weighted sound level is called the "noise level" referenced in units of dB(A). As stated, noise is measured on a logarithmic scale; a doubling of sound energy results in a 3 dB(A) increase in noise levels. However, changes in a community noise level of less than 3 dB(A) are not typically noticed by the human ear.[1] Changes from 3 to 5 dB(A) may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dB increase is readily noticeable, while the human ear perceives a doubling of sound to be a 10 dB increase in sound level.

Noise sources occur in two forms: (1) point sources, such as noise from stationary equipment; and (2) line sources, such as noise along a roadway with a large number of point sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6 dB for each doubling of distance from the source at acoustically "hard" sites and 7.5 dB at acoustically "soft" sites.[2] Sound generated by a line source typically attenuates at a rate of 3 dB and 4.5 dB per doubling of distance, for hard and soft sites, respectively.[3] Sound levels can also be attenuated by man-made or natural barriers, as illustrated in Figure 4.9-1.

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1 Federal Highway Administration, U.S. Department of Transportation: *Highway Noise Fundamentals*, p. 81. Springfield, Virginia: September 1980.

2 Federal Highway Administration, U.S. Department of Transportation: *Highway Noise Fundamentals*, p. 97. A "hard" or reflective site does not provide any excess ground-effect attenuation and is characteristic of asphalt, concrete, and very hard packed soils. An acoustically "soft" or absorptive site is characteristic of normal earth and most ground with vegetation.

3 Ibid., p. 97.

Screen walls, berms, or depressed roads typically reduce noise levels by 5 to 10 dB(A).[4] Sound levels for a source may also be attenuated 3 to 5 dB(A) by a first row of houses and 1.5 dB(A) for each additional row of homes. Exterior to interior noise attenuation provided by typical structures in the southern United States is provided in Table 4.9-1.

Table 4.9-1
Outside to Inside Noise Attenuation

Building Type	Noise Reduction - dB(A) Open Windows	Noise Reduction - dB(A) Closed Windows
Residences	12	20
Schools	12	20
Churches	20	30
Hospitals/Convalescent Homes	17	25
Offices	17	25
Theaters	20	30
Hotels/Motels	17	25

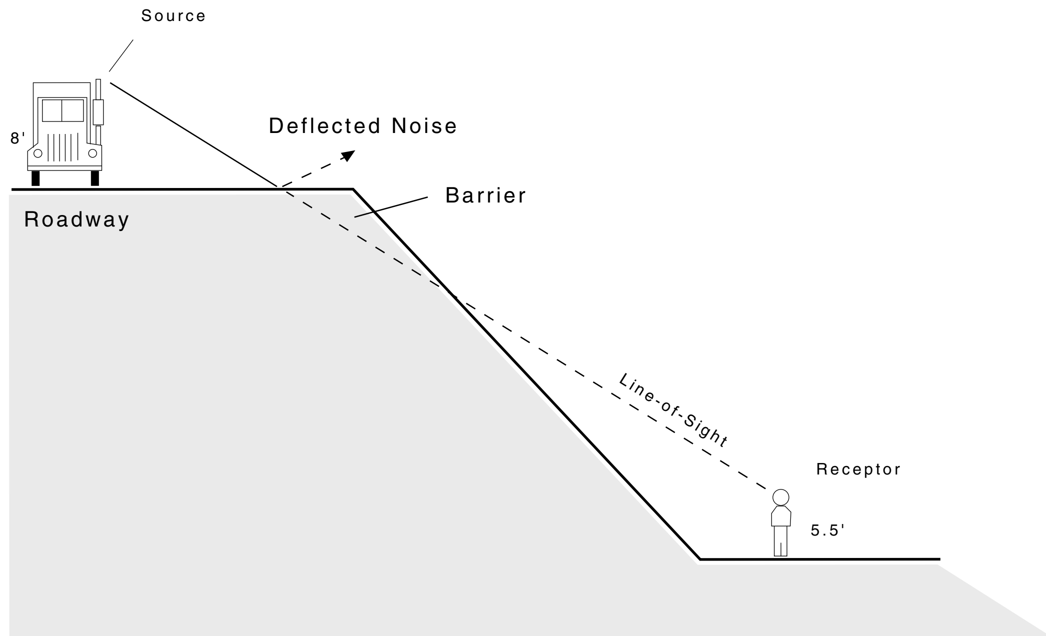
Source: Highway Noise Fundamentals, p. 117.

When assessing community reaction to noise, there is an obvious need for a scale, which averages noise levels over a longer time period. Several scales have been developed which address this issue. The most applicable are the equivalent noise level (L_{eq}) and the community noise equivalent level (CNEL). L_{eq} is the equivalent A-weighted sound level averaged over a given time interval. L_{eq} can be measured over any time period, but is typically measured for 1-minute, 15-minute, 1-hour, or 24-hour periods. CNEL is the average equivalent A-weighted sound levels that occur over a 24-hour day, obtained after the addition of five decibels to sound levels occurring during the evening from 7 PM to 10 PM, and the addition of ten decibels to sound levels occurring during the nighttime from 10 PM to 7 AM. The five- and ten-decibel penalties are applied because people have an increased sensitivity to noise during these time periods.

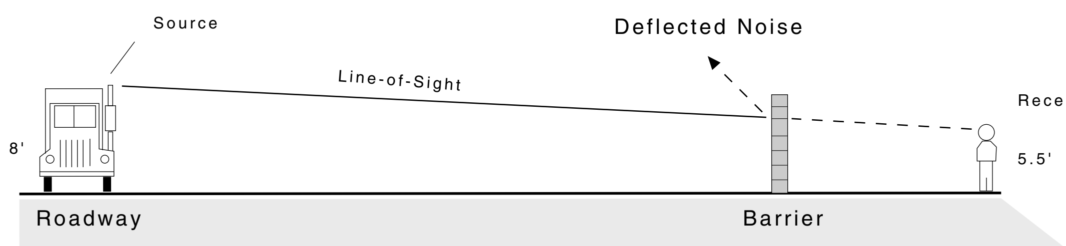
NOISE ANALYSIS METHODOLOGY

The purpose of the noise analysis is twofold: (1) to evaluate the RiverPark Project in terms of design to ensure that land uses are planned appropriately from a noise perspective; and (2) to evaluate the noise impact of the project on surrounding land uses.

4 Federal Highway Administration, U.S. Department of Transportation: *Highway Noise Mitigation*, p. 18. Springfield, Virginia: September 1980.



"Barrier Effect" Resulting from Differences in Elevation.



"Barrier Effect" Resulting from Typical Soundwall.

SOURCE: IMPACT SCIENCES, 1996, July, 2001.

FIGURE 4.9-1

Noise Attenuation by Barriers

The analysis of existing and future traffic noise presented in this section of the Draft EIR is based on noise level prediction modeling. Noise prediction modeling involves the calculation of vehicular noise levels along roadway segments in the project vicinity using the Federal Highway Administration Highway Noise Prediction Model (FHWA-RD-77-108). Current and future traffic volumes used data obtained from the project traffic report and additional information provided by the traffic engineer. The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and on site environmental conditions (i.e., topography, barriers, etc.). Noise energy rates utilized in the FHWA Model have been modified to reflect average vehicle noise energy rates identified by the California Department of Transportation.[5]

In addition to forecasting roadway noise levels, an acoustical analysis was conducted for a ballpark that could be developed within the Specific Plan Area subject to a special use permit.[6] Although the ballpark would be used primarily for sporting events, the noise analysis is based on amplified concert events which represents a worst case scenario with regards to noise impacts resulting from ballpark use.

PLANS AND POLICIES FOR NOISE CONTROL

Plans and policies that pertain to noise and its effect of the surrounding environs are discussed below. These plans and policies include: (1) the City of Oxnard *2020 General Plan* Noise Element and Ordinance; and (2) the State of California, Department of Environmental Health, Office of Noise Control guidelines for noise and land use compatibility.

City of Oxnard *2020 General Plan*

The California Government Code requires that a noise element be included in the *General Plan* of each county and city in the state. Local government goals, objectives, and policies for noise control are established by the noise element of the *General Plan* and the passage of specific noise ordinances. The City of Oxnard has adopted a noise ordinance and also uses the Noise Element of the *2020 General Plan* as the basis for the adoption and enforcement of noise standards. The objectives and policies identified in the Noise Element of the *General Plan* regarding the noise environment that pertain to this proposed project are as follows:

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5 Rudolf W. Hendriks, California Department of Transportation: *California Vehicle Noise Emission Levels*, Sacramento, California, January 1987, NTIS, FHWA/CA/TL-87/03.

6 Shen, Milsom, Wilke & Paoletti, Inc., February 2001.

Objectives

1. Provide acceptable noise levels for residential and other noise-sensitive land uses consistent with State guidelines.

2. Protect noise sensitive uses from areas with high ambient noise levels.

Policies

a) The City should encourage land uses that are not noise sensitive in areas that are permanently committed to noise-producing land uses, such as transportation corridors.

b) The City shall promote, where feasible, alternative sound attenuation measures other than the traditional wall barrier. These may include berms, a combination of berms and landscaping, or relocating buildings away from the roadway or other noise source.

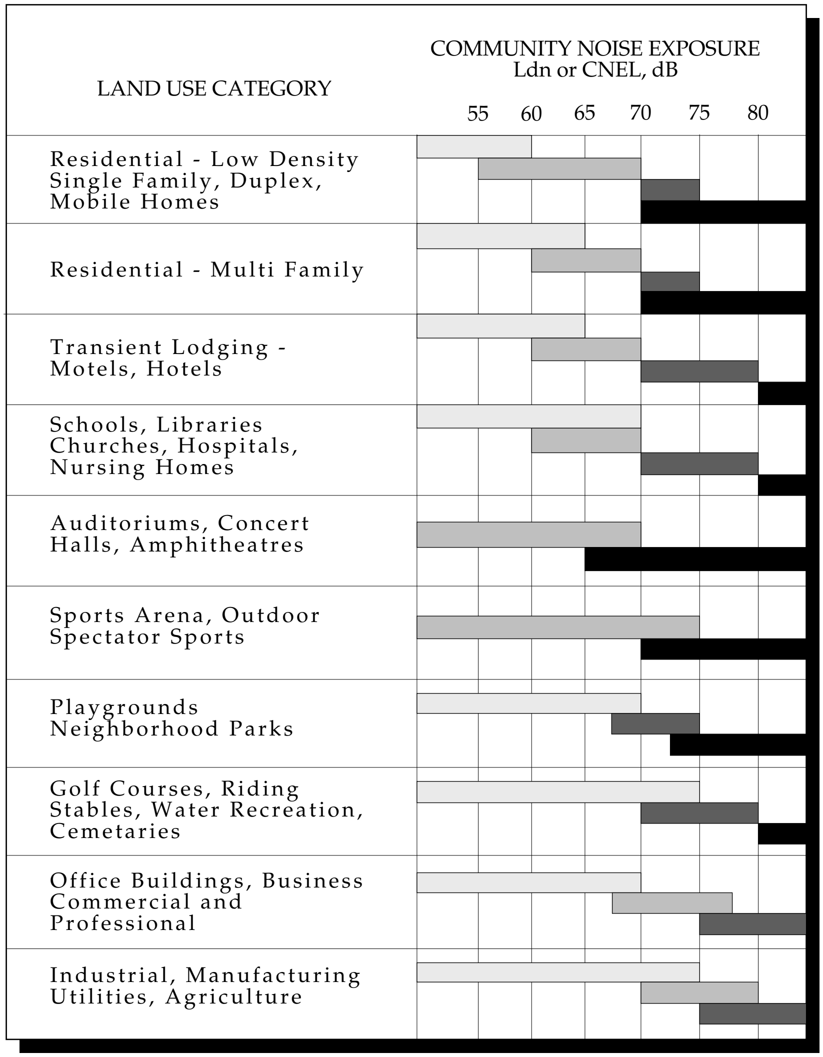
c) Proposed development projects shall not generate more noise than classified as "satisfactory," as determined by the noise compatibility standards, on nearby property. Project applicants shall reduce or buffer the noise generated by their projects.

d) The City shall continue to enforce State Noise Insulation Standards for proposed projects (such as the proposed project) in suspected high noise environments. The Planning Division shall notify prospective developers that, as a condition of permit issuance, they must comply with noise mitigation measures which are designed by an acoustical engineer. No building permits will be issued without City staff approval of the acoustical report/design.

California Department of Environmental Health

The State of California, Department of Environmental Health (CDEH) Office of Noise Control, also published recommended guidelines for mobile source noise and land use compatibility. Each jurisdiction is required to consider these guidelines when developing its *General Plan* Noise Element and determining the acceptable noise levels within its community. The City of Oxnard defers to these guidelines when assessing a project's noise compatibility with motor vehicle noise sources. These guidelines are illustrated in Figure 4.9-2.

As shown, the State and City typically consider an exterior noise level of 60 dB(A) CNEL as the value which separates normally acceptable noise from conditionally acceptable levels for single family detached residential uses. A noise level of 65 dB(A) CNEL typically separates normally acceptable and conditionally acceptable noise conditions for multi-family units and transient lodging. A noise level of 70 dB(A) CNEL is typically used to divide acceptable and unacceptable noise for all noise sensitive uses.



NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new constuction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise reduction features included in the design.

CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

SOURCE: California Department of Health, Office of Noise Control, Guidelines for the Preparation and Content of Noise Elements of The General Plan, February 1976.

FIGURE **4.9-2**

Land Use Compatibility Guidelines for Noise

ENVIRONMENTAL SETTING

Dominant noise sources on and near the Specific Plan Area include vehicular traffic traveling along the local roadway system, operations at the on-site sand and gravel mine, as well as agricultural operations. Each of these noise sources are discussed and described below.

Traffic Noise

In order to characterize the existing ambient noise environment, noise levels created by vehicular traffic traveling along the roadway segments which would be most affected by the project were calculated. Noise sensitive uses located along these roadways were identified as uses that could be potentially impacted by increases in traffic noise. The results are presented below in Table 4.9-2.

Table 4.9-2
Existing Roadway Noise Levels

ROADWAY	Land Uses along Roadway Segments	dB(A) CNEL[1]
VINEYARD		
Los Angeles/Central	Residential	67.9
Simon/Stroube	Residential	64.8
Stroube/Ventura	Residential/School	64.7
VENTURA		
Wagon Wheel/Vineyard	Residential	72.6
Vineyard/Gonzales	Residential	76.9
OXNARD		
Gonzales/Vineyard	Residential	78.2
GONZALES		
Ventura/Oxnard	Residential/Medical Clinic	74.9
WAGON WHEEL		
Esplanade/US 101 SB Ramps	Residential/Motel	55.6
STROUBE		
East of Vineyard	Residential	55.7
JOHNSON		
Telephone/Ralston	Residential/School	67.2
Ralston/Bristol	Residential	69.2
Bristol/North Bank	Residential	73.1
VICTORIA		
Valentine/Telephone	Residential	78.1
TELEPHONE		
Victoria/Johnson	School/Church	67.2
RALSTON		
Victoria/Johnson	Residential	63.0
VALENTINE		
Victoria/US 101 SB Ramps	Hotel	63.7

1 Distance from centerline is variable based on existing roadway configurations
Source: Impact Sciences, Inc. Calculations provided in Appendix 4.9.

As shown in Table 4.9-2, the majority of noise sensitive land uses along the studied roadway segments presently experience noise levels between 55.6 and 78.2 dB(A) CNEL. Specific noise sensitive uses include multi- and single-family residential uses, as well as schools, motels, hotels, and churches.

Sand and Gravel Mine

The Hanson Aggregates Mine Site, which makes up RiverPark Area 'B', is one of several sand and gravel mining sites located along the eastern edge of the Santa Clara River. Mining on this site has ceased. Active plant facilities on the mine site include two ready mix concrete batch plants operated by Associated Ready Mix, an asphalt plant operated by Sully Miller, a recycling plant operated by Hanson Aggregates, and related shop areas and offices. Hanson Aggregates has recently removed some facilities and completed other site maintenance activities in accordance with the approved reclamation plan for the site. Over the past year Hanson Aggregates has removed a rock and sand plant, various equipment in other locations on the property, an underground asphalt oil tank, and three transformer. Primary noise associated with the remaining on site facilities include the operational noise generated from the plant facilities as well as the mobile source noise generated from trucks entering and leaving the site. Noise generated from the sand and gravel mine site will cease when the existing plants and related activities cease.

Agricultural Operations

Agricultural activities consisting of the cultivating and growing of row crops occurs on site. Tractors and similar mechanized equipment of typical sizes used on Ventura County farms produce noise levels in the range of 75 to 85 dB(A) at 50 feet.[7] The on-site agricultural uses presently exist south of the Hanson Aggregates property. Both single and multi-family homes, which exists east of the agricultural fields, experiences noise from the adjacent farming operations. At build out of the Specific Plan, the existing agricultural fields would be developed and, consequently, noise associated with the agricultural operations would cease. As a result, the residential uses would no longer experience farming operation noise.

PROJECT IMPACTS

Thresholds of Significance

Noise thresholds used by the City of Oxnard consider both the Noise Compatibility Criteria (Figure 4.9-2) and community responses to changes in noise levels. Changes in a noise level of less than 3 dB(A) are not typically noticed by the human ear.[8] Changes from 3 to 5 dB(A) may be noticed by some individuals who are sensitive to changes in noise. A 5 dB(A) increase is readily noticeable. Based on this information, the City of Oxnard has selected the following thresholds for this analysis:

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7 Ventura County *General Plan*, *Hazards Appendix*, May 24, 1988.
8 Federal Highway Administration, *Highway Noise Fundamentals*, 1980.

1. An increase of 5 dB(A) or greater in noise levels that occurs from project-related activities would be considered noticeable, but not significant, if the resulting noise level would be within the acceptable range as identified in the *General Plan*. However, an increase of 3 dB(A) or greater in noise levels that occur from project-related activities would be significant if the resulting noise level would be greater than the acceptable range as identified in the *General Plan*.
2. Noise associated with the operation of any facility within the Specific Plan Area is considered significant if it would create, maintain, cause or allow the sound level, when measured on any other property, to exceed the allowable exterior sound level for a cumulative period of more than thirty (30) minutes in any hour.
3. Construction noise is considered significant when it exceeds the levels in identified below in Table 4.9-3. Additionally, the City has adopted a Noise Ordinance which regulate the permitted hours of construction. As stated in §19-60.9, construction activity is permitted between the hours of 7 AM and 6 PM Monday through Saturday. As shown, mobile construction noise sources that would exceed 75 dB(A) Leq at single family residences during permitted construction hours would result in a significant impact, while stationary noise sources exceeding 60 dB(A) L_{eq} at single family residences would result in a significant impact.

Table 4.9-3
Construction Equipment Noise Thresholds

Residential Structures			
	Single Family Residential	Multi-Family Residential	Commercial[1]
Mobile Equipment: Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment:			
Daily, except Sundays and legal holidays, 7:00 AM to 8:00 PM	75 dB(A) L_{eq}	80 dB(A) L_{eq}	85 dB(A) L_{eq}
Daily, 8:00 PM to 7:00 AM and all day Sunday and legal holidays	60 dB(A) L_{eq}	64 dB(A) L_{eq}	70 dB(A) L_{eq}
Stationary Equipment: Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment:			
Daily, except Sundays and legal holidays, 7:00 AM to 8:00 PM	60 dB(A) L_{eq}	65 dB(A) L_{eq}	70 dB(A) L_{eq}
Daily, 8:00 PM to 7:00 AM and all day Sunday and legal holidays	50 dB(A) L_{eq}	55 dB(A) L_{eq}	60 dB(A) L_{eq}
Business Structures			
		All Structures	
Mobile Equipment: Maximum noise levels for nonscheduled, intermittent, short-term operation of mobile equipment:			
Daily, including Sunday and legal holidays, all hours		85 dB(A) L_{eq}	

[1] *Refers to residential structures within a commercial area. This standard does not apply to commercial structures.*

Project Impacts

Construction Impacts

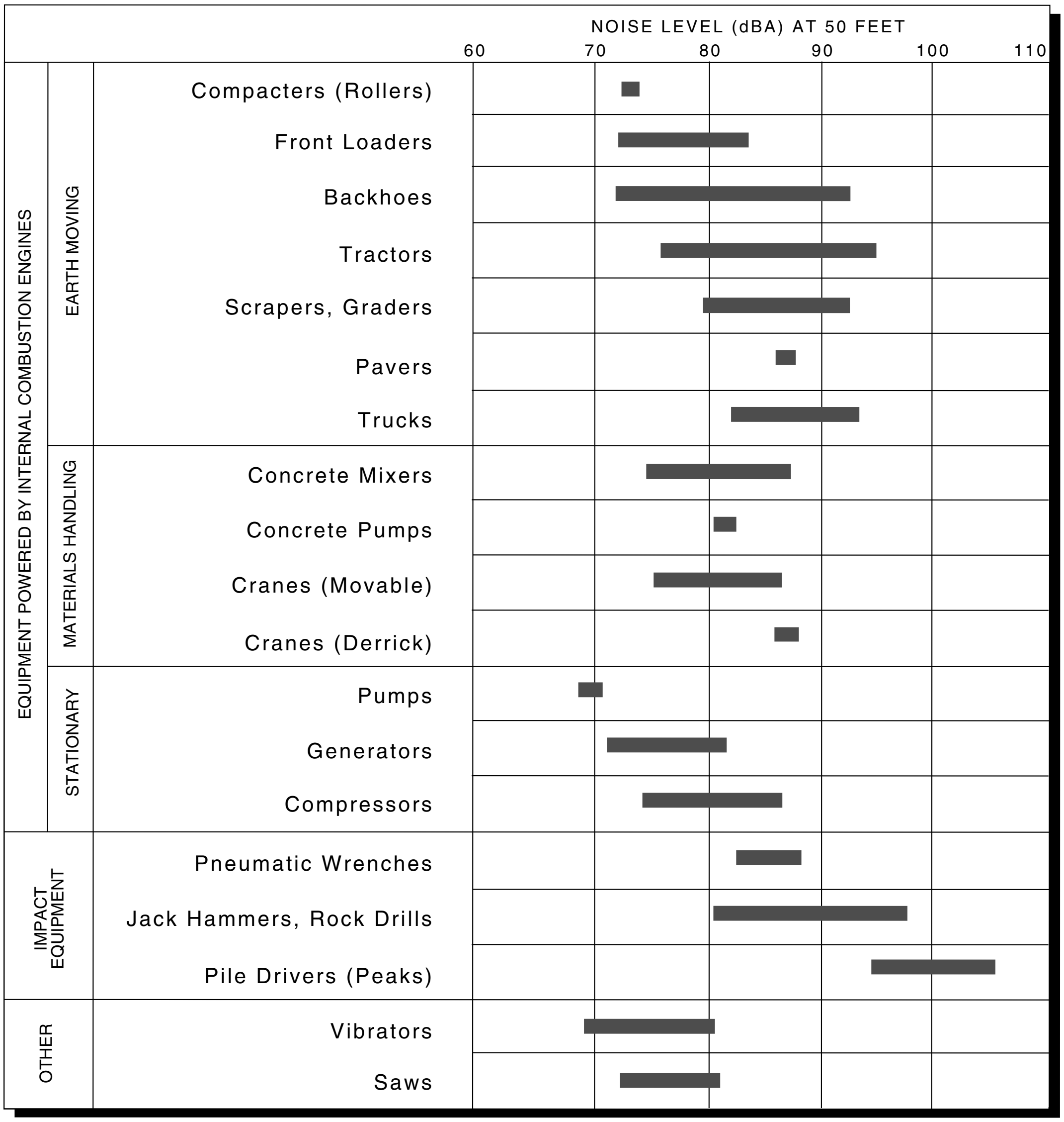
The U.S. Environmental Protection Agency has compiled data regarding the noise generating characteristics of specific types of construction equipment. These data are presented in Figure 4.9-3. As shown, noise levels generated by heavy equipment can range from approximately 68 dB(A) to noise levels in excess of 100 dB(A) when measured at 50 feet. These noise levels decrease rapidly as distance from the construction site increases. Specifically, noise levels diminish at a rate of approximately 6 dB(A) per doubling of distance. For example, a noise level of 68 dB(A) measured at 50 feet from the noise source to the receptor would reduce to 62 dB(A) at 100 feet from the source to the receptor, and further reduced by another 6 dB(A) to 56 dB(A) at 200 feet from the source to the receptor.

Development of the proposed RiverPark Project would involve two main phases of construction activities. First, overall site development, involving mass grading and construction of all major infrastructure and primary roadways would occur over the entire Specific Plan Area. The second phase of construction would consist of the construction of individual building projects within the Specific Plan Area. Construction of individual building projects is projected to occur periodically from 2002 to 2020. Equipment used would range from heavy machinery such as graders, scrapers, tractors, loaders and cranes during site development, to jackhammers, pneumatic tools, saws, and hammers during individual building projects. This equipment would generate both steady state and episodic noise that would be heard both on and off the Specific Plan Area. Potential noise impacts are analyzed separately for the site development and individual building projects.

Site Development

Site development of the RiverPark Project would involve rough grading and site preparation activities occurring over an estimated 12 month period. As discussed in Section 2.0, Environmental Setting, the Specific Plan Area consists of two primary development areas, RiverPark Area 'A' and RiverPark Area 'B'. As illustrated in Figure 4.9-4, RiverPark Area 'A' is primarily comprised of agricultural fields while RiverPark Area 'B' is primarily comprised of the Hanson Aggregates Property.

RiverPark Area 'A' is bordered by the El Rio West Residential Neighborhood to the east, the Ventura Freeway to the south and the Santa Clara River to the west. RiverPark Area 'B' is bordered by industrial uses to the north, Vineyard Avenue, the El Rio Community and agricultural uses to the east and the El Rio West Neighborhood to the south. RiverPark Area 'A' is currently under agricultural



Note: Based on limited available data samples.

SOURCE: United States Environmental Protection Agency, 1971, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," NTID 300-1.

FIGURE **4.9-3**

Noise Levels of Typical Constructon Equipment

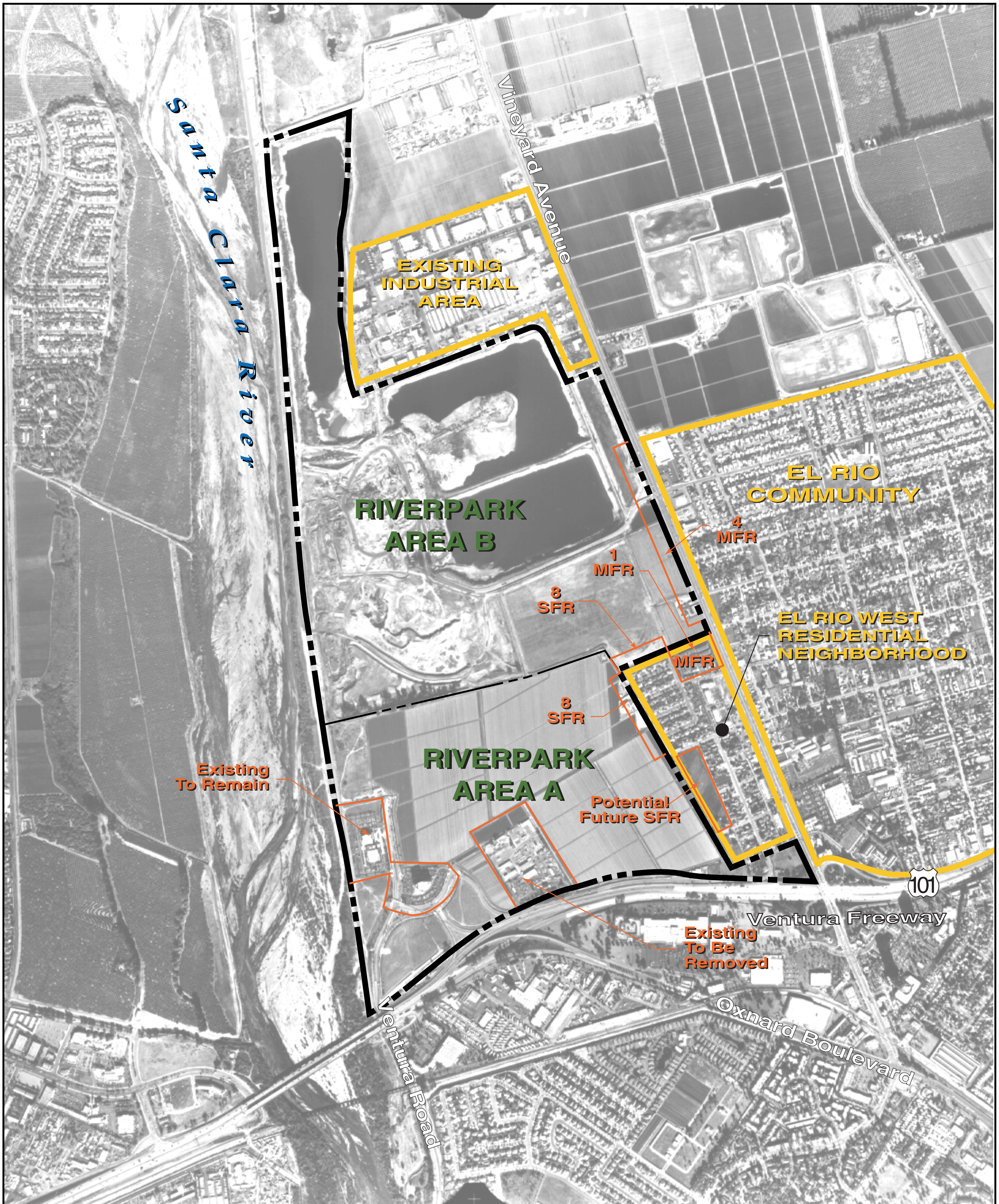


FIGURE **4.9-4**

Development Areas and Surrounding Land Uses production and is relatively flat. Grading and site preparation requirements in RiverPark Area 'A' are not the same as those for RiverPark Area 'B'. RiverPark Area 'B' has historically been used for sand and gravel mining activities. As a result, soils in the area consist of uncompacted sandy soils unsuitable for development. Additionally, there are three existing mint pits as well as the existing El Rio Retention Basins 1 and 2 in RiverPark Area 'B'. These areas would require extensive earthwork in order to properly engineer the soils to accommodate the proposed land uses. As a result of these existing conditions the RiverPark Area 'B' area would require greater amounts of grading and site preparation.

Site development activities, which involve the use of backhoes, tractors, scrapers, graders, and trucks, would be conducted throughout the Specific Plan Area, and in the case of the El Rio West Neighborhood, immediately adjacent to existing residences. As one can see by referencing Figure 4.9-3, equipment used during the site development and preparation activities typically generate the loudest noise levels of all standard construction equipment. These noise levels would primarily affect adjacent land uses, as there would not be any on site uses during this construction phase. Specifically, adjacent land uses include residential uses in the El Rio West Neighborhood to the east of the Specific Plan Area with some industrial uses to the north and existing mid-rise offices in the southwest corner of the plan area. However, of these adjacent uses, only the residences in the El Rio West Neighborhood and El Rio Community, as shown on Figure 4.9-4, would be sensitive to noise generated from the construction activities. El Rio West is located directly adjacent to RiverPark Area 'A' and 'B', while the El Rio Community is separated from RiverPark Area 'B' by Vineyard Avenue. The El Rio Community has four residences fronting the RiverPark Specific Plan Area separated by Vineyard Avenue, while El Rio West has a total of sixteen (16) single-family residences and one multi-family complex directly fronting the plan area. Of these, eight residences directly front RiverPark Area 'A' with the remaining eight residences and the multi-family complex front RiverPark Area 'B'. Due to the proximity of El Rio West to the construction area, noise levels resulting from construction activities would be greater at these residences than the four located in the El Rio Community. The El Rio West residences would receive unattenuated sound waves from the on site construction activities, while concurrently providing attenuation to the El Rio West residences directly adjacent to them. Unattenuated noise levels at the residences fronting the Specific Plan Area could exceed 95 dB(A) during grading activities in which the grading equipment is operating along the project boundary. It should be noted that these noise levels would only occur as grading and site preparation activities are occurring in the vicinity of the sensitive receptors. When compared to the noise thresholds identified in Table 4.9-3, the short-term 95 dB(A) noise level generated by the heavy grading equipment would exceed the threshold and result in a significant impact.

Individual Building Projects

As discussed above, the site development phase of the proposed project would last approximately 12 months. During this time, all infrastructure and major topographic grades would be established in preparation for development of the individual building projects. After the initial site development is completed, build-out of the allowed uses would begin. Full build-out of the Specific Plan Area is assumed by 2020. No pre-determined phasing plan has been developed to guide which uses would be developed when and where within the Specific Plan Area. Therefore, there is not enough information available at this time to fully assess potential development and construction noise impacts on both on and off-site locations without making several assumptions, which are discussed below.

On-Site

As individual building projects are carried out, potential construction noise impacts to on-site uses could occur. Again, as no phasing plan exists, no specific land use orientations or configurations exist from which to base potential construction noise impacts to future on-site uses.

However, all future building project construction activities would be subject to noise regulations outlined within the City's Noise Ordinance. Specifically, §19-60.9 of the Oxnard Noise Ordinance limits the hours of construction between 7 AM and 6 PM Monday through Saturday. For the purposes of this analysis, the residential and school uses proposed for the RiverPark Project would be considered sensitive receptors and basing noise impacts at these receptors represents a worst-case noise analysis for potential future on-site construction noise impacts. Furthermore, is reasonable to assume that development immediately adjacent to constructed future uses would have a direct line of site to the construction activity which would result in unattenuated noise levels at these adjacent land uses. Based on a reasonably worst case scenario, and comparing typical construction equipment noise identified on Figure 4.9-3 with the construction thresholds presented in Table 4.9-3, it is reasonable to infer that construction activities adjacent to sensitive receptors would exceed the thresholds for construction noise and result in a significant impact.

Off-Site

As with potential construction noise impacts to on site uses as a result of individual building projects, potential construction noise impacts to existing and proposed off-site uses could also occur. As discussed earlier, the El Rio West and El Rio Community currently exist adjacent to the RiverPark Project Area. Additionally, there is a potential for development of an existing vacant parcel within the El Rio West area that is immediately adjacent to the RiverPark Area 'A' area. For the purposes of this discussion, assuming that this parcel would be developed with single family residences would assume a worst case scenario with respect to potential construction noise impacts to off-site locations, as single family residences are considered sensitive receptors.

Again, §19-60.9 of the Oxnard Noise Ordinance limits the hours of construction between 7 AM and 6 PM Monday through Saturday. Construction activities are not permitted to occur outside of this time range except for emergency situations. Again, for the purposes of this analysis, the residential uses adjacent to the RiverPark Project, specifically in the El Rio West Neighborhood would be considered sensitive receptors and analyzing noise impacts at these receptors represents a worst-case noise analysis for potential future off-site construction noise impacts. Furthermore, it is reasonable to assume that development immediately adjacent to constructed future uses would have a direct line of site to the construction activity which would result in unattenuated noise levels at these adjacent land uses. Based on a reasonably worst case scenario, and comparing typical construction equipment noise identified on Figure 4.9-3 with the construction thresholds presented in Table 4.9-3, it is reasonable to conclude that individual building projects adjacent to sensitive receptors would exceed the thresholds for construction noise and result in a significant impact.

Mobile Construction Noise

Another aspect of construction related noise involves the use of heavy trucks to haul equipment and materials to the site, as well as transport debris. Additionally, all workers would most likely be transported to the site by automobiles utilizing the local roadway system which would in-turn generate additional noise. However, as Vineyard Avenue currently experiences traffic volumes in excess of 20,000 ADT, the addition of related construction workers to the roadway's ADT would not result in a noticeable difference in ambient noise levels. It should be noted that the RiverPark Project would balance all soils on site. Therefore, the project would not require the use of truck haul routes to either import or export soils which is a substantial factor in potential off site noise impacts. Impacts resulting from mobile construction noise would not be significant.

Operational Impacts

Potential noise impacts could also result from operational activities both on and off the RiverPark Project area. These impacts are attributable to mobile source noise, stationary source noise and human activity. Each of these potential noise sources is described below.

Mobile Source Noise

Mobile source noise associated with buildout of the proposed project could affect the surrounding environment in two possible ways. First, traffic noise can potentially impact receptors located within the Specific Plan Area and secondly, traffic noise can potentially impact off site uses. Both, on and off-site noise impacts associated with vehicular noise are discussed below.

On Site Roadway Noise

In order to help guide and configure the land uses into areas considered acceptable according to the land use compatibility guidelines, Table 4.9-4 identifies those land use types planned for the specified roadway segments and compares them with the predicted noise levels based on traffic volumes forecasted in the traffic study.

Table 4.9-4
Future On-site Noise Contours and Land Use Types

ROADWAY Segment	Planned Land Uses	Distance from Center of Roadway: CNEL at 75 feet	75 dB(A) CNEL	Noise Contour (ft.): 70 dB(A) CNEL	65 dB(A) CNEL	60 dB(A) CNEL
OXNARD BOULEVARD						
US 101/Town Center	Commercial	68.3	45	64	117	243
Town Center/Santa Clara River	Commercial/ Mixed Use	63.6	29	38	65	132
South Park/North Park	Multi-Family	59.6	27	30	41	71
North of North Park	Single Family	56.6	27	38	33	50
SOUTH PARK DRIVE						
Santa Clara River/Oxnard	Single Family/ Multi-Family	56.8	20	24	30	49
West of Oxnard	Single Family/ Multi-Family	49.4	<10	<10	12	18
SANTA CLARA RIVER BOULEVARD						
Vineyard/South Park	Single Family/School	63.0	40	44	60	110
South Park/Oxnard	Multi-Family/ Commercial	61.3	39	42	53	88
Town Center/Oxnard	School/ Commercial	61.3	28	32	48	90
MYRTLE STREET						
Town Center/Vineyard	Single Family/ Commercial	58.3	<26	28	36	60
Town Center/Santa Clara River	Single Family/ Commercial	54.9	<26	26	30	42
TOWN CENTER DRIVE						
Santa Clara River/Oxnard	Commercial	60.0	23	27	40	75
Oxnard/Myrtle	Commercial	58.9	22	25	35	64
NORTH PARK DRIVE						
Oxnard/Vineyard	Single Family	57.0	<22	24	30	50
West of Oxnard	Single Family	51.8	<22	22	24	30

Source: Impact Sciences, Inc. Calculations are provided in Appendix 4.9. *Predicted noise levels assume no attenuation by barriers. Intervening walls, terrain, setbacks and structures proposed by the project will reduce these noise levels.*

Based on traffic volumes consistent with Section 4.7, Transportation & Circulation of this EIR, noise modeling was conducted to predict noise contours along on-site roadways. As presented in Table 4.9-4, noise levels along the roadways within the Specific Plan Area are predicted to range from 49.4 dB(A) CNEL along South Park Drive to 68.3 dB(A) CNEL along Oxnard Boulevard when measured at 75 feet from the roadway centerline. It is important to note that the noise levels in Table 4.9-4 assume no attenuation by either natural or man-made barriers and, as such, represent maximum, worst-case, noise levels.

While setbacks and roadway widths have been drafted, the configuration, orientation of specific land use types along the fixed roadway segments are unknown at the present time and would not be defined until individual tract maps are prepared. However, forecasted noise contours for the fixed roadways can be used as a guide to determine if the proposed land uses would be significantly impacted as a result of vehicular traffic noise.

As shown on Figure 4.9-3, noise levels normally acceptable for single family residences ranges up to 60 dB(A) CNEL. When compared to the forecasted noise levels expected for roadway segments adjacent to single family residencies, only one segment exceeds the standard. As all the other on site roadway segments adjacent to single family uses would be below the 60 dB(A) threshold, no impacts would occur at these locations. Projected noise levels along Santa Clara River Boulevard between Vineyard Avenue and South Park Drive are 63 dB(A) at 75 ft. A 60 ft. landscaped buffer would separate Santa Clara River Boulevard from existing homes in the El Rio West Neighborhood to the south. Located to the south of Santa Clara River Boulevard with a 4 to 8 ft. berm included in the 60 ft. buffer. With the 60 ft. buffer and 4 to 9 foot berm, resulting noise levels would be attenuated by at least 5 dB(A).[9] Therefore, the expected 63 dB(A) roadway noise level would be reduced to approximately 58 dB(A) at 75 ft. Consequently, no significant impact would occur.

Noise levels normally acceptable for multi-family residences ranges up to 65 dB(A) CNEL. All roadway segments adjacent to multi-family uses would not exceed 65 dB(A) CNEL. Therefore, as the projected noise levels would not exceed the threshold, no impacts associated with on site vehicular noise sources on multi-family uses would occur.

The RiverPark Specific Plan proposes two school sites along Santa Clara River Boulevard on the eastern and western project boundaries. Specifically, one site is located along Vineyard Avenue, between North and South Park Drive, while the other school site on the western edge of the Specific

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9 Federal Highway Administration, U.S. Department of Transportation: *Highway Noise Mitigation*, p. 18. Springfield, Virginia: September 1980.

Plan Area. The land use compatibility guidelines for noise indicate that normally acceptable noise levels for school site ranges up to 70 dB(A) CNEL. Neither of the roadway segments that are adjacent to these school sites would exceed 63 dB(A) CNEL Therefore, as the noise levels would not exceed the threshold, no impacts would occur.

Finally, both parks and commercial uses would be located adjacent to on site roadways. Both of these land use categories, when compared to the land use compatibility guidelines for noise, should not exceed 70 dB(A) CNEL. The roadway segment with the highest forecasted noise level resulting from vehicular noise is Oxnard Boulevard between US 101 and Town Center Drive. The expected noise level along this roadway is 68.3 dB(A) CNEL. Therefore, as the highest noise level would not exceed the threshold, no noise impacts would occur to the proposed park and commercial facilities.

Off-site Mobile Noise

A similar method was used in calculating the expected noise levels resulting from vehicular noise at off site sensitive receptor locations. Table 4.9-5, below, identifies those land use types along the specified roadway segments and compares them with the predicted noise levels based on traffic volumes forecasted in the traffic study to the land use compatibility guidelines. Off-site noise level impacts are based on the difference between existing traffic volumes and existing traffic volumes plus project-generated trips.

As shown, noise level changes attributable to the Specific Plan Area at off site locations are predicted to range between -0.6 dB(A) and 1.6 dB(A). The greatest increase in ambient noise levels (1.6 dB(A)) attributable to the project would occur along Ventura Road between Wagon Wheel Road and Vineyard Avenue. It is noted that several noise sensitive uses found along off-site study roadways are expected to experience noise levels in excess of the land use compatibility guidelines for noise thresholds. However, as stated earlier, an increase of less than 3 dB(A) CNEL would not exceed the off-site mobile source thresholds of significance for this analysis and would hardly be perceptible to the human ear. Therefore, the proposed project would not result in any significant off site noise impacts resulting from vehicular sources at off site locations.

Table 4.9-5
Existing Plus Project Roadway Noise Levels

ROADWAY Segment	Noise Sensitive Land Uses	Existing CNEL	Existing + Project CNEL	Increase in CNEL	Significant Project Impact
VINEYARD AVENUE					
Los Angeles/Central	Residential	67.9	68.6	0.7	NO
Stroube/Ventura	Residential/School	64.7	64.4	-0.3	NO
North Park/Stroube	School	64.8	64.8	0.0	NO
VENTURA ROAD					
Wagon Wheel/Vineyard	Residential	72.6	74.2	1.6	NO
Vineyard/Gonzales	Residential	76.9	77.7	0.8	NO
OXNARD BOULEVARD					
Gonzales/Vineyard	Residential	78.2	78.7	0.5	NO
GONZALES ROAD					
Ventura/Oxnard	Residential/Medical	74.9	75.5	0.6	NO
WAGON WHEEL ROAD					
Esplanade/US 101 SB Ramps	Residential/Motel	55.6	55.0	-0.6	NO
STROUBE STREET					
East of Vineyard	Residential	55.7	56.5	0.8	NO
JOHNSON DRIVE					
Telephone/Ralston	Residential/School	67.2	67.4	0.2	NO
Ralston/Bristol	Residential	69.2	69.5	0.3	NO
Bristol/North Bank	Residential	73.1	73.3	0.2	NO
VICTORIA AVENUE					
Valentine/Telephone	Residential	78.1	78.6	0.5	NO
TELEPHONE ROAD					
Victoria/Johnson	School/Church	67.2	67.4	0.2	NO
RALSTON STREET					
Victoria/Johnson	Residential	63.0	63.1	0.1	NO
VALENTINE ROAD					
Victoria/US 101 SB Ramps	Hotel 6	63.7	63.9	0.2	NO

Source: Impact Sciences, Inc. Calculations provided in Appendix 4.9.

Other Noise Sources

The Specific Plan permits development of a 5,000-seat multi-use ballpark in Planning District D between the Ventura Freeway, Oxnard Boulevard, Santa Clara River Boulevard and Myrtle Street. Development of this use is subject to the issuance of a Special Use Permit (SUP) by the City of Oxnard. The RiverPark Specific Plan would permit the ballpark facility to be used by a minor league baseball team and be available for other public and entertainment events, such as festivals, fairs, and concerts. The ballpark would also be made available for use by high school and college baseball teams. The precise location, specific design and operational characteristics of this facility would be proposed at the time an application for a SUP is submitted to the City.

Use of amplified sound for the ballpark could result in noise impacts, however, amplified sound would not be used at all activities. While the precise location of such a facility within District D is not known at this time, the potential for impacts can be assessed based on the type of sound system design typical for such a facility. Noise from operation of the ballpark would be significant if it exceeds established thresholds for land uses. The proposed RiverPark Specific Plan would permit development of high density housing in along portions of Oxnard Boulevard, Santa Clara River Boulevard and Myrtle Street. High and medium density housing is also permitted to the west, north and east of Planning District D. Housing in these areas would be separated from Planning District D by major streets including Oxnard Boulevard, Santa Clara River Boulevard and Myrtle Street.

A preliminary acoustic analysis for a ballpark was prepared based on the sound requirements for a typical outdoor concert ballpark facility.[10] This preliminary analysis utilized existing sound data acquired from a similar ballpark. Potential noise impacts can be assessed by assuming what type of sound system is used, sound monitoring equipment and sound equipment location. All sound equipment in this type of facility would typically be positioned to focus or aim the amplified sound towards the intended recipients within the ballpark and away from the surrounding land uses.

However, as opposed to establishing noise contours as done with roadway noise or stationary source noise that dictates established and constant noise levels at given distances, noise from concerts and similar events vary dramatically and are intermittent in nature. Typical noise levels from a concert event could be 100 dB(A) at 125 feet from the stage. As the Specific Plan would allow residential development in and adjacent to Planning District D, there is some potential for noise from a ballpark facility to impact residential uses, depending on the location and orientation of the ballpark in relation to areas where residential uses are permitted and the sound system design. Utilizing this estimated maximum sound level, residential uses near the ballpark could experience noise levels in excess of the acceptable exterior noise level for residential uses. Therefore, as noise generated from the ballpark could exceed the allowable exterior sound level for more than thirty (30) minutes in any hour, this potential impact is considered significant.

Cumulative Impacts

Cumulative noise impacts could primarily occur as a result of increased traffic on local streets attributable to the build-out of the Specific Plan Area as well as other related projects. In order to analyze the potential cumulative noise impacts, cumulative traffic volumes from the traffic study have been modeled to forecast changes in roadway noise levels for the year 2020. The cumulative noise

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10 Shen, Milsom, Wilke & Paoletti, Inc., February 2001.

impact analysis is based on a comparison between the existing roadway noise levels identified in Table 4.9-2 and the future noise levels identified in Table 4.9-6 below.

Table 4.9-6
Cumulative Roadway Noise Levels

ROADWAY Segment	Noise Sensitive Land Uses	Existing CNEL	2020 Buildout Plus Project CNEL	Increase in CNEL	Significant Cumulative Impact
VINEYARD AVENUE					
Los Angeles/Central	Residential	67.9	69.4	1.5	NO
Stroube/Ventura	Residential/School	64.7	65.5	0.8	NO
North Park/Stroube	School	64.8	65.1	0.4	NO
VENTURA ROAD					
Wagon Wheel/Vineyard	Residential	72.6	74.8	2.2	NO
Vineyard/Gonzales	Residential	76.9	79.3	2.4	NO
OXNARD BOULEVARD					
Gonzales/Vineyard	Residential	78.2	79.6	1.4	NO
GONZALES ROAD					
Ventura/Oxnard	Residential/Medical	74.9	77.2	2.3	NO
WAGON WHEEL ROAD					
Esplanade/US 101 SB Ramps	Residential/Motel	55.6	59.2	3.6	NO
STROUBE STREET					
East of Vineyard	Residential	55.7	57.3	1.6	NO
JOHNSON DRIVE					
Telephone/Ralston	Residential/School	67.2	67.6	0.4	NO
Ralston/Bristol	Residential	69.2	69.7	0.5	NO
Bristol/North Bank	Residential	73.1	75.3	2.2	NO
VICTORIA AVENUE					
Valentine/Telephone	Residential	78.1	79.1	1.0	NO
TELEPHONE ROAD					
Victoria/Johnson	School/Church	67.2	67.6	0.4	NO
RALSTON STREET					
Victoria/Johnson	Residential	63.0	63.4	0.4	NO
VALENTINE ROAD					
Victoria/US 101 SB Ramps	Hotel 6	63.7	65.3	1.6	NO

Source: Impact Sciences, Inc. Calculations provided in Appendix 4.9.

As shown in Table 4.9-6, the proposed project in conjunction with buildout of the uses allowed by the *2020 General Plan*, including all known *General Plan* Amendments as well as regional growth, would result in noise level increases between 0.4 dB(A) CNEL along four separate roadway segments to maximum noise level increases of 3.6 dB(A) CNEL along Wagon Wheel Road.

Referring to the established noise thresholds stated earlier in this section, an increase of 5 dB(A) or greater in noise level that occurs from project-related activities would be considered noticeable, but not significant, if the resulting noise level would be within the acceptable range as identified in the *General Plan*. Therefore, although the noise increase of 3.6 dB(A) along Wagon Wheel Road is above the 3 dB(A) increase threshold, the resulting noise level is still below the acceptable outside residential noise standard of 60dB(A) CNEL. As such, the noise level increase along this roadway segment would not generate a significant cumulative impact, as any increase less than 5.0dB(A) is acceptable if the resulting ambient noise level is below acceptable land use compatibility guidelines noise levels. Cumulative roadway noise impacts are not significant.

MITIGATION MEASURES

Construction

The following measures are recommended to minimize impacts associated with remediation, grading and construction activities:

4.9-1 On-site construction activities shall be limited to between the hours of 7:00 AM and 6:00 PM, and exclude Sundays.

4.9-2 Staging areas shall be provided on-site to minimize off-site transportation of heavy construction equipment. These staging areas shall be located to maximize the distance to residential areas.

4.9-3 Construction equipment is fitted with modern sound-reduction equipment.

4.9-4 When construction operations occur adjacent to occupied residential areas, additional noise reduction measures shall be implemented, including, but are not limited to, changing the location of stationary construction equipment, shutting off idling equipment and notifying adjacent residences in advance of construction work.

4.9-5 During rough grading construction activities adjacent to the El Rio West Neighborhood, the temporary acoustical barriers shall be provided along the property boundary separating the construction site from the residences. These barriers shall be at height equal to that of the tallest mobile equipment being used.

Operational

4.9-6 Where practical, locate loading zones and trash receptacles in commercial, office, and restaurant areas away from adjacent residential areas.

4.9-7 Any application for a Special Use Permit for a ballpark facility in Planning District D shall be accompanied by an acoustical study, based on a sound system plan for the facility, demonstrating that no areas where residential uses are permitted by the Specific Plan would have noise levels over the allowable exterior sound level for more than thirty (30) minutes in any hour.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant noise impacts would result from the RiverPark Project.

4.10 PUBLIC SERVICES

INTRODUCTION

This section provides discussion on public services with respect to the RiverPark Project and is divided into six topics in the following subsections: 4.10.1, Public Schools; 4.10.2, Fire Protection; 4.10.3, Police Protection; 4.10.4, Parks and Recreation; 4.10.5, Solid Waste Management; and 4.10.6, Library Services.

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4.10 PUBLIC SERVICES

INTRODUCTION

This section provides discussion on public services with respect to the RiverPark Project and is divided into six topics in the following subsections: 4.10.1, Public Schools; 4.10.2, Fire Protection; 4.10.3, Police Protection; 4.10.4, Parks and Recreation; 4.10.5, Solid Waste Management; and 4.10.6, Library Services.

4.10.1 PUBLIC SCHOOLS

INTRODUCTION

Public education in the area is provided by the Rio School District and the Oxnard Union High School District. The Rio School District ("RSD") provides educational services for kindergarten through eighth grade students, while the Oxnard Union High School District ("OUHSD") provides educational services for ninth through twelfth grade students. This section addresses the potential impact on RSD and OUHSD of additional students that could be generated by the proposed residential development in the RiverPark Specific Plan.

ENVIRONMENTAL SETTING

District Enrollment

The Specific Plan Area is located within the boundaries of the Rio School District and Oxnard Union High School District, as show in Figures 4.10-1 and 4.10-2. The attendance boundaries of individual schools are adjusted by the school districts periodically as needed. For this reason, enrollments at any school within the Districts potentially could be affected by students generated from homes developed in the Specific Plan Area. As such, it is unknown which specific schools could be impacted. For this reason, the analysis focuses on overall school district capacities. For each school, the design capacity (under State Funding Program guidelines and including interim portable classrooms) and enrollment for the current school year (2001/02) are listed in Table 4.10.1-1. As shown, RSD is operating at 108 percent of its capacity (85 percent including capacity of portables) and OUHSD is operating at 113 percent of its capacity (97 percent including capacity of portables). However, neither school district is currently operating on a multi-track, year round calendar at this time. A year-round calendar can increase capacity by 25-30 percent.

Table 4.10.1-1 identifies the capacity of each site under State Guidelines[1] (Column C) and including "non-chargeable" portable classrooms (Column D). Although portable classrooms provide classroom space, they may not include additional restroom, multi-purpose, cafeteria, science, industrial education, or physical education facilities. Portable facilities also might take up space that would otherwise be used for play and/or open space area. The OUHSD considers student population in excess

1 "State Guidelines" under the State Funding Program exclude the greater of (i) portable classrooms leased under five years or (ii) owned/leased portable classrooms in excess of 25 percent of the number of permanent classrooms.

of the design capacity of the permanent classrooms to be an overcrowded situation, because adding students in portable classrooms typically causes over-utilization of existing core facilities such as libraries, restrooms, and playfields.[2] The need for classrooms has increased with the signing of legislation that provides incentives to school districts to reduce classroom size to a 20:1 ratio in certain programs and grade levels.

Table 4.10.1-1
Design Capacities and Current Enrollments of Local School Districts

(A) District and Schools	(B) Fall 2001 Enrollment	(C) Capacity Under State Guidelines	(D) Capacity with Non-Chargeable Portables	(E) Percent of Capacity Under State Guidelines	(F) Percent of Capacity with Portables
RIO SCHOOL DISTRICT					
El Rio Elementary	419	575	700	73%	60%
Rio Del Norte Elementary	650	650	750	100%	87%
Rio Lindo Elementary	568	525	600	108%	95%
Rio Plaza Elementary	531	500	625	106%	85%
Rio Real Elementary	538	600	650	90%	83%
Rio Rosales	328	0	400	N/A	82%
Rio Del Valle Junior	733	648	729	113%	101%
SUB-TOTAL	3,767	3,498	4,454	108%	85%
OXNARD UNION HIGH SCHOOL DISTRICT					
Adolfo Camarillo High School	2,539	2,216	2,737	115%	93%
Channel Islands High School	2,819	2,240	2,705	126%	104%
Hueneme High School	2,666	1,966	2,325	136%	115%
Oxnard High School	2,979	2,211	2,603	135%	114%
Pacifica High School	1,307	2,250	2,250	58%	58%
Rio Mesa High School	2,227	2,007	2,433	111%	92%
SUB-TOTAL	14,537	12,890	15,053	113%	97%

Sources: Fall 2001 Enrollment from OUHSD (as of October 3, 2001) and RSD (as of September 27, 2001). School Capacity of Rio Elementary School District from Office of Public School Construction records and phone conversation with District on July 26, 2001. School Capacity of Oxnard Union High School District from Eric Ortega, Communication with Impact Sciences, July 27, 2001 Please not that neither enrollment or capacity are included for El Rio High (Com. Day), Frontier High (Cont.), Pacific View High (Com. Day), and Puenta High (OUHSD).

2 Eric Ortega, Assistant Superintendent-Business Services, Oxnard Union High School District. Communication with Impact Sciences, July 23, 2001.

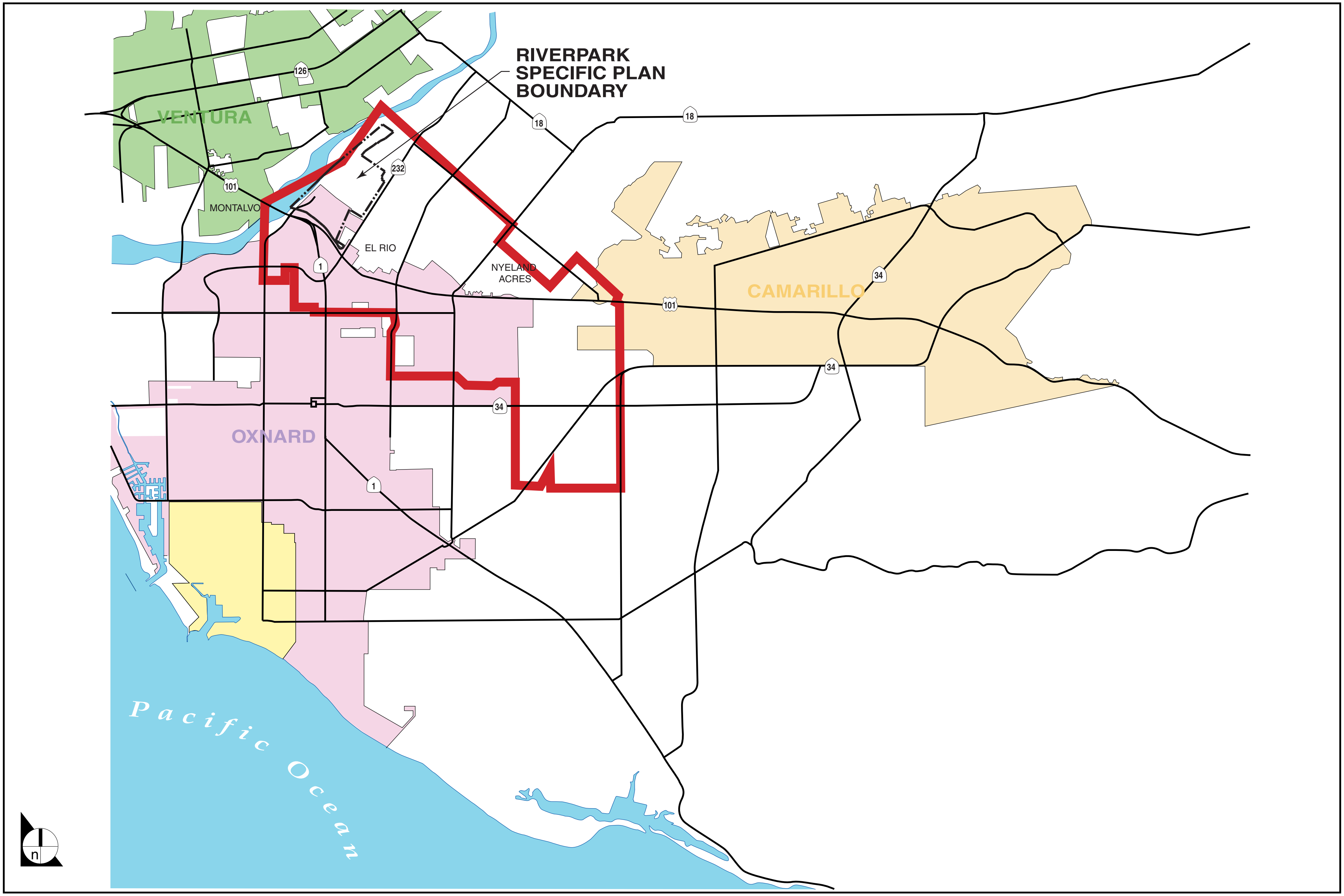

FIGURE 4.10.1-1

Rio School District School Boundaries

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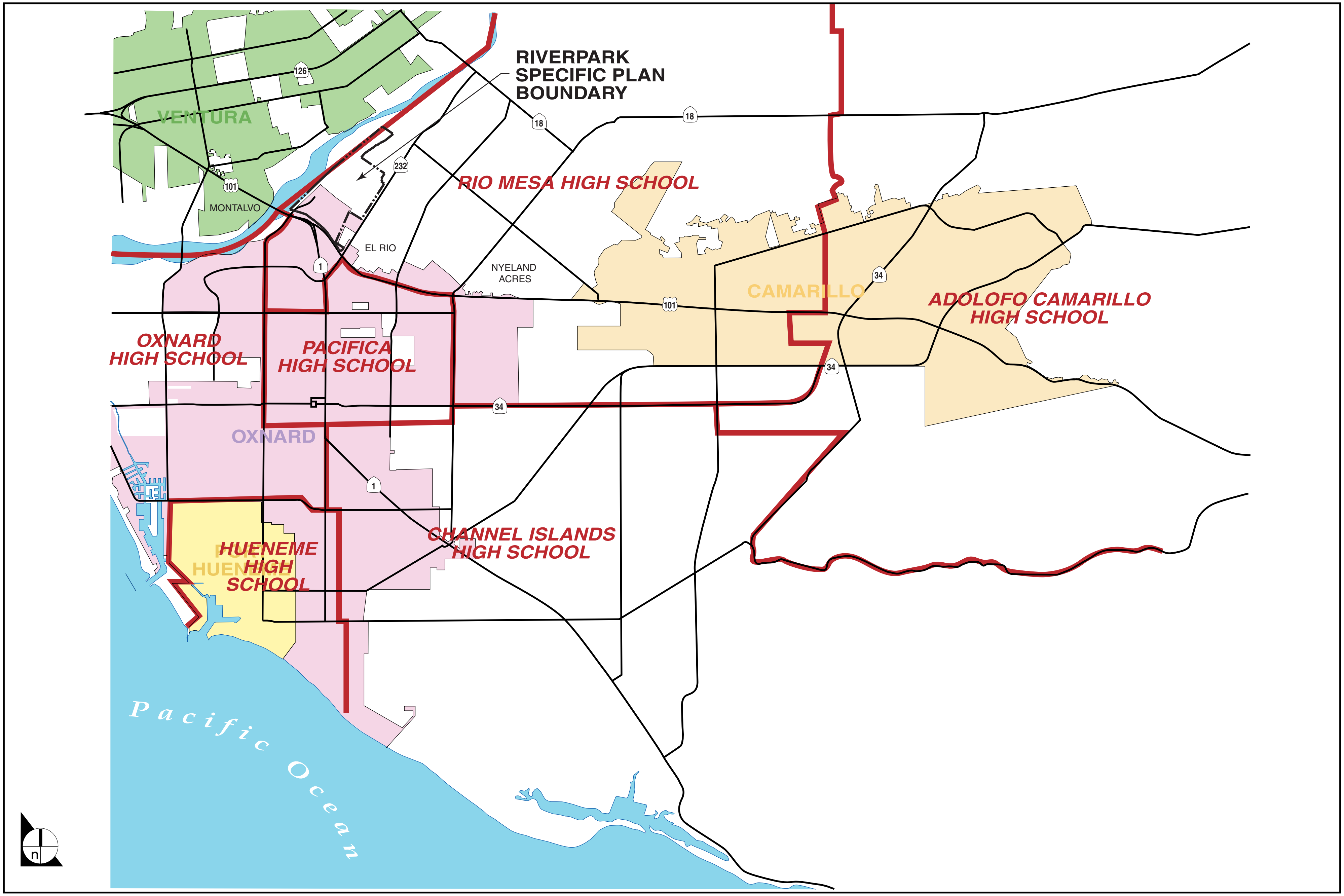

FIGURE 4.10.1-2

Oxnard Union High School District School Attendance Boundaries

39-22•11/01

Bus Service

Both school districts potentially affected by the proposed project provide bus service. The Oxnard Union High School District provides bus service to students who live greater than three miles from the schools where a safe walking path to school is not available. The Rio School District also provides bus service for students within the District. Most funding for bus service comes from the Districts' general funds and the State.

Facilities Planning and Construction

RSD recently completed the construction of the Rio del Norte School which opened in August 2001 for the 2001/02 school year. The new elementary school provides educational facilities for grades Kindergarten through 6. The school has 26 permanent classrooms (capacity of 650 students) and the District is placing four leased portable classrooms on the site for additional capacity of 100 students. This school is intended to serve existing student populations and is not intended to serve additional students generated by future growth.

The Rio Rosales School is an interim facility consisting of 16 leased portable classrooms. There are currently no permanent buildings at Rio Rosales School but permanent buildings are being planned to replace the interim portable classrooms. The 16 leased portable classrooms can serve up to 400 students (25 students per classroom).[3]

OUHSD recently completed the construction of Pacifica High School, which opened in August 2001 with a capacity to house 2,250 students. The Pacifica High School will relieve overcrowding at all five existing OUHSD comprehensive high schools. Another new high school is planned for construction in the City of Camarillo. Currently pesticide testing is being conducted on the potential site for this new school, which is projected to be constructed in six to eight years. This new high school in Camarillo is also designed to relieve overcrowding as a result of new housing developments in the Cities of Camarillo and Oxnard, including new housing in the RiverPark Specific Plan Area, and to provide capacity sufficient for the removal of portable classrooms.[4]

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3 John Sinutko, Rio School District, Oxnard California: personal communication with Impact Sciences, Inc., July 23, 2001.

4 Ortega, Eric, Assistant Superintendent-Business Services, Oxnard Union High School District: letter to Impact Sciences, January 16, 2001.

Projected Enrollment Growth

Neither school district currently has an updated Long Range Facility Master Plan. OUHSD is projecting development of 5,656 new homes (including RiverPark and other projects in Oxnard, Hueneme, and Camarillo) generating 568 new high school students within the school district by the year 2006.[5]

The latest Facilities Master Plan for RSD was prepared in 1997. The Plan identified proposed developments, not including the RiverPark Specific Plan, that would result in 1,730 new dwellings and 943 students between 1997 and 2009. Of these, 990 dwelling units would be occupied between 2001 and 2009, generating 537 students. The Superintendent's Report on the Impact of Residential Development and the Need to Impose Developer Fees, completed in April, 1998, included a forecasted increase of 657 students between 1997-1998 and 2002-2003 based on proposed development projects excluding the RiverPark Specific Plan. The Development Report of the RSD, completed in January 1999, identified proposed developments within the District that would result in a total of 1,682 new dwelling units. However, the RiverPark Specific Plan was not included among the list of potential projects. While the population forecasts vary somewhat, all indicate that RSD's student population will grow even without students from the RiverPark project.

Overview of New School Financing

The State has traditionally been responsible for funding the construction of local public schools. To assist in providing facilities to serve students generated by new development projects, the State passed Assembly Bill 2926 (AB 2926) in 1986. This bill allowed school districts to collect impact fees from developers of new residential and commercial/industrial building space. Development impact fees were also referenced in the 1987 Leroy Greene Lease-Purchase Act, which required school districts to contribute a matching share of project costs for construction, modernization, or reconstruction of schools.

Senate Bill (SB) 50 and Proposition 1A (1998) provided a comprehensive school facilities financing and reform program by, among other methods, authorizing a $9.2 billion school facilities bond issue,[6] school construction cost containment provisions, and an eight-year suspension of the Mira, Hart, and Murrieta court cases. Specifically, the bond funds included $2.9 billion for new school construction and $2.1 billion for school reconstruction/modernization. The provisions of SB 50 prohibit local agencies from

5 Cunningham, Lewis, Director of Facilities, Oxnard Union High School District: personal communication with New Schools, October 16, 2001.

6 $9.2 billion Statewide bond issue included $6.7 billion for K-12 educational facilities, including new construction, modernization, hardship, and class size reduction funding.

denying either legislative or adjudicative land use approvals on the basis that school facilities are inadequate and reinstate the school facility fee cap for legislative actions (e.g., general plan amendments, specific plan adoption, zoning plan amendments). These provisions are in effect until 2006 and will remain in place thereafter as long as subsequent State school facilities bonds are approved and available.

SB 50 establishes three levels of Developer Fees which may be imposed upon new development by the governing board of a school district depending upon certain conditions within a District. These three levels include:

- Level 1: Level 1 fees are the base statutory fees. As of January 25, 2000, Level 1 fees are $2.05 per square foot for new residential development and $0.33 per square foot for new commercial/industrial development. These amounts represent the maximum that can currently be legally imposed upon new development projects by a school district unless the district qualifies for a higher level of funding. Where there is an elementary and high school district, this amount of fees is divided between the two districts.
- Level 2: Level 2 fees allow the school district to impose developer fees above the base statutory levels, up to 50 percent of certain costs under designated circumstances. The State would match the 50 percent funding if State funds are available.
- Level 3: Level 3 fees apply if the State runs out of bond funds at any time, allowing the school district to impose 100 percent of the cost of the school facility or mitigation minus any local dedicated school moneys.

Under Level 2, the governing board of a school district may impose developer fees to fund up to 50 percent of new school construction costs. However, in order to qualify for Level 2 funding the district must satisfy at least two of the following four requirements:

1. Impose a Multi Track Year Round Education (MTYRE) with:
   - For unified or elementary school districts at least 30 percent of K-6 enrollment in the district (or high school attendance area) must be on MTYRE schedule;
   - For high school districts (i) at least 30 percent of high school district enrollment on MTYRE or (ii) at least 40 percent of K-12 enrollment on MTYRE (within the district or high school attendance area for which the district is applying for funding)
2. Place a local bond measure on the ballot in the last four years which received at least 50 percent plus 1 of the votes.
3. District has issued debt or incurred obligations for capital outlay equal to a specified percentage of its local bonding capacity (under Government Code 65995.5(b)(3)(C)).
4. At least 20 percent of teaching stations within the district are relocatable classrooms.

RSD has been levying and continues to be justified in levying Level 1 Fees, and is currently in the process of meeting the requirements to impose Level 2 or Level 3 fees.[7] OUHSD met the required elements and was imposing Level 2 fees from May 10, 2000 through May 10, 2001 but its Level 2 fee analysis expired on May 10, 2001 and it is in the process of meeting the requirements to once again impose Level 2 or Level 3 fees. According to Government Code Section 65996, the development fees authorized by SB 50 are deemed to be "full and complete school facilities mitigation."

Existing Student Generation at the Project Site

The site currently contains one occupied home, and no known students are generated by uses on the Specific Plan site.

PROJECT IMPACTS

Thresholds of Significance

The City of Oxnard considers the impact of a project on school facilities and services to be significant if:

- School facilities will not have sufficient capacity to accommodate the new students generated by the project or the ability to construct the facilities necessary to serve the additional students generated in a timely manner.

School Facilities Planned as Part of Specific Plan Project

The proposed RiverPark Specific Plan includes two sites designed for new RSD schools. Planning District G includes one site with 9 net acres. Planning Districts J and K includes one site with 27 net acres. The 9-acre site within Planning District J is adequate for a single elementary school serving 530 students in grades K-6 (680 students if two-story buildings are used). The 27.0-acre site is adequate for a 9.0-acre elementary school serving 530 students in grades K-6 (680 students in two-story buildings), a 10.7-acre middle school serving 600 students in grades 7-8 (750 students in two-story buildings), and 7.0 acres of playfields (full track/field facilities at a 600-student middle school). Planning for these school sites included consultations with RSD regarding the size and location of the proposed school sites and joint use playfields. The District advised the City of Oxnard in a response letter to the Notice of Preparation for this EIR that 30 acres of land for the development of new elementary and middle schools by the District should be designated in the specific Plan Area. The planned 36.0 net acres of

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[7] Rio School District. *Development Report*, January 12, 1999.

school/playfields is sufficient for schools with a capacity of 1,660 students plus space for full track/field facilities at the middle school. 2,110 students can be accommodated on these sites if two-story buildings are built.

RSD has not prepared or proposed specific school facilities for either school site at this time. If the parcels are to be developed into a school, further environmental analysis based on a formal development plan may be needed.

Student Generation and Impact on School Facilities

The Specific Plan would allow a number of housing types. For the purpose of this analysis, the low medium density residential category in the Specific Plan is considered to be single family detached dwelling units; the medium density category are considered to be single family attached dwelling units; and the high density category are considered to be multi-family dwelling units. Based on thee assumptions, the proposed RiverPark Specific Plan would permit the development of up to 2,805 dwelling units, including 463 single-family detached residential units, 1014 single-family attached residential units, and 1,328 multi-family residential units.

RSD and OUHSD provided student generation rates which vary according to grade level and dwelling unit type, representing an estimate on the average number of students generated per residential dwelling unit. The generation rates represent an estimate on the average number of students generated per residential dwelling unit during the course of a project's lifespan. Based upon these student generation rates, an estimate of the student population expected to be generated by build-out of the maximum number of residential units permitted by the Specific Plan has been calculated. As shown below in Table 4.10.1-2, based on these student generation rates, approximately 1,990 K-12 students would be generated by the build-out of the allowed residential uses in the Specific Plan, including 1,654K-8 students and 337 high school students.

Based on the student generation identified above, a comparison between current district capacity and projected enrollment is provided below in Table 4.10.1-3. Please note that column (D), Projected Enrollment, assumes current enrollment levels (Column B) with the addition of all projected students generated by the residential uses in the RiverPark project (Column C) as identified above in Table 4.10.1-2.

Table 4.10.1-2
Student Generation –Allowed Residential Units

Dwelling Type	No. of Units	Generation Factor	Total Students
Rio School District			
Multi Family	1,328	0.590 students/unit	783
Single Family Attached	1014	0.590 students/unit	598
Single Family Detached	463	0.590 students/unit	273
Subtotal	2,805		1,654
Oxnard Union H.S.			
Multi Family	1,328	0.106 students/unit	141
Single Family Attached	1014	0.106 students/unit	108
Single Family Detached	463	0.190 students/unit	88
Subtotal	2,805		337
TOTAL			1,991

Sources: Oxnard Union High School District Office, Developer Fee Justification Document for Oxnard Union High School District, *January 2000; and Rio School District*, communication at meeting between RiverPark and Rio School District, October 2001.

Table 4.10.1-3
Student Generation Impacts of Permitted Uses on School Districts

(A) School District	(B) Current Enrollment	(C) Projected RiverPark Students	(D) Total Projected Enrollment	(E) Capacity Under State Guidelines	(F) % of Capacity	(G) Capacity with Portables	(H) % of Capacity
Rio	3,767	1,654	5,421	3,498	155%	4,454	122%
Oxnard Union	14,537	337	14,874	12,890	115%	15,053	99%
TOTAL	18,304	1,991	20,295	16,388	124%	19,507	104%

Sources: See Table 4.10.1-1 for Current Enrollment and Existing Capacity. See Table 4.10.1-2 for projected students from RiverPark.

As shown in Table 4.10.1-3, the addition of students generated by the permitted residential uses would significantly impact both school districts.

Rio School District

As discussed above, RSD is presently operating at 108 percent of its capacity under State guidelines. The addition of approximately 1,650 new K-8 students at build-out of the Specific Plan could not be accommodated without additional facilities and staffing, or some combination of continued use of portable classrooms and utilizing a multi-track year-round school calendar. The District advised the City of Oxnard in a response letter to the Notice of Preparation for this EIR that 30 acres of land for the development of new elementary and middle schools by the District should be designated in the Specific Plan Area.

As discussed above, the Specific Plan identifies sites with a combined total of 36.0 net acres of school/playfields with a capacity for schools serving 1,660 students plus space for full track/field facilities at the middle school (or 2,110 students if two-story buildings are used). The planned sites are sufficient for facilities that would be needed to accommodate the projected growth in K-8 student population generated by residential development in RiverPark.

Oxnard Union High School District

As discussed above, the Oxnard Union High School District is presently operating at 113 percent of its capacity under State guidelines (including the new Pacifica High School). OUHSD indicates that the addition of approximately 340 new students at build-out of the Specific Plan could not be accommodated without additional facilities and staffing. As such, unless mitigated the project has a significant impact.

CUMULATIVE IMPACTS

OUHSD has projected enrollment growth over the next five years based on known and anticipated residential development throughout the District. This growth will result in cumulative impact on OUHSD's facilities. Based on these projections, OUHSD is proposing to construct a new high school in Camarillo to accommodate the projected growth in students. Additional residential development within the RSD would also result in a cumulative impact on facilities in RSD. State law currently provides the mechanism for school districts to obtain funding for new school facilities to mitigate cumulative impacts.

MITIGATION MEASURES

4.10.1-1 Prior to the issuance of building permits for individual residential development projects in the Specific Plan Area all legally allowable developer impact fees shall be paid to the Rio School District and the Oxnard Union High School District.

4.10.1-2 School facilities may be constructed and dedicated to the Rio School District or Oxnard Union High School District in-lieu of cash fee payments, so long as all State requirements are satisfied and the facilities are approved by the applicable District. The District receiving facilities shall give credit in the form of waiving or reducing developer fees based on the amount of facilities dedicated to the Districts. For example, if forty percent of the required capacity is provided, the first forty percent of fees shall be waived.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant impacts to school facilities will result from the RiverPark Project.

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4.10 PUBLIC SERVICES

INTRODUCTION

This section provides discussion on public services with respect to the RiverPark Project and is divided into six topics in the following subsections: 4.10.1, Public Schools; 4.10.2, Fire Protection; 4.10.3, Police Protection; 4.10.4, Parks and Recreation; 4.10.5, Solid Waste Management; and 4.10.6, Library Services.

4.10.2 FIRE PROTECTION

INTRODUCTION

The purpose of this section is to describe the City's existing fire protection services and the potential impacts of the RiverPark Specific Plan. Sources used in the preparation of this section include: the City of Oxnard 2020 General Plan *(November 1990), the* City of Oxnard General Plan Final EIR *(June 1990), and personal communication with City of Oxnard Fire Department officials.*

ENVIRONMENTAL SETTING

Staffing and Facilities

Fire protection services are provided in the City by the Oxnard Fire Department. The Fire Department also responds to chemical spills, injuries, and vehicle accidents, and is responsible for managing the City's records pertaining to hazardous materials Risk Management and Prevention programs. The Fire Department has established a computer database system using CAD and RMS to assign fire department resources and record information on business occupancies.

The City maintains a total of six fire stations. The location of these stations relative to the project area is depicted in Figure 4.10.2-1. Each fire station contains a fire engine and over 200 pieces of equipment including breathing apparatus, emergency medical supplies, tools, and fire-proof clothing. The Fire Department also keeps and maintains reserve equipment. Each of these six stations is staffed by a minimum of three fire fighters at all times. Station 1 is currently staffed with seven fire fighters and an battalion chief and Station 6 is currently staffed with six fire fighters.

An existing County of Ventura fire station is located within the Specific Plan Area in the County El Rio Maintenance Yard. This station is used by the County Fire Department as a "cover station" providing additional assistance to other County units responding to calls from Thousand Oaks to Ojai. Although the County Fire Department would not be directly responsible for fire calls generated with the City, the City of Oxnard Fire Department has a mutual aid agreement with Ventura County.

Standards and Response Times

The City of Oxnard Fire Department's goal in response to a call for emergency service is to have a fire unit on the scene within four and one-half minutes of receipt of the call at the station. Based on a average travel speed of 30 miles per hour, a distance of approximately 1.2 miles can be covered within four and one-half minutes. A quick response time is critical for the prevention of property damage and loss of life.

As illustrated in Figure 4.10.2-1, the City is divided into six overlapping Response Districts for each station. Each station has a primary service area in which they respond to calls, as well as a secondary and tertiary service area. This system assures that resources are available as needed to respond to different types of incidents throughout the City. Several fire stations may respond to calls dependent upon the type and severity of the incident. The Fire Department has a defined protocol for responding to a call based upon the type (i.e., medical, structure fire, etc.) and severity of an incident. Based on this protocol, the Fire Department's dispatch center sends equipment and personnel from the City's fire stations as needed.

The City of Oxnard Fire Department has mutual aid agreements with Ventura County, the City of Ventura, and the Ventura County Federal Fire Department, which operates fire stations at the Port Hueneme Naval Construction Battalion Base and the Point Mugu Naval Air Station.

Presently, the closest fire station to the Specific Plan Area is Station 4, located on Vineyard Avenue just west of Oxnard Boulevard. The existing development within and adjacent to the Specific Plan Area in the current City Limits is within the primary service area of Station 4. This includes the two existing office buildings in RiverPark Area 'A', existing development along El Rio Drive and the portion of the El Rio West Neighborhood located north of Stroube Street. Response time from Station 4 to these existing developed areas in the City is approximately four and one- half minutes.

Existing Fire Flows

It is the City of Oxnard's policy not to permit new construction unless there is adequate water supply and pressure to serve the project. Recent expansions of the City's water distribution system include additional water pressure separation vaults to ensure that enough water can be delivered at adequate pressure and fire flow levels as new customers are added to the system. These expanded facilities are capable of delivering approximately 106 cubic feet per second (roughly 68 million gallons per day), and meet fire flow levels required by the State of California.

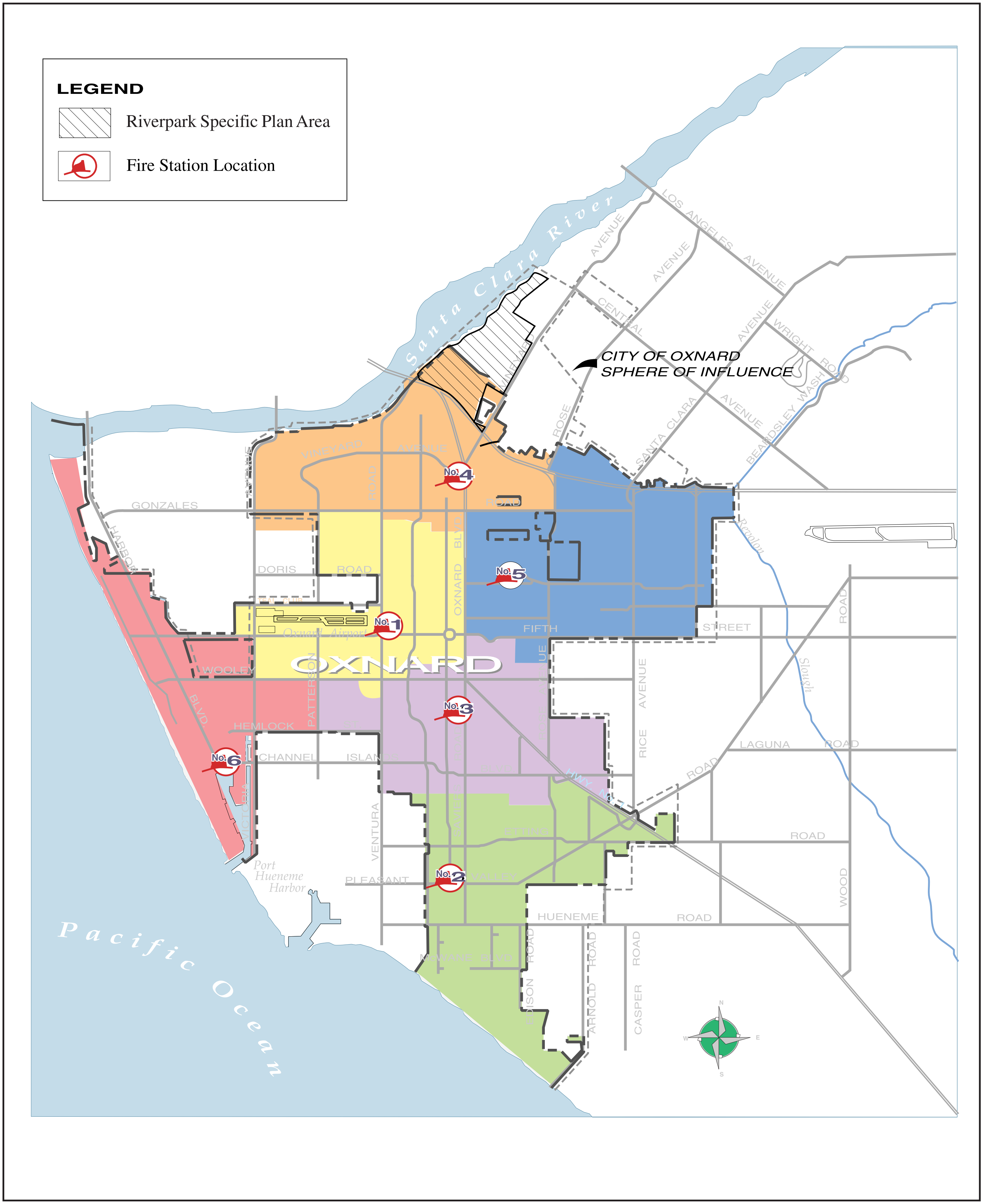

FIGURE 4.10.2-1

Response Areas of Fire Stations

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Plans and Policies for Fire Fighting

The City has also adopted strict fire prevention regulations on new buildings to decrease the damage and danger incurred by a fire before the emergency crews can respond. The following routine measures are required for all new development projects:

1. Implement the City of Oxnard Fire Department fire prevention recommendations through project design. Include the Oxnard Fire Department in the plan check process for new tenant improvements so the department can recommend and inspect specific tenant improvements prior to the opening of business. This increases the level of fire prevention and allows for the fire department to better plan for calls that may be generated.
2. All roof materials provided on the project site shall be of non-combustible material.
3. All new structures are required to contain automatic fire sprinkler systems. The fire safety devices provided within the project buildings shall be designed by a California Life Safety Specialist who is approved by the City of Oxnard.
4. All fire protection and alarm systems shall be maintained in accordance with Fire Department guidelines by licensed, certified, or otherwise qualified personnel. Maintenance records shall be kept on-site.
5. Exterior building glass shall be protected by using the newly available coatings designed to eliminate glass shards in the event of seismic activity, heat, or Fire Department operations.
6. The project shall comply with all State of California fire requirements.
7. Addresses for each tenant shall be clearly identified on the front and rear of all buildings.

The Fire Department is in the process of developing a Strategic Plan, scheduled for completion in December 2001. The Fire Department Strategic Plan will address the number and locations of existing and future fire stations, staff resources, and equipment needed to maintain adequate response times as the City grows consistent with the City's 2020 General Plan.

2020 General Plan Policies

The Safety Element of the *2020 General Plan*, adopted in 1990, contains information goals, objectives and policies related to fire protection services in the Public Facilities and Safety Elements. The primary finding in the Public Facilities Element is that additional public safety facilities and equipment will be necessary to meet the needs of additional growth in the City. Goals and objectives call for providing adequate facilities and services. A policy in the Public Facilities Element states that new stations should be established as needed to provide adequate service and additional equipment and staff resources should be added as needed. Three general locations for new fire stations are identified in the Public Facilities Element. One of these locations is on Vineyard Avenue in the general vicinity of Walnut Avenue, near the RiverPark Specific Plan Area. The Safety Element contains goals, objectives and policies that are consistent with those related to fire protection services in the Public Facilities Element.

PROJECT IMPACTS

Thresholds of Significance

The City of Oxnard considers a project to have a significant impact on fire protection services if:

- adequate response times to handle calls for services cannot be maintained;
- special fire protection problems are associated with the proposed project or general area; and/or,
- there would be substantial interference with an evacuation plan.

Construction Impacts

A large amount of wood framing would occur on the Specific Plan site during its build-out. In association with the framing operations, electrical, plumbing, communications, and ventilation systems would be installed in each structure. Although rare, fires do occur at construction sites, and it is expected that the electrical, plumbing, and mechanical systems for the development would be properly installed during framing operations (they would be subject to City codes and inspection by City personnel prior to drywalling). In addition, construction sites would also be subject to City requirements relative to water availability and accessibility for fire fighting equipment. Therefore, adherence to City codes and requirements during construction would reduce the potential for fire hazards at the Specific Plan Area during construction to below the threshold of significance.

In addition, construction pursuant to the Specific Plan would increase traffic both on and adjacent to the Specific Plan Area during working hours because commuting construction workers, trucks, and other large construction vehicles would be added to normal traffic periodically during the build-out of the Specific Plan. Slow-moving, construction-related traffic on local adjacent roadways may temporarily reduce optimal traffic flows on local roadways and could conceivably delay emergency vehicles traveling through the area. This potential is considered small given the periodic and short term nature of any construction related traffic and no significant impacts are expected with the use of flagmen and other standard construction practices.

Operational Impacts

The proposed RiverPark Specific Plan would allow development of up to 2,761 dwelling units, along with commercial buildings and new school facilities. This development would require emergency fire protection and medical services.

The City of Oxnard Fire Department will be responsible for fire protection and emergency medical service to the project area. It is anticipated that demands for fire protection service will increase above current levels upon build-out of the Specific Plan, as a total of up to 7,220 persons would be added to the Specific Plan area at build-out. Calls for service are expected to be those typical of residential, commercial, and schools. Typical calls would include structure fires, garbage bin fires, car fires, electrical fires, emergency medical responses, etc.

The City of Oxnard Fire Department has prepared a *Fire Protection Planning Guide* to provide a compilation of general development requirements which involve fire prevention and protection measures. All development within the City must comply with the requirements in this guide, which addresses construction activities and fire protection measures for new development. All development is also subject to a detailed review by Fire Department staff to ensure compliance with the requirements. Measures in the *Fire Protection Planning Guide* address development guidelines for various projects within the City and are meant as a guide for the design of projects. Specific measures for individual development projects would be identified during the review of development plans on an ongoing basis by the Fire Department.

Facilities

As proposed, the RiverPark Specific Plan includes a site for a new fire station. Planning District L, the Public Facilities District, includes 3.7 acres for a new fire station and a administrative or maintenance facilities for the Rio School District. The proposed location at Vineyard Avenue and Simon Way is consistent with the location for a new station identified in the Public Facilities Element of the 2020 General Plan to serve the portion of the City north of the Ventura Freeway.

Presently, service to this area is provided from Station 4, located on Vineyard Avenue just west of Oxnard Boulevard. As discussed above, The City of Oxnard Fire Department's goal in response to a call for emergency service is to have a fire unit on the scene within four and one-half minutes of receipt of the call at the station. With an average assumed travel speed of 30 miles per hour, a distance of approximately 1.2 miles can be covered within four and one-half minutes. Based on this standard, the southern portion of the Specific Plan Area, generally south of the planned extension of Ventura Road can be adequately served by Station 4, along with uses located on Vineyard Avenue. The distance from Station 4 to the north end of the proposed residential uses along Oxnard Boulevard would be slightly over 2 miles. The proposed location for a new station on Vineyard Avenue at Simon Way would allow for a four and one-half minute response to emergency calls in the northern and central portions of the Specific Plan Area. The Fire Department has indicated that design and construction of the new fire station would take approximately two years. Development of the fire station would need to occur early in the development of the Specific Plan Area to ensure adequate response times can be maintained as development occurs. No significant impact related to response times will result.

The Oxnard Fire Department and Ventura County Fire Department are currently discussing establishing a joint City/County Fire station at the proposed location. This station would serve to replace the existing County Fire station located in the County El Rio Maintenance Yard on El Rio Drive. Approximately a 1.5-acre site is necessary to establish a new 10,000 square foot fire station and approximately 2.0 acres would be needed to establish a new larger joint City/County Fire Station. As proposed Planning District L could accommodate either type of station. Should the City and County determine that a joint station can not meet the needs of both Fire Departments, a plan for the relocation of a new county fire station would be agreed to by the County and the project applicant prior to the sale of the El Rio Maintenance Yard to the project applicant by the County. No significant impact to County fire protection services will, therefore, result.

Resource Needs

The Oxnard Fire Department has reviewed the proposed RiverPark Specific Plan and the proposed location for the new City Fire Station. The Fire Department has determined that a new station at this location would need to be manned by three firefighters for each of three planned shifts. Specifically, a captain, engineer and firefighter would be required. An additional fire engine would also need to be purchased for this station. An additional fire inspector and a vehicle for this position would also be needed to provide for review of development plans, construction and buildings.

The primary source of funding for Fire Department facilities and related resources comes from the City's General Fund, and funding is allocated to the Department through the City's budget process. Based upon the fiscal impact study prepared for the Specific Plan, revenues accrued to the City's General Fund from sales taxes, property taxes and other revenues generated by the project would be sufficient to pay for the development of a new fire station and the annual recurring cost of manning this facility.[1] No significant impact on

Emergency Plans and Evacuation Routes

With regard to emergency plans and evacuation routes, the proposed Specific Plan would be required to comply with all standards and policies contained in City's Safety Element of the 2020 General Plan and appropriate sections of the City's Zoning Code. These standards are enforced during the review of tract maps at the subdivision stage of the development process. Furthermore, development pursuant to the Specific Plan would not adversely hinder the performance of evacuation routes in the area because any significant impacts to the local circulation network would be mitigated to maintain an acceptable level of service. Please refer to Section 4.7, Transportation & Circulation, for a discussion of traffic impacts and mitigation. Thus, no significant impacts to emergency plans or evacuation routes are expected.

Unusual Number or Unique Calls for Service

None of the uses allowed within the Specific Plan Area are considered to be unusual in nature or to have the potential to generate an unusual number or type of calls for service. The proposed uses will be required comply with all applicable Fire Department codes and regulations for residential and commercial development. Typical calls would include structure fires, garbage bin fires, car fires, electrical fires, emergency medical responses, etc. All such fires and medical emergencies can be adequately addressed with the types of equipment typically found at City fire stations The project would, therefore, not generate service calls that are "out of the ordinary." Rather, service calls from the proposed project would be similar to those from other similar residential and commercial uses within the City of Oxnard. No significant impact to fire protections services would result due to special fire protection needs.

CUMULATIVE IMPACTS

Build-out of the land uses allowed by the 2020 General Plan, including the related projects known at this time, will increase demands on fire protection services. The population and housing increase associated with this growth would increase the demand for fire protection and emergency services throughout the City. The fire department has maintained a very respectable Class II fire rating by conducting a pro-active approach to fire fighting. For example, the department requires that all new

1 Urban Futures, Inc.: *RiverPark Specific Plan Proposal Fiscal Impact Analysis*. November 2000.

structures contain sprinkler systems which substantially reduce the intensity and duration of a fire, and the Fire Department is currently preparing a Strategic Plan. The maintenance of the various programs, which the department employs to achieve this rating, would ensure the continued ability of the Department to meet the cumulative demand for fire and emergency services and meet recommended national fire protection service standards. No significant cumulative impacts will result.

MITIGATION MEASURES

No mitigation measures are required as no significant impacts have been identified.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

No unavoidable significant impacts to fire protection services are anticipated as a result of the RiverPark Project.

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4.10 PUBLIC SERVICES

INTRODUCTION

This section provides discussion on public services with respect to the RiverPark Project and is divided into six topics in the following subsections: 4.10.1, Public Schools; 4.10.2, Fire Protection; 4.10.3, Police Protection; 4.10.4, Parks and Recreation; 4.10.5, Solid Waste Management; and 4.10.6, Library Services.

4.10.3 POLICE PROTECTION

INTRODUCTION

The purpose of this section is to describe the City's existing police protection services and the potential impacts to said service with build-out of the Specific Plan. Sources used in the preparation of this section include: the City of Oxnard 2020 General Plan *(November 1990), the* City of Oxnard General Plan Final EIR *(June 1990), and personal communication with City of Oxnard law enforcement officials.*

ENVIRONMENTAL SETTING

Staffing and Facilities

Law enforcement and police protection services are provided to the City of Oxnard and the project area by the City of Oxnard Police Department. The Police Department has one station, located near Oxnard City Hall, and three storefront police substations which are used for community-based policing in the Carriage Square, Southwinds, and La Colonia neighborhoods. The location of these stations in relation to the project area is depicted in Figure 4.10.3-1. The Police Department employs 202 sworn officers and 124 support personnel.[1]

The department utilizes approximately 55 marked patrol cars, eight police motorcycles, eight marked code enforcement vehicles, four marked animal control vehicles, six marked community services vehicles, an armored SWAT team van, a motor home, and several unmarked and undercover patrol vehicles. The Department employs state-of-the-art crime investigation techniques, computerized information systems, and innovative crime prevention programs. In addition, the City maintains an active neighborhood watch program.[2]

The City is separated into four Police Districts, each of which contains two response beats (see Figure 4.10.3-2). Each response beat is further divided by a grid network in order to allow the Department to accurately and quickly direct patrol officers to calls for service. The beats are patrolled 24 hours a day by uniformed police officers in four overlapping ten-hour shifts per day.

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1 Communication with Art Lopez, Police Chief, City of Oxnard Police Department, October 31, 2000.
2 Ibid.

In determining appropriate staffing levels, the Department reviews crime trends, officer availability, response times, as well as geographical barriers, population density, and community based programs, on an annual basis. Adjustments are made after an analysis is made of these factors.[3]

Crime Statistics

Crime statistics are compiled by the City of Oxnard Police Department on a yearly basis. The statistics are categorized by type of criminal activity and location. The predominant types of crime within the City, as well as within the Beats that contain the project area, include residential and auto burglary, theft, and domestic disputes.

Standards and Response Times

The City of Oxnard Police Department's goal for response time to priority one (emergency) situations is 5 minutes or less. The response time for a non-emergency call is 20 to 45 minutes.[4]

Emergency Assistance

The City of Oxnard Police Department and the County of Ventura Sheriffs Department have a mutual aid agreement in the event additional assistance is needed, or if the emergency response time to an emergency would be quicker from the patrol car in the nearest jurisdiction. In addition, assistance is offered by the California Highway Patrol and Port Hueneme Police Department on an "as needed" basis.

Plans and Policies for Police Protection

2020 General Plan

Police protection is addressed in the Public Facilities Element of the City of Oxnard *2020 General Plan* (November, 1990). The existing police station is at/or exceeds capacity but adequate acreage exists at the site for expansion. The need for additional facilities due to projected growth in the City could be accommodated through expansion of existing facilities, or the acquisition of a new site for a larger police facility.

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3 Communication with Art Lopez, Police Chief, City of Oxnard Police Department, October 31, 2000.
4 Communication with David Keith, City of Oxnard Police Department, April 5, 2001.

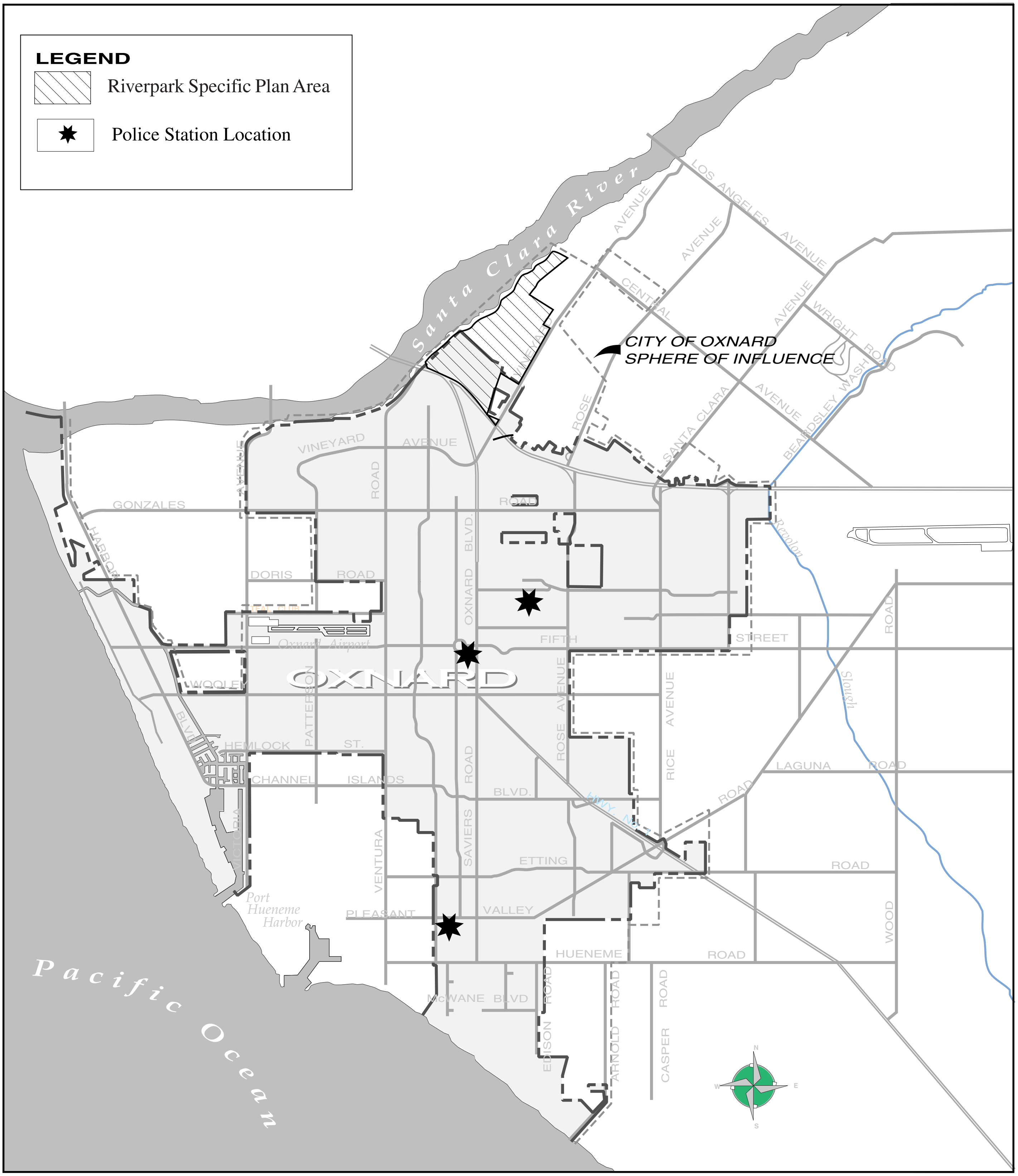

FIGURE 4.10.3-1

Locations of Police Stations

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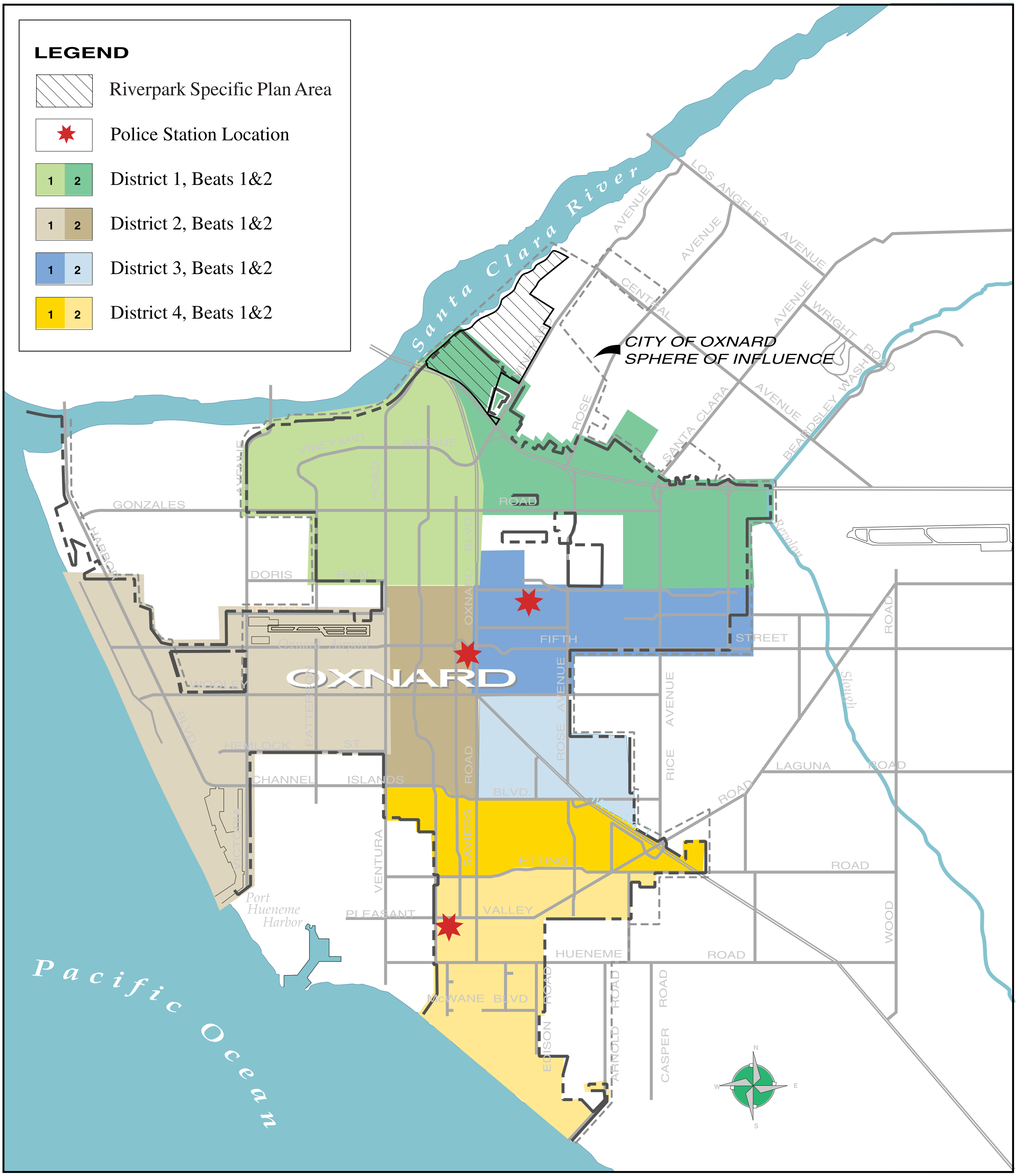

FIGURE 4.10.3-2

City of Oxnard PoliceBeats

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The Safety Element and the Public Facilities Element of the *2020 General Plan* list objectives and policies which pertain to the status of Police Protection for the year 2020.

The Safety Element calls for the provision of efficient and effective police protection services by: 1) requiring Police Department review of all proposed development projects for potentially dangerous situations; 2) employing state-of-the-art law enforcement communications techniques to decrease response time; 3) requiring crime prevention devices (deadbolts, locks, peepholes, etc.) in all new development; 4) encouraging use of the principles of crime prevention and defensible space through security design; 5) encouraging neighborhood watch programs; 6) publicizing police protection services throughout the education system; and, 7) encouraging joint police-citizen participation through the Inter-Neighborhood Coordinating Council and Neighborhood Councils.

PROJECT IMPACTS

Thresholds of Significance

For the purposes of this analysis, the City of Oxnard considers the impact of the project on police services significant if the project would result in:

- an unusual number of calls for service
- inadequate police staffing;
- a substantial decline in response times to handle calls for services;
- substantial interference with an evacuation plan.

Construction Impacts

Site development and construction would not normally require services from the Police Department, except in the cases of trespassing, theft, and vandalism. Such activities at a construction site are not unusual, but are only occasional and do not typically place undue demands on police protection services. Construction of the project would occur periodically as tract maps are approved and subdivisions are built. Construction activity would increase traffic both on and adjacent to the project site during working hours because commuting construction workers, trucks, and other large construction vehicles would be added to normal traffic during the build-out period. Slow moving construction-related traffic along local roadways may reduce optimal traffic flows on these roadways and could conceivably delay police and emergency vehicles or contribute to a vehicle accident. This potential is considered small given the periodic and short term nature of any construction related traffic and no significant impacts are expected with implementation of flagmen and other standard construction practices.

Operational Impacts

The RiverPark Specific Plan would allow the development of up to 2,805 residential units and up to 2.485 million square feet of commercial space. The City of Oxnard Police Department will have the responsibility for providing general law enforcement services to the Specific Plan area. It is anticipated that demands for law enforcement would increase above current levels upon build-out of the proposed project.

Number of Calls for Service

The uses allowed by the RiverPark Specific Plan include typical residential and commercial uses that will not generate an unusual number of service calls for service. In general, the types and number of calls for service would be consistent with those presently occurring in the area, including residential burglary, auto theft and auto burglary.[5] Based on current crime statistics the Police Department bases its service planning on a basis of 0.4 calls for service per capita. If all 2,805 units allowed by the Specific Plan are built, the projected increase in population is approximately 7,220. This population would generate approximately 2,900 calls for service annually.

All proposed development in the City is also subject to a detailed review by the Police Department staff for conformance with the Police Department's design standards to reduce demands for police protection services to the site.

Staffing Needs

Based on the number of calls for service estimated to be generated by the RiverPark Project, the Oxnard Police Department has determined that 17 additional police personnel would be required to provide police services to the project.

It is the policy of the City of Oxnard to monitor the need for additional police officers as part of the City's annual budget process. Through this action, the City ensures that police services are available to serve planned and proposed projects. Based upon the fiscal impact study prepared for the Specific

5 Communication with David Keith, City of Oxnard Police Department, April 5, 2001.

Plan, revenues accrued to the City's General Fund from sales taxes, property taxes, etc., would meet the capital outlay for police service as well as fully funding all other necessary urban services required by the Specific Plan, including the cost for the additional police personnel required.[6] The demand for additional police services would grow as the Specific Plan Area develops over time. No significant impacts are expected as the project will generate sufficient revenues to maintain adequate law enforcement services to the Specific Plan Area.

Response Beats and Response Times

As mentioned, the City of Oxnard Police Department's goal for response time to priority one (emergency) situations is five minutes or less. The response time for a non-emergency call is 20 to 45 minutes. The Oxnard Police Department currently provides police service to the existing office buildings in the southwest corner of the Specific Plan Area. Response time for an emergency call to the project area would be five minutes. Annexation of RiverPark Area 'B' to the City would add a new service area to the existing response beat for this area of the City. This increase in service area will result in a significant increase in the size of the service area for the existing response beat.

Emergency Plans and Evacuation Routes

With regard to emergency plans and evacuation routes, all individual development projects occurring within the Specific Plan Area would be required to comply with the existing policies related to public safety in the Safety Element of the 2020 General Plan and related standards in the City's Zoning Code. These standards are enforced during the review of tentative tract maps and building plans by the City's Development Advisory Committee. Development of the RiverPark Project would not adversely hinder the performance of evacuation routes in the area because all significant traffic impacts to the local circulation network would be mitigated to maintain an acceptable level of service. Thus, no significant impacts to emergency plans or evacuation routes will result.

CUMULATIVE IMPACTS

The population increase associated with development of the uses allowed by the Oxnard 2020 General Plan will increase the demand for law enforcement services throughout the City. As police officers are deployed in specific beat areas throughout the City, response times for calls would remain adequate as long as additional officers are provided proportionate with population increases to accommodate the

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6 Urban Futures, Inc.: *RiverPark Specific Plan Proposal Fiscal Impact Analysis*. November 2000.

corresponding increase in service calls. Funding for Police Department staffing comes from the City's General Fund, and funding is allocated to the Department through the City's budget process. Maintenance of adequate funding to the Department to meet its service obligations will result in this impact not being significant.

MITIGATION MEASURES

4.10.3-1 A storefront police station of approximately 1,000 square feet shall be established by the City within the commercial portion of the project when warranted by the increase in the number of calls for service to mitigate the impact of the addition of service area to the existing response beat serving the Specific Plan Area.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant impacts to police protection services will result from the RiverPark Project.

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4.10.4 PARKS AND RECREATION

INTRODUCTION

This section addresses the existing recreation facilities in the City of Oxnard and the potential impacts of the proposed RiverPark Specific Plan. Sources used in the preparation of this section include the City of Oxnard 2020 General Plan *(November 1990), the* City of Oxnard 2020 General Plan Final EIR, *(June 1990) and communication with staff of the City's Parks and Recreation Facilities Department.*

ENVIRONMENTAL SETTING

Citywide Parks and Recreation Facilities

There are 40 existing park facilities located within the City of Oxnard. The City of Oxnard classifies park facilities into five categories based upon the park's primary purpose and service area. These categories are: Mini-Parks, Neighborhood Parks, Community Playfields, Community Parks, and Special Purpose Facilities (golf courses, beaches, etc.). The City's primary focus is on Community and Neighborhood Parks. The following briefly describes the characteristics of each type of park found within the City.[1]

Mini-Parks - This type of facility serves a limited population living within a very short radius of the facility, often less than one-quarter of a mile. These facilities are often targeted for a specific market segment, such as children or senior citizens. They are often found in proximity to medium-high density residential areas such as townhouse complexes, apartment complexes, or senior citizen housing.

Neighborhood Parks - This type of park is intended to provide the surrounding neighborhood with an area for intense recreational activities. These facilities are to be positioned in the middle of a neighborhood to facilitate easy accessibility. The emphasis is on free play areas which can be utilized for a number of activities, including ball games (soccer, softball) as well as kite flying, Frisbee, etc. A playground with play equipment is also an essential component of this facility. This type of park typically lacks lighting for nighttime use, and is noted for the lack of spectator facilities or improved ball fields with raised mounds, established base paths, field outlines, etc. The minimum land area for

1 City of Oxnard Planning Department: *City of Oxnard 2020 General Plan*, "Parks and Recreation Element." Oxnard, California: November 1990; and communication with David Gorcey, City of Oxnard, April 4, 2001.

a neighborhood park is between 5 and 10 acres. These parks can either be stand alone, or may be developed for joint use adjacent to a school site.

Community Playfields - Community Playfields are large facilities, usually acting as athletic complexes, which are designed to meet the need for improved facilities associated with organized recreational events. Facilities found in this type of park include spectator amenities, ball fields, and sometimes lighting for evening use of the park. Community Playfields are designed to serve a broad segment of the City's population.

Community Parks - A Community Park is typically 20 to 30 acres in size, and offers amenities that cannot be contained within other types of parks. Both active and passive recreation activities can be accommodated within a Community Park. Types of facilities found within this type of park include sports complexes, large swimming pools, group picnic areas, gardens, etc.

Special Purpose Facility - These are areas reserved for specific or single-purpose recreation activities such as golf courses, nature centers, marinas, zoos, rifle ranges, etc.

Parkland Inventory

The City of Oxnard Parks and Recreation Element subdivides the City into five Recreation Planning Areas (RPAs) to assess park and recreation needs within specific areas of the City. The Specific Plan Area falls within the North Recreation Planning Area (RPA).

There are 756 acres of developed parkland that exist in the City of Oxnard including a 224-acre public golf course. A total of approximately 169 acres is in the form of neighborhood parks while the remainder is community level parks (212 acres) and State and County owned regional level parks. The golf course and the College Park are the only regional park facilities owned and maintained by the City of Oxnard. There is a total of thirteen existing or proposed parks (including the golf course) within the North RPA.

City of Oxnard Parks and Recreation Standards

The current City of Oxnard standard for total developed acres of parkland is 3.0 acres per thousand population, as established by the Quimby Act. Individual standards for Neighborhood and Community Parks are 1.5 acres per 1,000 population.

2020 General Plan Policies

Parks and Recreation Element

The Parks and Recreation Element of the *2020 General Plan* lists goals, objectives, and policies which pertain to the status of Outdoor Recreation in the City. The stated goal of the Parks and Recreation Element is the provision of a variety of quality recreation facilities and resources for Oxnard residents.

The Parks and Recreation Element indicates that there is an inadequate supply of park areas able to accommodate intensive recreation facilities within the City. There are also not enough large, grassy play areas for youth and adult passive and organized recreation needs. To address these and other concerns, a number of policies were created.

PROJECT IMPACTS

Thresholds of Significance

The City considers the impact of a project to be significant if sufficient park space is not provided based on the following standards:

- Neighborhood Parks: 1.5 acres per 1,000 new residents.
- Community Parks: 1.5 acres per 1,000 residents.

The City does not identify standards for Mini-Parks, Community Playfields, nor Special Purpose Parks, although such facilities are considered to be viable recreational/ parkland uses within the *2020 General Plan*.

Park Demand

The proposed RiverPark Specific Plan would allow development of a maximum of 2,805 dwelling units, within an estimated residential population of approximately 7,220 persons. Based on the City's park planning standards, approximately 11 acres of neighborhood parkland and 11 acres of community parkland is required to adequately serve a population of 7,220.

Parks Included in Specific Plan

As shown in Figure 4.10.4-1, the Specific Plan includes a variety of parks and open spaces. Three neighborhood parks are proposed within Residential Planning Districts. These parks are located in District F, the Vineyards Neighborhood District; District J, the RiverPark Mews Neighborhood District; and District H, the RiverPark Crescent Neighborhood District. In Figure 4.10.4-1, the neighborhood park in District F is identified as the El Rio Park, the park in District J is identified as the East Park, and the park in District H is identified as Crescent Park. The neighborhood parks in Districts F and J are approximately 5 acres in size and the park in District H is approximately 3 acres in size. In total, approximately 13 acres of neighborhood park land will be provided. This amount exceeds the 11 acres required under the City's planning standards for neighborhood parks. These parks are located in the southern, central and northern portions of the Specific Plan Area to provide neighborhood park land within walking distance of all residential neighborhoods that would be established by the Specific Plan. In addition, the El Rio Park in Planning District F, has been sited on the eastern boundary of the Specific Plan Area to serve the residents of the existing El Rio West residential neighborhood as well as the residents of the new neighborhoods in the Specific Plan Area.

Community park land will be provided on the elementary/intermediate school site along Vineyard Avenue in Planning Districts J and K. Use of the playfields on this school site is proposed through a joint use agreement with the Rio School District. It is planned that the Rio School District would have sole and exclusive use of the playfields on the school site during regular school hours and at such other times as these fields may be needed for school purposes. Regular school hours are defined as 7:00 AM to 4:00 PM, Monday through Friday for each day that the school(s) is in session. Outside of these periods, the playfields would be available for use by the City of Oxnard Parks and Recreation Department. It is anticipated that these playfields would be primarily scheduled for use for organized sports league games and practices. No site plan has been developed for this school site by the Rio School District at this time. Based on the school facilities requirements of the State Department of Education, a minimum of 12 acres of play fields would be required for the number of students planned for these schools. Depending on the site plans for the elementary and intermediate schools sites, up to 18 acres of play field space could be provided. The amount of community play fields provided on this school site would be greater than the 11 acres required under the City's planing standards for community park land.

In addition to this formal neighborhood and community park space, the Specific Plan includes other less formal park spaces, as shown in Figure 4.10.4-1. The largest of these park areas are the Central Park, in Oxnard Boulevard between Northpark and Southpark Drives and the Windrow Park, located

FIGURE **4.10.4-1**

Open Space Master Pan

on the western edge of the Specific Plan Area between Southpark Drive and the elementary school site. In addition, the western elementary school site will contain playfields and other recreational facilities.

These park spaces are distributed throughout the Specific Plan as shown in Figure 4.10.4-1. The Specific Plan also includes Pedestrian and Bikeway Circulation Master Plans, shown in Figures 4.10.4-2 and 4.10.4-3, that will link these open space areas. Pedestrian sidewalks have also been integrated on both sides of vehicular roadways. Pedestrian crossings will be designated by a variation in roadway surfacing and other indicators to lessen any potential conflicts. As shown, hiking trails are planned around the reclaimed mine pits and through the planned residential neighborhoods. Opportunities are provided to link this system to the regional hiking trail planned offsite along the Santa Clara River Levee. Residential boulevards and roadways will interconnect neighborhood parks and encourage pedestrian access between the parks, the trails within the Specific Plan Area, the Santa Clara River trail and the native riparian woodland planned along the western edge of RiverPark ‘B’. The Bikeway Circulation Plan includes Bike Paths, Lanes and Routes throughout the RiverPark Community. As with the pedestrian system, connections to the regional trail along the Santa Clara River are planned.

Consistency with Parks and Recreational Element Plans and Policies

In order to address the findings of the Park and Recreation Element, the City has established a goal to provide a variety of quality recreation facilities and resources for all Oxnard residents. Numerous objectives and policies have been established in support of this goal. The following provides a discussion of the consistency of the proposed project with applicable objectives and policies.

<u>Objectives</u>

- Expand the variety of park types developed by the City.
- Build sufficient Neighborhood Parks, Community Parks, and Special Purpose Facilities to meet the needs of the future residents of the City by the year 2020.
- Reduce overuse of Neighborhood Parks where possible.
- Prior to incorporation of additional land into the City, park provision shall be assessed and potential additional parkland identified.

<u>Discussion</u>

As discussed above, the Specific Plan would create a variety of neighborhood, community and special purpose facilities linked by pedestrian and bicycle facilities. Sufficient neighborhood and community park land will be provided to meet the needs of the 7,220 projected residents of the RiverPark Community. The RiverPark Project is consistent with these objectives.

Objectives

- Create a physical link for pedestrian and bicycle traffic between facilities.

Discussion

A Landscaped pedestrian walkways and bikeways would be located throughout the Specific Plan Area connecting the recreational facilities to the residential and commercial land uses. The RiverPark Project is consistent with these objectives.

Policies

- The City shall seek to improve cooperation with various school districts within the City's Sphere of Influence regarding shared use of facilities.
- Future park sites should be located next to school sites whenever feasible.
- Prior to incorporation of additional land into the City, park provision shall be assessed and potential additional parkland identified.

Discussion

The RiverPark Specific Plan is consistent with these applicable policies of the Parks and Recreation Element. The project will involve the incorporation of additional land into the City. As discussed above, adequate parkland is being provided. Consistent with these policies, parks are provided next to both planned school sites and joint use of the playfields associated with the elementary/intermediate school site in Planning Districts J and K is planned to provide community playfield facilities.

CUMULATIVE IMPACTS

The Parks and Recreation Element of the City's 2020 General Plan contains a projection of the amount of neighborhood and community park land needed to meet the needs of the population that would be generated by the development of all residential uses allowed by the 2020 General Plan. This element of the General Plan also defines measures to acquire and develop the required park sites. As discussed above, the RiverPark Specific Plan provides sufficient neighborhood and community park land to meet the needs of the population that will be associated with development of the residential uses allowed

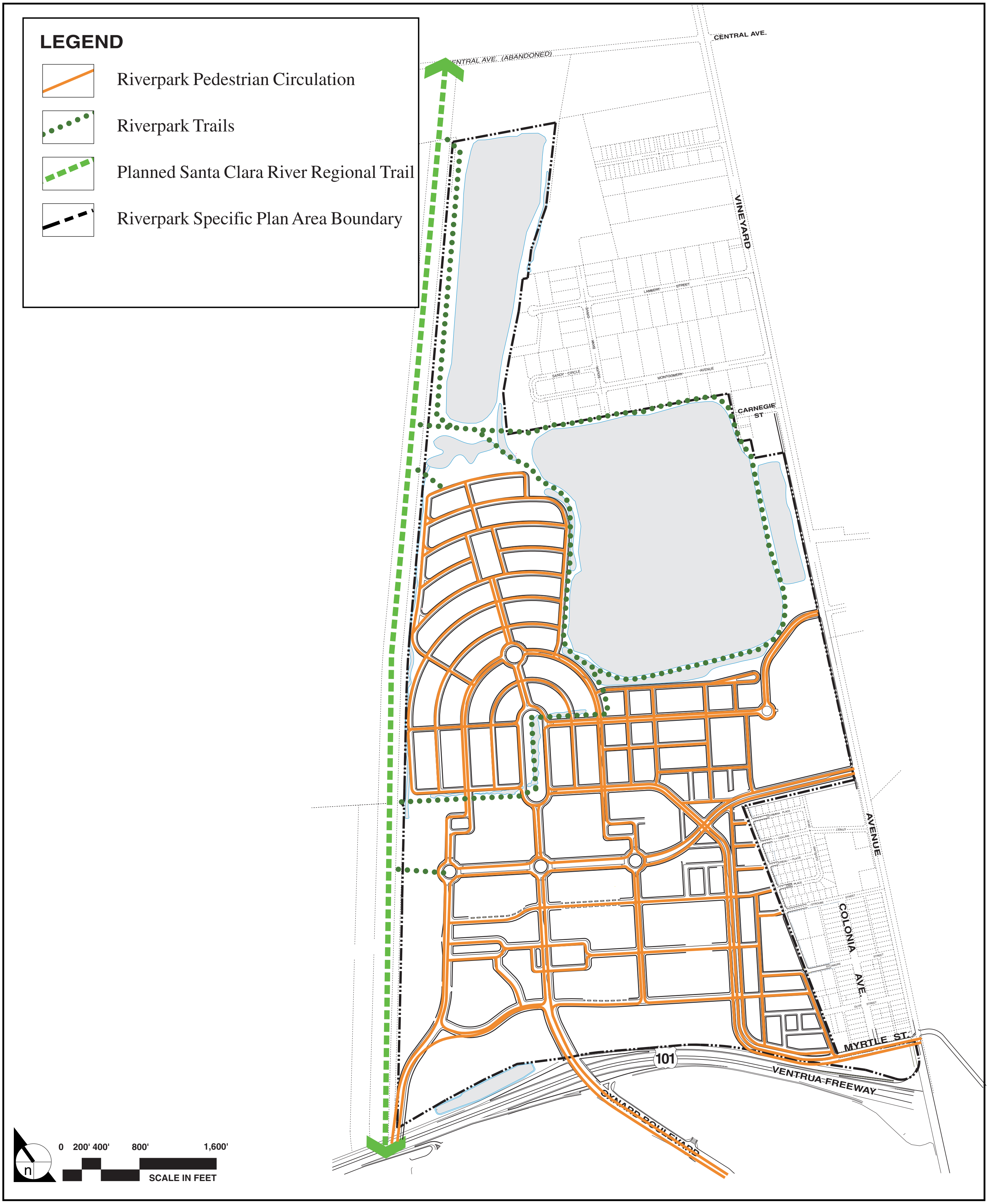

FIGURE **4.10.4-2**

Trail and Sidewalk System

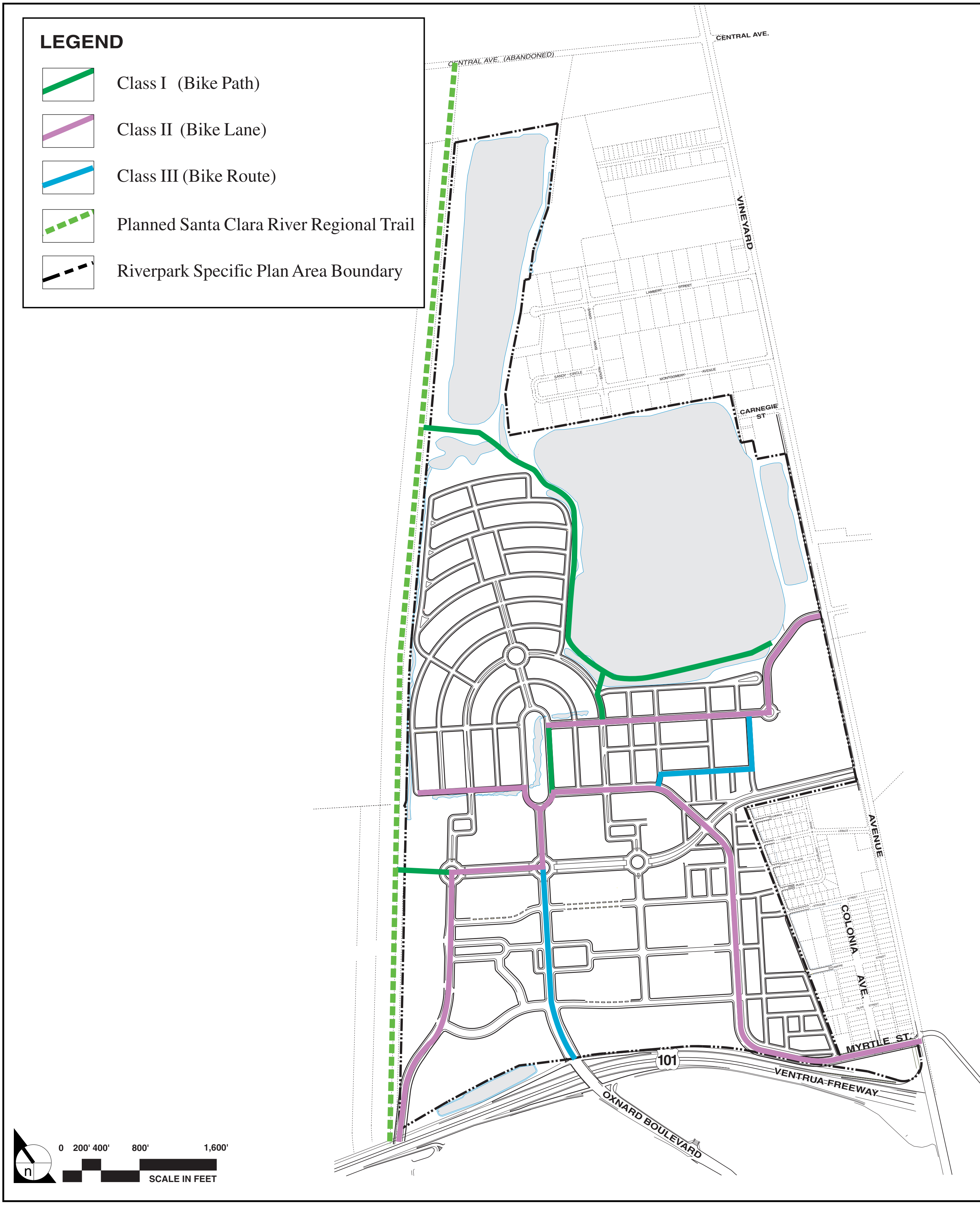

FIGURE 4.10.4-3

Bicycle Facilities Plan

by the proposed Specific Plan. No cumulative impacts to parks ad recreation services, therefore, will result.

MITIGATION MEASURES

No mitigation measures are required as no significant impacts have been identified.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant impacts to park and recreation facilities will result from the RiverPark Project.

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INTRODUCTION

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4.10.5 SOLID WASTE MANAGEMENT

INTRODUCTION

This section analyzes the solid waste impacts of the RiverPark Specific Plan Project. Each City within Ventura County has the responsibility to develop plans and strategies to accommodate solid waste generated by uses within the County in a safe and cost effective manner. In the past, solid waste was simply collected and disposed of in landfills. Today, in response to State mandates, economic factors, and the difficulty in approving new landfills, alternative methods of collection, transfer, disposal, source reduction, and recycling are prominent methods of dealing with solid waste. The prediction of the type of disposal and recycling options available in the future is difficult due to the changing dynamics of this industry. This is especially true given the time span for build-out of the Specific Plan, and the rapid development of new technologies and markets for recycled materials, which contribute to the reduction in solid waste entering local landfills. The methodology utilized to conduct this analysis assumes that no new landfills or other means of solid waste disposal (i.e., co-generation plants, transfer and recycling stations) will be constructed during the course of Specific Plan build-out.

ENVIRONMENTAL SETTING

Regional Solid Waste Plans and Policies (AB 939)

Solid waste disposal is an issue of regional and statewide significance. The traditional method of landfill disposal is becoming increasingly problematic, as landfills approach or reach their capacity and the ability to find and develop new landfill sites is complicated by numerous environmental, regulatory and political concerns. Because of the environmental concerns associated with landfills, Assembly Bill 939 (AB 939) was enacted by the state legislature to add Section 40050, et seq., to the State Public Resources Code. This legislation, otherwise known as the California Integrated Waste Management Act, mandates that all local and county governments adopt a Source Reduction and Recycling Element (SRRE) to identify means of reducing the amount of solid waste reaching landfills. The law requires that landfill disposal be reduced by 25 percent by the year 1995 and 50 percent by the year 2000.

Countywide Solid Waste Disposal

Solid waste disposal in Ventura County is a competitive and dynamic system and, theoretically, waste can be disposed at any landfill depending upon the preference of individual solid waste haulers and other factors, such as proximity to the collection area, tipping fees, and daily capacities at the landfill sites. Currently, most solid waste collected within Ventura County by public and private haulers is disposed of in the County. However, this does not guarantee that solid waste haulers do not or would not take solid wastes outside the County. Solid waste management in Ventura County no longer focuses on “waste sheds,” or fixed areas that dispose of their wastes at a particular landfill. For the same reasons, solid waste disposal planning is also no longer done on the basis of population forecasts.

Solid waste generated within Ventura County was historically disposed of at three major landfills: Bailard, Simi Valley, and Toland Road Landfills. Solid waste generated within the City of Oxnard was disposed of at the Bailard landfill until the closure of this facility in August of 1996. The Bailard landfill closed because the limits on solid waste flows contained in the Conditional Use Permit and Solid Waste Permit under which the landfill operates were reached.

In response to legislative mandates to reduce the waste stream and to address the need for solid waste disposal facilities, the City of Oxnard has constructed the Del Norte Regional Recycling and Transfer Station. This facility opened concurrent with the closure of the Bailard Landfill. Solid waste is transported to this facility where all recyclables are extracted and stored for sale.[1] Non-recyclables are disposed of at the Simi Valley and Toland Road Landfills, although alternative landfill sites located in Los Angeles County or other counties may ultimately receive waste from this facility, including the Chiquita Canyon Landfill near Santa Clarita.[2] The two primary options for disposal are discussed below.

The Toland Road Landfill is a class II municipal landfill located north of Highway 126, between the cities of Santa Paula and Fillmore. This landfill underwent a vertical and lateral expansion to maintain continuity in public waste disposal after the closure of the Bailard Landfill. The landfill is now fully permitted to receive a maximum of 1,500 tons per day. The landfill began its expanded operations in August of 1996. This expansion extends the lifespan of the landfill by 31 years, with closure projected to occur in the year 2027.[3] The County of Ventura Conditional Use Permit (CUP)

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1 City of Oxnard (http://www.ci.oxnard.ca.us/refuse/refusedelnorte.html) April, 2001.
2 Interview with Chi Hermann, Ventura Regional Sanitation District, April 4, 2001.
3 Ibid.

requires that the operator can only accept waste generated within the County, with the minor exception of a small amount of waste generated in Carpinteria.

The Simi Valley Landfill is a private landfill operated by Waste Management Inc., of California. The CUP for this landfill permits a maximum of 3,000 tons per day of solid waste to be disposed, with operation allowed until the year 2004. The landfill averages approximately 2,000 tons per day. Approximately 9 million cubic yards of available space remain at the landfill, which equates to a remaining lifespan of more than 8 years at maximum daily tonnage or approximately 12 years at the current disposal rate. A new permit application must be filed by the year 2004 in order to allow the landfill to reach its total lifespan described above.[4]

City of Oxnard Solid Waste Plans and Policies

Source Reduction and Recycling

In 1991, the City adopted an SRRE to provide a comprehensive strategy to meet the mandates of AB 939. Waste reduction programs from the SRRE that are being implemented include recycling programs, re-use programs, and regional materials recovery. The principal components of the City's SRRE include:

- Non-procurement efforts by the City of Oxnard, for example, to use double-sided copying of its documents, purchase durable beverage containers, etc.
- Educational programs to inform the public of source reduction alternatives, including formal in-school programs, fliers and public workshops.
- Curbside recycling in the City's residential zones.
- Multi-Family and Commercial Recycling Programs.
- City Parks and Recreation Department works with developers to identify waste reduction and recycling opportunities in their landscape and facility designs.
- Yard Waste Collection Programs.
- Awards program that provides public recognition to businesses, organizations, community groups, etc., which excel in source reduction and recycling efforts.

In support of the City's efforts to reduce the volume of solid waste entering local landfills, a Special Use Permit for a Regional Materials Recovery and Waste Transfer Facility (MRF) was approved in June

4 Interview with Frank Kiesler, District Manager, Simi Valley Landfill and Recycling, March 22, 2001.

1993. On July 25, 1995, the City Council approved the location of the MRF at the corner of Sturgis Road and Del Norte Road. The facility opened in August of 1996.

The MRF is an integral part of the source reduction and recycling program. The principal activity of the facility is to remove recoverable material before transferring the refuse to a landfill for disposal. The material recovery portion of the facility handles all grades of recyclable commodities for which there is a resale market. Typical recyclable materials include aluminum, glass, papers of all grades, metals, plastics, wood, and yard waste. The permitted capacity of the MRF is 2,780 tons per day. Other features of the facility include a buy-back center, administrative offices, and a recyclable household hazardous waste collection center that collects batteries, antifreeze, used motor oil, oil filters, and water based paint.[5]

Other Relevant City Solid Waste Policies

The *Household Hazardous Waste Element* (HHWE) for the City of Oxnard seeks to maximize the removal of household hazardous waste (HHW) from the waste stream, thereby enhancing the environment and quality of life.

Short-term objectives of the HHWE include: reduction of illegal disposal of HHWs; to the extent possible, recycle oil, paint, auto batteries and antifreeze through annual HHW collection days or permanent centers; investigate the use of mobile reclamation facilities; and, expand public education to ensure proper disposal and use of less environmentally hazardous products.

Medium-term objectives of the HHWE include: development of standards and public controls that require solid waste facilities to adhere to monitoring principles and procedures which will deter the illegal disposal of HHW; attempt to promote the development of a regional HHW facility; and, expand and promote educational programs regarding proper disposal of HHW and the overall reduction in the use of toxic materials.

Within the *2020 General Plan*, the *Public Facilities Element* seeks to reduce the volume of solid waste requiring disposal at local landfills and to encourage recycling by: utilizing resource recovery to reduce the amount of solid waste requiring disposal; by working cooperatively with the Ventura Regional Sanitation District (VRSD), and other Ventura County cities in support of voluntary recycling programs; and to establish a regional recycling facility or facilities in Ventura County; requiring

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5 City of Oxnard (http://www.ci.oxnard.ca.us/refuse/refusedelnorte.html) April, 2001.

applicants for discretionary development approval to employ practices that reduce the quantities of wastes generated and promote resource recovery; and implementing or participating in appropriate source reduction and recycling programs to meet mandated waste reduction of 25 percent by 1995 and 50 percent by 2000 in accordance with the California Integrated Waste Management Act of 1989.

City of Oxnard Solid Waste Disposal

The City of Oxnard provides refuse and recycling collection service for both residential, commercial, and industrial accounts within the City limits. Solid waste collected from commercial and industrial accounts generates the highest volume of wastes (63 percent of all waste), compared to the residential (37 percent).[6]

PROJECT IMPACTS

Thresholds of Significance

The City of Oxnard considers the impact of a project on solid waste collection services and disposal facilities to be significant if:

- The project solid waste disposal stream would be reduced less than the applicable waste reduction target of 25 percent by 1995 and 50 percent past the year 2000.

Short-Term Construction Waste

Construction within thee proposed RiverPark Specific Plan Area would began in 2002 and is anticipated to continue through the year 2020. Development of individual development projects within the Specific Plan Area would temporarily generate solid waste during the construction of the proposed structures. As build-out of the Specific Plan occurs, increasing amounts of solid waste would also be generated on a recurring and long-term basis. Where these solid wastes are disposed and how they are recycled is economically driven. As previously discussed, solid waste disposal in Ventura County is competitive and dynamic and, theoretically, waste can be disposed at any landfill, depending upon the preference of individual solid waste haulers and other factors, such as proximity to the collection area, tipping fees, and daily capacities at the landfill sites. Furthermore, the amount of solid waste entering landfills over the long term versus the amount generated would be based upon a number of variables, including market demand for recyclables (fluctuations in prices for recyclables will

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6 California Integrated Waste Management Board. Jurisdiction Profile for City of Oxnard. (http://www.ciwmb.ca.gov/Profiles/Juris/JurProfile1.asp?RG=C&JURID=356&JUR=Oxnard), March 2001.

determine their types and quantities), product packaging, utilization of reusable products (e.g., coffee mugs versus paper cups), and disposal alternatives (e.g., composting or incineration within co-generation plants). Therefore, based on such uncertainties, it is difficult to determine the exact amount of waste that projects would contribute to landfill waste streams and its ultimate disposal location. Nonetheless, an attempt is made in the following discussion to identify the amount of solid waste that would be generated by the proposed Specific Plan during demolition and construction.

Site preparation and construction activities would generate an estimated total of approximately 52,066 cubic yards over the build-out period for the Specific Plan assuming no diversion of construction wastes. Construction generation rates are based on 15 cubic yards of waste per residential unit. Construction waste generation rates are based on a factor of 15 cubic yards of waste per residential unit, and 70 cubic yards of waste for every 20,000 square feet of commercial land use.[7] Wastes generated during build-out will include scrap lumber, packaging material, plastics, and inert wastes (i.e., wastes that are not likely to produce leachates of environmental concern, such as dirt, concrete, asphalt, rocks, building materials, yard trimmings, stumps, tree limbs, and leaves).

Generally, waste generation typically occurs over short time periods and ceases following completion of the construction phase. Waste generated during construction of the project would be processed at the City's MRF. This facility would separate recyclables thereby reducing the waste stream entering local landfills. As described above, the Toland Road Landfill is the most likely candidates to accept waste processed by the MRF. With the recent expansion of the Toland landfill the operation of this facility has been extended to the year 2027. Given the present and expected future availability of landfill space at the Simi Valley and Toland Road Landfill, the incremental nature of solid waste generated during construction, and the recycling of waste at the newly opened MRF, no significant impacts to solid waste disposal facilities are expected during construction of the Specific Plan.

Operational Impacts

Once fully developed and fully occupied, approximately 15,132 tons of solid waste per year would be generated by the permitted uses on the Specific Plan Area, based upon generation rates developed by the Ventura County Solid Waste Management Division. Table 4.10.5-1 illustrates the amount of solid waste generated by type of use. Waste composition is expected to consist of cardboard and plastic materials used in product packaging, along with aluminum cans, glass, food wastes, and backyard green trimmings.

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7 David Gordon Wilson, *Handbook of Solid Waste Management*, 1997.

Table 4.10.5-1
Estimated Volume of Solid Waste Generated by Permitted Uses

Use	Generation Factor[1] (tons/year)	Square Feet or # of Units	Waste Generated (tons/year)	Material Diverted (tons/year)	Waste Disposed in Landfill (tons/year)	% of Waste Diverted (tons/year)
Single-family Residential	2.04	1,477 DU	2,862	1,889	973	66%
Multi-family Residential	1.17	1,328 DU	1,589	1,049	540	66%
Retail	0.0024	3 million SF	1,542	1,018	524	66%
Eating and Drinking	0.0108	477,500 SF	5,157	3,404	1,753	66%
Hotel and Motel	0.0053	696,960 SF	2,703	1,784	919	66%
Office	0.0014	1.7 million SF	1,113	735	378	66%
Education and Schools	0.0013	1.8 million SF	166	109	56	66%
Total			15,132	9,987	5,145	66%

[1] *Ventura County Initial Study Assessment Guidelines, Guidelines for Waste Treatment/Disposal-Solid Waste, November 1992.*

It is noted that new development projects are required to cooperate with the city-wide programs and to implement site-specific source reduction, recycling and re-use programs, as well. Tables 4.10.5-1 and also identifies the volume of solid waste which is estimated to be diverted and sold in conformance with the City's recycling program. All waste would be transported and handled at the Del Norte MRF. This facility currently accepts an approximate daily volume of 1,200 tons per day, which is about 43 percent below the permitted capacity of 2,780 tons per day.[8] As described above, a total of 15,132 tons per year of waste would be generated annually at build-out of the Specific Plan with the permitted uses. This amounts to an average of 41.5 tons per day for build-out with permitted uses and 55.6 tons per day of solid waste for build-out with conditional uses. When these numbers are added to the 1,200 tons of waste presently sorted on a daily basis by the Del Norte Facility, a total of 1,241.5 tons of waste per day would be sorted with the build-out of the permitted uses and 1,255.6 tons of waste per day for the build-out with permitted uses. As can be seen, this is substantially below the capacity of this facility, and no significant impacts to the facility are expected.

On February 23, 2000, the California Integrated Waste Management Board approved the City's diversion rate at 66 percent.[9] This is above the 50 percent diversion rate required by the City of Oxnard in conformance with AB 939. Because the diversion rate of the City of Oxnard is above the required by AB 939, the solid waste generated by the project will not result in a significant impact on the City's collection and recycling system or landfill capacity.

8 Personal communication with Mr. Jay Duncan, Recycling Manager, City of Oxnard Waste Reduction & Education Program, March 12, 2001.

9 City of Oxnard Waste Reduction & Education Program. (http://www.ci.oxnard.ca.us/refuse/refuse.html), March 2001.

CUMULATIVE IMPACTS

Construction of all the related projects on the City's current project list and build-out of the Uses allowed by the City's 2020 General Plan will generate additional solid waste. The City's SRRE programs have thus far been successful in reducing the City's total volume of solid wastes requiring landfill disposal. With the success of the MRF, the city-wide solid waste 66 percent diversion rate is above the required 50 percent diversion rate. Further, any related or future projects are required to comply with the City's SRRE programs. This would ensure the continued effort toward source reduction and recycling. Continued implementation of the SRRE programs, operation of the MRF and cooperation by new development projects in implementing site-specific solid waste management programs are expected to achieve the mandates of AB 939 on a citywide basis. As such, no significant cumulative impacts will result.

MITIGATION MEASURES

No mitigation measures are required as no significant impacts have been identified.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant solid waste impacts will result from the RiverPark Project.

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4.10 PUBLIC SERVICES

INTRODUCTION

This section provides discussion on public services with respect to the RiverPark Project and is divided into six topics in the following subsections: 4.10.1, Public Schools*; 4.10.2,* Fire Protection*; 4.10.3,* Police Protection*; 4.10.4,* Parks and Recreation*; 4.10.5,* Solid Waste Management*; and 4.10.6,* Library Services*.*

4.10.6 LIBRARY SERVICES

INTRODUCTION

This section of the EIR addresses potential impacts to library services as a result of the implementation of the proposed project. Information for this section was obtained from the City of Oxnard Public Library and the fiscal impact study prepared for the RiverPark Specific Plan by Urban Futures, Inc.

ENVIRONMENTAL SETTING

Oxnard Public Library Facilities

The Oxnard Public Library operates three facilities and provides library services to the residents of the City. The Main Library, located in the Oxnard Civic Center on A Street between Second and Third Streets, is approximately 72,000 square feet in size and was completed at a cost of $12,800,000 in 1992.[1] The Colonial mini-branch is the closest library facility to the RiverPark Project site. Located on 1500 Camino del Sol, this library serves as a satellite to the main library. The Oxnard Public Library System contains nearly 400,000 volumes (books, periodicals, cassettes, videos, etc.) in its collection. The library serves over 78,000 registered borrowers and has an attendance of over 500,000.[2] The library's operating hours is as follows: Sundays - closed; Mon-Thurs 10:30 AM to 8:00 PM, Sat 9:00 AM to 5:30 PM. With a staff of 30 full-time equivalent permanent employees, the library's operating budget for 1999-2000 is $2.4 million. The library operates under the management of a director with a five-member advisory Library Board, active Friends of the Library group, and a newly formed library foundation.[3]

In April of 2001 the Oxnard Public Library created a Strategic Plan of Service as a catalyst for focusing attention on future issues of the Library System. Highlighted in the Strategic Plan of Service are six Strategic Issues that provide the context for establishing the goals of the Library Strategic Plan. These six issues are:

1. Maintain a community focus as the community undergoes rapid social and economic change;
2. Enhance and support technology-based services and electronic information resources;
3. Provide services, resources and programs that celebrate the diversity of the community;

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1 Oxnard Public Library. (http://www.oxnard.org/info.html) February 2001.
2 City of Oxnard. (http://www.ci.oxnard.ca.us/libservices.html) February 2001.
3 Oxnard Public Library. (http://www.oxnard.org/rfp.html) July 2001.

4. Make the Library a teaching and learning organization capable of responding to new service demands;
5. Evaluation the Library environment and the need for additional hours and facilities;and
6. Develop a marketing strategy to create an awareness of Library resources and events.

Since 1995 there has been a steady increase growth of 24 percent in customers and an 18 percent increase in checked out items. There has been a steady increase in the usage of Library facilities as the population of Oxnard increases.

Other library resources are available to area residents and include libraries in nearby cities (e.g., Thousand Oaks, Santa Paula), Ventura County libraries; libraries located at local colleges (e.g., Oxnard College, Ventura College), high schools and junior high schools. This library services augment City facilities by providing some residents alternative sources for library materials. However, many of the library facilities listed above may charge a fee or restrict use of their materials by nonresidents or non-students. The closest such facility is the Albert H. Soliz Library of the Ventura County Library System. This library is located at 2820 Jourdan Street, which is 0.4 miles from the project site.

Funding

Funding sources for the Oxnard Library System primarily consists of City General Fund allocation and revenue from fines, fees, and other miscellaneous sources. Allocations of the General Fund for the Public Library System are made on an annual basis by the City Council based on total available funding for all City services.

PROJECT IMPACTS

Thresholds of Significance

Based on the goals contained in the Public Facilities Element of General Plan, the City of Oxnard considers the impact of a project on library services to be significant if:

- the City's library system does not have the capacity to serve the project.

Impact Analysis

Development of the proposed would result in a total of 2,805 dwelling units on the project site. According to the fiscal impact study conducted for the proposed Specific Plan, approximately 7,220 new residents would be generated by build-out of the RiverPark Specific Plan. This increase in residents would result in an increase in the demand for library materials and space. The City's Public Library system currently contains adequate capacity to serve the City.

District D of the proposed Specific Plan permits the development of a storefront library facility to serve the residents in the Specific Plan Area, as well as residents throughout the City. The storefront library facility would serve a similar purpose as the existing branch libraries. While the Main Library serves as main hub for information and library services, the branch libraries provide services for the needs of the local neighborhood. The storefront branch library permitted in District D in the Specific Plan Area would serve local library service needs of the Specific Plan Area and the surrounding El Rio West neighborhood. As such, no impact related to library facilities would be expected.

Funding for the operation of library facilities is provided by allocations from the City's General Fund. At the current service level, the cost of providing library services to the City is $18.53 per resident. Based on the fiscal impact study prepared by the City, revenues accrued to the City's General Fund from sales taxes, property taxes, etc., would meet the capital outlay for library service as well as fully funding all other necessary urban services required by the Specific Plan.[4] Therefore, the increased demand for library services could be met through the allocation of revenue from the City's General Fund. Given that total project generated revenue to the City would exceed total projected City costs for the provision of all governmental services, the fiscal impact of the project is considered somewhat beneficial. As such, no significant impacts are expected as the cost to operate and maintain library services to the site would be covered by established funding sources.

CUMULATIVE IMPACTS

Development of the projects on the related project list and all other land uses allowed by the 2020 General Plan would result in an increase in residents and an associated increase in demand for library services. The population increase associated with this growth would increase the demand for library services throughout the City. The General Plan indicates that the City plans to meet this increased demand by establishing additional mini-branch libraries in other areas of the City. Additional mini-branch libraries

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4 Urban Futures, Inc.: *RiverPark Specific Plan Proposal Fiscal Impact Analysis.* November 2000.

are identified in the Northwest Community and Northeast Community Specific Plan areas. No significant cumulative impacts on library services are anticipated given the current level of planning for the expansion of the City's library services.

MITIGATION MEASURES

No mitigation measures are required as no significant impacts have been identified.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

No unavoidable significant impacts to library services are anticipated as a result of the RiverPark Project.

4.11 PUBLIC UTILITIES

INTRODUCTION

This section provides discussion on public utilities with respect to the RiverPark Project and is divided into four topics in the following subsections: 4.11.1, Stormwater Drainage; 4.11.2, Water Supply and Distribution; 4.11.3, Wastewater Service; and 4.11.4, Energy.

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4.11 PUBLIC UTILITIES

INTRODUCTION

This section provides discussion on public utilities with respect to the RiverPark Project and is divided into four topics in the following subsections: 4.11.1, Stormwater Drainage; 4.11.2, Water Supply and Distribution; 4.11.3, Wastewater Service; and 4.11.4, Energy.

4.11.1 STORM WATER DRAINAGE

INTRODUCTION

The following section describes existing drainage patterns in and around the proposed Specific Plan Area, describes the proposed RiverPark Specific Plan Master Plan of Drainage, and evaluates the potential impacts on existing drainage patterns and conditions. Information on the existing drainage conditions and the design of the proposed drainage system is incorporated from the City of Oxnard Master Plan of Drainage *(2001) and a hydrology and hydraulics study prepared by Huitt-Zollars. These studies are available for review at the City of Oxnard.*

EXISTING CONDITIONS

City of Oxnard Surface Hydrology Conditions

The Oxnard Plain has little topographic relief and is located at a minimal elevation above sea level. Major drainages in the City of Oxnard include the Santa Clara River, agricultural sloughs, and a combination of City owned and Ventura County Flood Control District (VCFCD) storm drains and flood control channels. The City is located within the Santa Clara River Basin, which drains a watershed area of approximately 1,624 square miles in Ventura and northern Los Angeles Counties. The segment of the Santa Clara River located along the western edge of the City of Oxnard is the last stretch of the river before it discharges into the Pacific Ocean. Flood control responsibility for the Santa Clara River in Ventura County lies with the Ventura County Flood Control District (VCFCD). Improved drainage channels within the City of Oxnard include the Patterson Drain, Doris Avenue Drain, Wooley Road Drain, Oxnard West Drain, Oxnard Industrial Drain, Rice Road Drain, J Street Drain, El Rio Drain, Santa Clara Avenue Drain, the Stroube Drain, and the Fifth Street Drain. These drainage facilities convey runoff to outlet points located in the southern and western portion of the City.

Existing Drainage Conditions

The RiverPark Specific Plan Area is generally flat with existing gradients of less than 0.5 percent. The land generally follows the gradient of the adjacent Santa Clara River and slopes to the southwest corner of the Specific Plan Area near the point where the Ventura Freeway crosses the Santa Clara River. The RiverPark Specific Plan Area contains approximately 701 acres and currently accepts runoff from areas outside the Specific Plan Area totaling over 500 acres. Figure 4.11.1-1 shows existing drainage facilities and the drainage areas within, and currently draining to, the Specific Plan Area. The existing drainage areas within the Specific Plan Area and off-site areas that currently drain to the Specific Plan Area are described below.

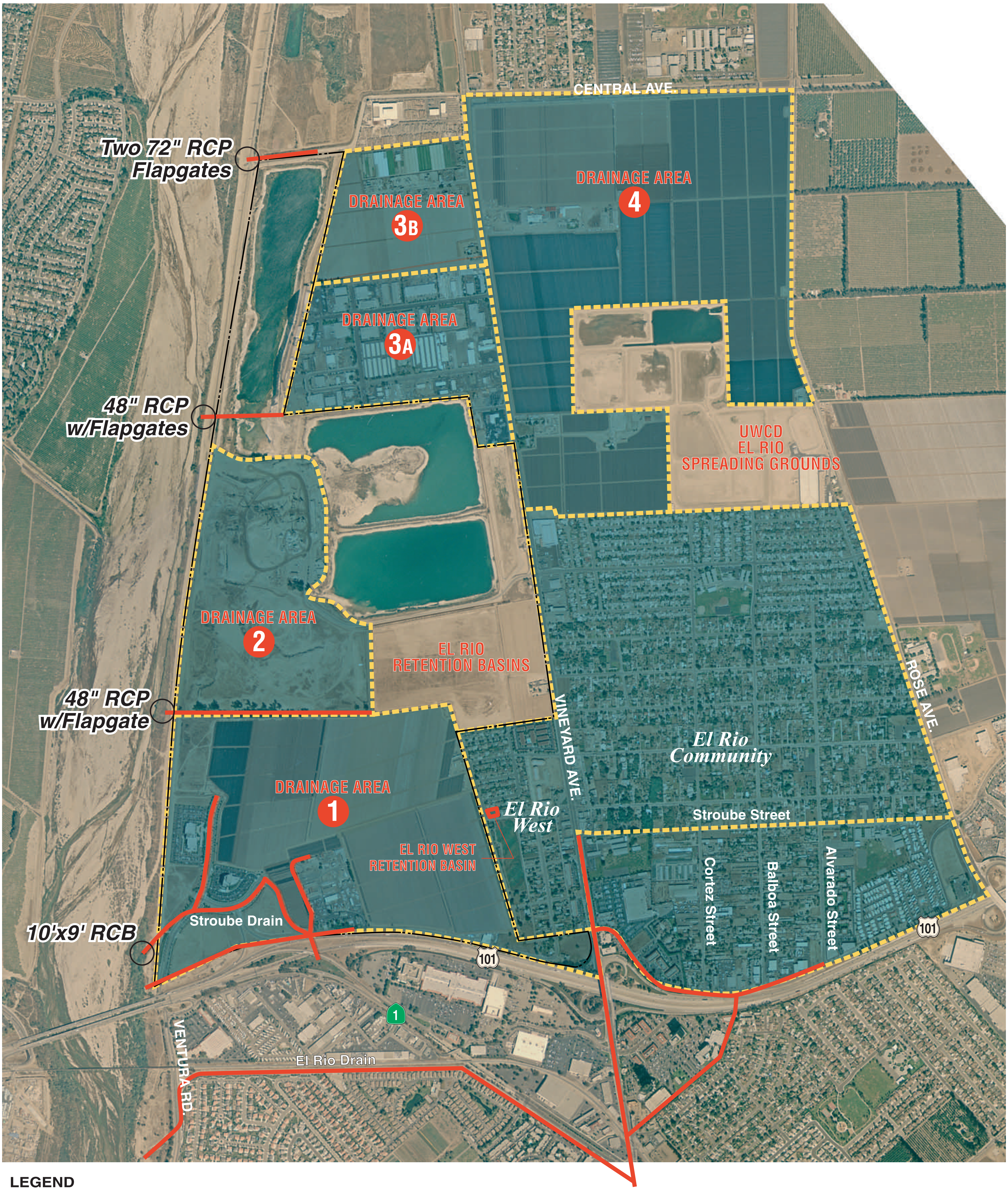
Drainage Areas within the Specific Plan Area

Drainage Area 1: This drainage area includes RiverPark Area 'A', bounded by the Ventura Freeway, the Santa Clara River, Vineyard Avenue, and the City limits. This area currently consists of approximately agricultural and commercial uses. The two office buildings and streets existing in the southwestern corner of the Specific Plan Area were built in conformance with the City's Oxnard Town Center Specific Plan. Ventura Road and a portion of Town Center Drive were built to support development of these buildings. A large 10-foot wide by 9-foot high reinforced concrete box storm drain was also built at the time Ventura Road and Town Center Drive were built. This facility is commonly referred to as the "Stroube Drain" and currently discharges through the levee to the Santa Clara River approximately 600 feet north of the US 101 Santa Clara River Bridge. As shown on Figure 4.11.1-1, the Stroube Drain currently extends from the western edge of the Specific Plan Area to the end of Town Center Drive. Ventura Road also contains a storm drain that contributes runoff to the Stroube Drain. These facilities drain the existing development in this area.

Most of Drainage Area 1 consists of agricultural fields at this time. Runoff from this agricultural land ponds onsite and eventually percolates or enters the Stroube Drain. An open earth drainage ditch located along the north side of El Rio Drive collects runoff and conveys it to the end of Town Center Drive to the Stroube Drain. There is also an existing storm drain system on the north and west edges of the County El Rio Maintenance Yard that drains to an existing Caltrans drain on the north side of the Ventura Freeway.

The portion of Drainage Area 1 located between the Ventura Freeway, Myrtle Street and Vineyard Avenue drains to Vineyard Avenue.

Drainage Areas 2a and 2b: Drainage Areas 2a and 2b include the RiverPark 'B' area. The existing sand and gravel mine occupies the majority of this area. The existing Large Woolsey, Small Woolsey, Brigham and Vickers mine pits occupy the northern and eastern portions of the mine site. The plant and stockpile areas occupy make up the remainder of the mine site. There are existing drains to the Santa Clara River at the southwest corner of the mine site and at the northwest corner of the mine plant area. An open earth drainage channel along the boundary of River Park Areas 'A' and 'drains to a 48-inch outlet through the levee to the river. At the northwest corner of the plant area there are 48-inch and



LEGEND

Riverpark Specific Plan Boundary

Drainage Facilities

Drainage Area Boundary

0 200' 400' 800' 1,600'
SCALE IN FEET

FIGURE **4.11.1-1**

Site Drainage Area Locations

36-inch drain outlets through the levee. The topography in this portion of the mine site is varied due to the historic mining operations of cutting, filling, and disposal of tailings. A minor amount of the storm flows from this area drain to the west towards the earth drainage ditch located on the boundary of River Park Areas 'A' and 'B' and discharges to the Santa Clara River. The majority of the flows from these areas flow towards and into the existing Brigham/Vickers mine pits.

Off-site Tributary Drainage Areas

Drainage Areas 3a and 3b: The off-site areas located between Vineyard Avenue and the Large and Small Woolsey Mine Pits consist of two distinct drainage areas. Drainage Area 3a includes the Beedy Street industrial area and the site of the Ventura County Juvenile Justice Center, which is currently under construction. Currently the Beedy Street Industrial Area drains to the Large Woolsey Mine Pit through a 24-inch drain. Drainage Area 3b includes the Montgomery Avenue/Lambert Street and Carnegie Street industrial areas. The northern half of the Montgomery Avenue/Lambert Street area drains into the Large Woolsey Mine Pit through a 36-inch drain located at the end Lambert Street. The southern half of the Montgomery Avenue/Lambert Street area drains to the Small Woolsey Pit through a 42-inch drain located on the southern edge of this area and a 36-inch drain at end of Montgomery Street. The smaller Carnegie Street industrial area also drains into the Small Woolsey Pit through a 24-inch drain located at the end of Carnegie Street.

Drainage Area 4: This drainage area consists of the agricultural land located east of Vineyard Avenue, north of the El Rio Community and south of Central Avenue. The majority of the northern and western portion of this area currently drains across Vineyard Avenue to El Rio Retention Basins No. 1 and 2. El Rio Retention Basin No. 1 is an approximate 10-acre basin. El Rio Retention Basin No. 2 is an approximate 65-acre retention basin.

Drainage from this area is collected in a 78-inch drain located in the vicinity of Lemar Avenue and Vineyard Avenue which discharges into El Rio Retention Basin No. 1. There is an 84-inch outlet from this basin that connects to El Rio Retention Basin No. 2, where the majority of high flow events are stored. These combined basins have 100-year storm storage capacities. Flows are retained in these basins and percolate into the aquifer and/or evaporate into the atmosphere. Any excess runoff from El Rio Retention Basin No. 2 is discharged into the existing earth drainage ditch along the boundary of RiverPark Areas 'A' and 'B' that drains to the Santa Clara River.

Drainage in Surrounding Off-site Areas

Area north of Central Avenue: The County of Ventura has constructed a storm drain in Central Avenue which picks up the off-site drainage from areas to the north of Central Avenue and discharges these flows through a trapezoidal channel to the Santa Clara River. All drainage within and northeasterly of this system currently discharges into the Santa Clara River through two 72-inch drains located at the northwest corner of the Large Woolsey Mine Pit.

El Rio Community: The portion of the El Rio Community located south of Stroube Street generally drains south towards the Ventura Freeway. A portion of this area of El Rio drains to and under the Ventura Freeway to the City of Oxnard's El Rio Drain. Further east another drain under the freeway accepts runoff from frontage properties. Frontage properties along Vineyard Avenue drain to an existing drain in Vineyard Avenue that connects to the City's El Rio Drain. The portion of El Rio located north of Stroube Street generally drains to the south and east.

El Rio West Neighborhood: The portion of the El Rio West Neighborhood located between Stroube and Myrtle Streets drains south. The portion of this neighborhood located north of Stroube Street drains south and west to a detention basin located at the end of Stroube Street. This detention basin drains west to the Specific Plan Area through four 12-inch drains.

Area south of Ventura Freeway: Flows from the El Rio Community located east of Vineyard Avenue are prevented from draining into the Specific Plan Area by Vineyard Avenue. Similarly, flows generated south of the Ventura Freeway flow away from the Specific Plan Area.

Existing Flood Conditions and Protection

The proposed Specific Plan Area is currently protected from the Santa Clara River by the existing levee located along the western boundary of the Specific Plan Area. The levee extends along the south bank of the Santa Clara River from Highway 101 about 25,000 feet (approximately 5 miles) north to South Mountain. Constructed in 1961 by the U.S. Army Corps of Engineers (ACOE), the levee is a stone revetted, compacted earth embankment that ranges in height form 4 to 13 feet above the natural ground and has a top width of 18 feet with 2:1 (horizontal to vertical) side slopes. Additional protection to portions of the levee are provided by groins in areas where the levee is subject to direct attack by stream meander. There are no groins north of the Ventura Freeway in the vicinity of the Specific Plan Area. The levee is owned and maintained by the Ventura County Flood Control District (VCFCD).

Improvements or modifications to the levee are subject to approval by VCFCD and review by the ACOE. No flooding from presently occurs onsite from the Santa Clara River.

Some flooding presently occurs south of the Ventura Freeway from the Santa Clara River during a 100-year storm event. During a 100-yer event, the river rises to an elevation of 75.7 feet msl spilling out of the western bank onto the low point of Ventura Road south of the Ventura Freeway and Wagon Wheel Road. Flood waters remain at this low point until the stage of the river recedes sufficiently to again allow gravity drainage. This area of inundation occurs periodically the portion of Ventura Road south of Wagon Wheel Road. The existing building pads built in the southwest corner of the Specific Plan Area along Ventura Road are graded to a minimum elevation of approximately 80 feet msl. This occasional flooding during a large storm primarily affects Ventura Road and has minimal effect on the Specific Plan Area.

The City is also a member of the National Flood Insurance Program (NFIP). Through this program, new development is required, through conditions of approval, to eliminate existing flooding problems identified on the Flood Insurance Rate Maps produced under the NFIP. The NFIP has regulations requiring communities to adopt land use restrictions for their 100-year floodplain to qualify for Federally subsidized flood insurance. These restrictions include a requirement that residential structures be elevated above the level of the 100-year flood and that other types of structures be flood-proofed.

Finally, the floodplain management ordinance, Chapter 35 of the Oxnard City Code, identifies requirements for development in areas subject to flooding. Most of the urbanized area of the City is outside of the 100-year flood zone. The major areas located within the 100-year flood zone in the vicinity are found along the Santa Clara River. The project site is not located within a designated 100-year flood zone.

City of Oxnard Master Plan of Drainage

The City of Oxnard adopted an updated *Master Plan of Drainage* in January of 2001 to facilitate coordinated decision making on drainage and flood protection within the City. The plan inventories existing facilities, adopts drainage standards, defines areas with deficiencies, plans needed improvements, and establishes a strategy for financing recommended works of improvement. The 10-year frequency storm event is used in the *Master Plan of Drainage* as the "design-year storm" for storm water facilities. Where sump or overflow conditions exist, provisions must be made to convey runoff in streets or other approved pathways for conditions equivalent to a 50-year storm event. In all cases, building pads must be elevated above the level of a 100-year flood. To help fund storm drain improvements, the City collects a fee based on the gross square footage of the site being developed, with cost factors identified in the *Master Plan of Drainage*. These fees vary in accordance with the type(s) of land use proposed.

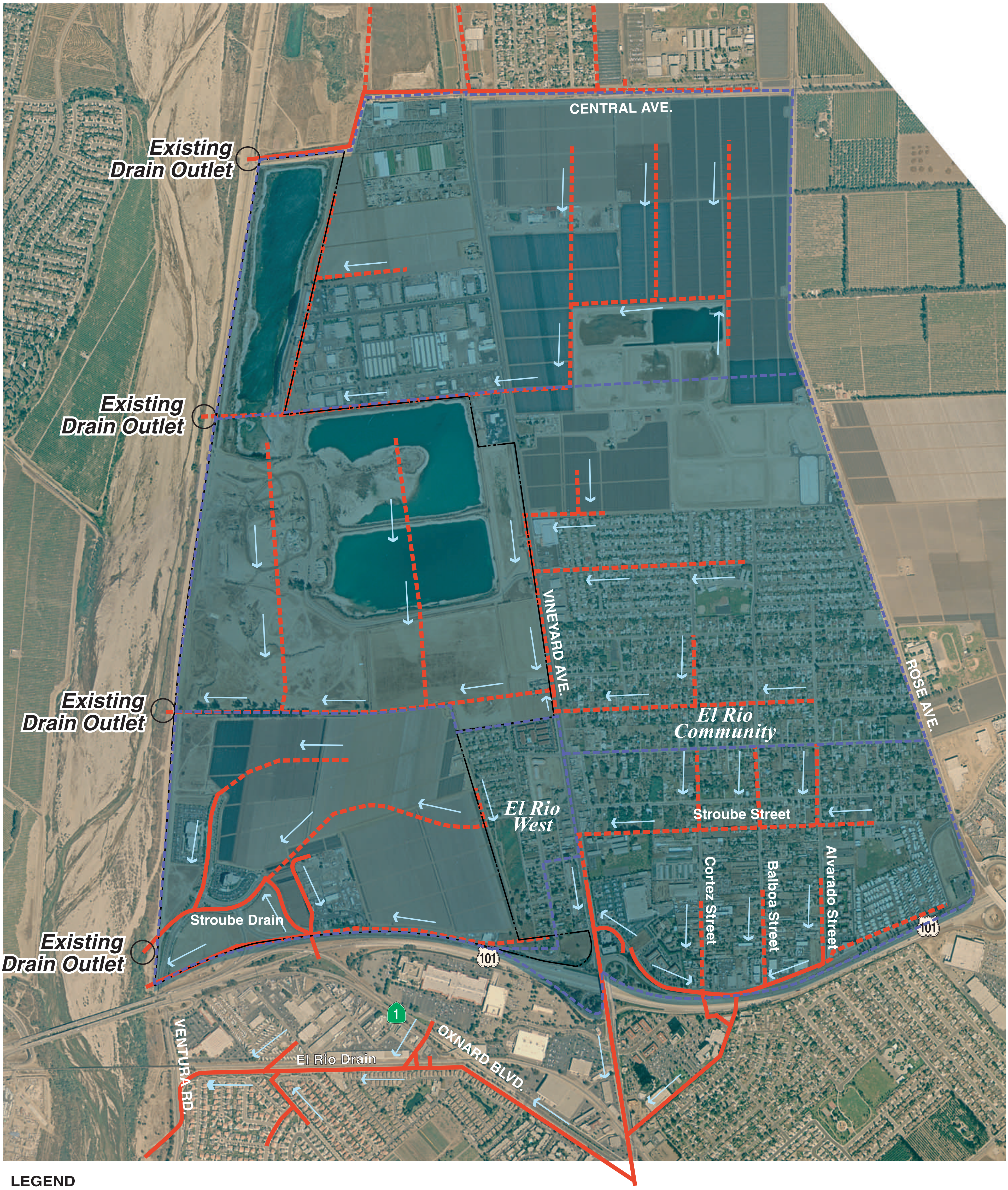
The Master Plan of Drainage provides a reference from which landowners, developers, and City officials may be informed of the potential need for additional drainage facilities and the estimated costs in meeting those needs.

Facilities recommended in the Master Plan are planned to meet existing and projected needs for storm drainage from initial runoff concentration points to the downstream confluence with regional flood control facilities. The facilities proposed in this report consist of storm drains larger than 30-inches and open channels. The Master Plan states that smaller pipes, catch basins, manholes, junction structures, and inlet and outlet structures will also be required as the major facilities are constructed, but their number, size, and location are be determined during the design of the major facilities. In most cases, conveyance structures are planned as underground storm drains in the form of reinforced concrete pipe up to a diameter of 72" and as rectangular concrete boxes for larger sizes.

The Master Plan of Drainage was prepared for the purpose of planning facilities on a basin-wide scale. The Master Plan recognizes there are some factors that may necessitate future modifications and refinement of the plan. For example, developments such as small subdivisions, industrial parks, and shopping centers usually require detailed runoff analysis for design of specific drainage facilities, and additional hydrologic investigations may be needed. Also, additional hydrologic calculations may be required when a significant change in land use occurs within a hydrologic sub-area. In this case, the City's adopted method of computing runoff is to be used to calculate appropriate peak discharge amounts and rates to be used in detailed designs.

Master Plan Facilities

Figure 4.11.1-2 shows the Master Plan of Drainage Facilities Map for the area. As shown in this figure, the Master Plan maintains existing drainage patterns in the area. Areas west of Vineyard generally drain towards the existing drains into the Santa Clara River along with the agricultural area east of Vineyard and north of the El Rio Community. The Master Plan also shows new facilities to drain the northern half of the El Rio Community west to the river with the southern half of El Rio draining east to Vineyard and south towards the Ventura Freeway to the City's El Rio Drain.



LEGEND

Riverpark Specific Plan Boundary

Existing Drainage Facilities

Proposed Drainage Facilities

Drainage Area Boundary

Direction of Flow

0 200' 400' 800' 1,600'
SCALE IN FEET

FIGURE 4.11.1-2

City of Oxnard Storm Drain Master Plan

The Master Plan shows the Stroube Drain being extended east to the end of the El Rio West Neighborhood to collect runoff from the portion of this neighborhood located north of Stroube Street. The Master Plan also shows easterly extensions of the existing drain in Ventura Road and the existing drain along the southern edge of the Specific Plan Area to drain the rest of the RiverPark 'A' area and the portion of the El Rio West Neighborhood located south of Stroube Street.

New drains are also shown along the northern and southern boundaries of the RiverPark 'B' Area. These drains would connect to the existing drain outlets into the Santa Clara River. The new drain shown on the southern boundary of the RiverPark 'B' Area is planned to drain the northern half of the El Rio Community. Extensions of the existing storm drain in Vineyard Avenue and the existing drains along the freeway are also shown to drain the southern half of the El Rio Community.

PROJECT IMPACTS

Thresholds of Significance

The City of Oxnard considers a project to have a significant impact related to storm drainage and flooding if it would:

- Create or contribute runoff water which would exceed the capacity of existing or planned storm water systems; or
- Place structures within a 100-year flood hazard area.

Proposed Drainage Improvements

As discussed above, the City's Master Plan of Drainage recognizes there are some factors that may necessitate future modifications and refinement of the master plan. The storm drain master plan included in the proposed RiverPark Specific Plan reflects detailed drainage studies completed to support the planning of the Specific Plan Area. The RiverPark Specific Plan Drainage Master Plan is designed to meet and exceed the Ventura County and City of Oxnard drainage criterion. In addition, the proposed drainage system was designed to provide water quality treatment of all storm flows from on and off-site tributary areas.

Figure 4.11.1-3 shows the proposed RiverPark Storm Drain Master Plan. As shown in this figure, the RiverPark Storm Drain Master Plan accepts runoff from areas to the east of Vineyard Avenue in generally the same locations shown in the City's Master Plan. A new storm drain would be built in

Santa Clara River Boulevard extending east from the Ventura Road Drain to Vineyard Avenue. This drain has been sized to accept runoff from the northern portion of the El Rio Community.

The RiverPark Storm Drain Master Plan also includes the extension of the existing Stroube Drain east to Stroube Street as called for in the City's Master Plan to collect runoff from the portion of the El Rio West Neighborhood located north of Stroube Street. A new drain in Myrtle Street would collect runoff from the portion of the El Rio West Neighborhood located south of Stroube Street and convey it to Vineyard Avenue.

Runoff from the agricultural area located north of the El Rio Community and east of Vineyard Avenue would continue to be collected at the northwestern corner of El Rio and conveyed under Vineyard Avenue into a storm water quality basin.

A description of the drainage system for each drainage area is provided below:

<u>Drainage Area 1</u>: will be drained into the new storm drain in Santa Clara River Boulevard and the proposed extension of the Stroube Street Drain. Both of these drains will connect to the existing Stroube Street Drain and outlet to the Santa Clara River. Water quality treatment features including dry swales, pervious pavement in parking fields, centrifugal separators, and other Best Management Practices will be employed to comply with NPDES storm water discharge requirements.

<u>Drainage Area 2a</u>: Runoff from the western portion of Drainage Area 2a will be collected in on-site storm drain systems and drain to a dry swale located along the western edge of the Specific Plan Area. Cleansing the detention of flows will occur here in a manner similar to that described above. These flows will be conveyed to the existing storm drain outlet to the Santa Clara River located at the boundary of RiverPark Areas 'A' and 'B'. The southern portion of Drainage Area 2a will drain south to the Santa Clara River Boulevard Drain.

<u>Drainage Area 2b</u>: The northern portion of Drainage Area 2b will drain to the west to on-site storm drains that will convey the runoff to a dry swale along the eastern edge of the development area. This swale drains to a linear water quality detention basin along the southern edge of the Brigham-Vickers Pit. Low flows from this basin will drain south to the Santa Clara River Boulevard. The western portion of Drainage Area 2b will also drain south to the Santa Clara River Boulevard. A secondary and emergency overflow outlet weir is planned within the South Water Quality Basin to route flows in excess of a 10-year storm event directly into the adjacent Large Woolsey Water Storage/Recharge basin.

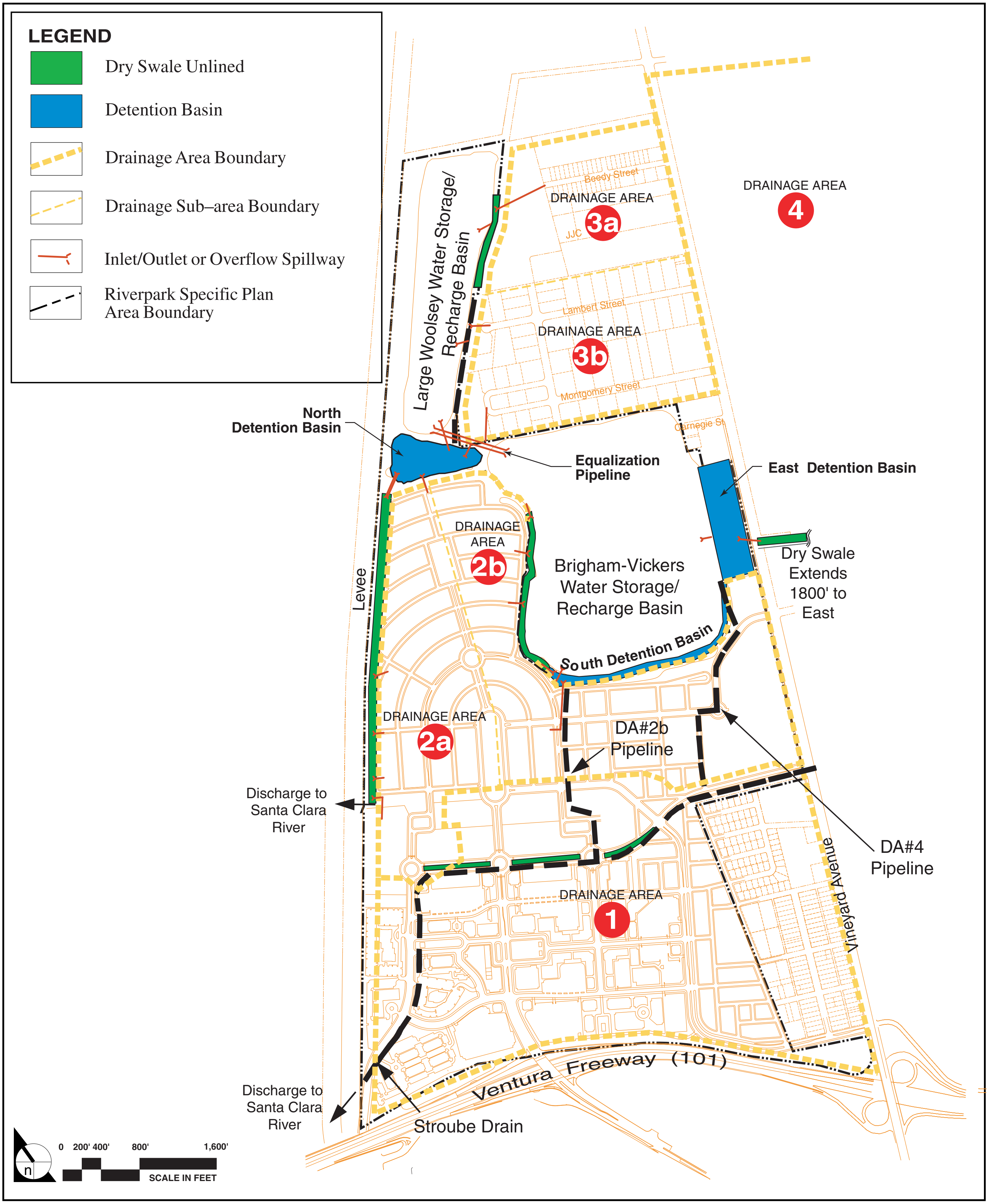


FIGURE **4.11.1-3**

Riverpark Storm Drain Master Plan

Drainage Areas 3a and 3b: The storm water discharge from the Area 3b (the Beedy Street Industrial Area) will be collected in a dry swale along the western edge of the Large Woolsey Pit. Drainage from Area 3b (the Montgomery-Lambert Industrial Area) will be collected in a new storm drain along the eastern edge of the Large Woolsey Pit. The runoff from both areas 3a and 3b will be conveyed to the North Water Quality Detention Basin via a series of dry swale and storm drain pipes, offering cleansing to the storm flows as previously described. The detained flows will then drain south to the swale along the western edge of the Specific Plan Area. Flows up to and including 10-year storm event flows will be allowed to settle pollutants out. A secondary and emergency overflow outlet weir is planned within the north water quality basin to route flows in excess of the 10-year event directly into the adjacent large Woolsey Water Storage/Recharge basin.

For the northern portions of Drainage Area 2a and all of area 2b storm water flows will enter the north and south water quality basins where pollutants will be allowed to settle out. For storm water flows larger than a 10-year event, the north and south water quality basins will have a secondary and emergency overflow outlet weir. These outlet weirs will be placed at appropriate elevations within the basins to control flows in excess of the 10-year storm event and route them directly into the adjacent Brigham-Vickers Water Storage/Recharge Basin.

Drainage Area 4: The storm water flows from this area will follow historical routes to the north side of El Rio. The existing swale located along the northern edge of the El Rio Community that currently collects these flows will be replaced with a new dry-swale offering the same water cleansing and polishing described for the previous drainage areas. The treated flows will then flow through the existing 78” pipe and into the modified El Rio Drainage Basin No. 1, called out as the East Water Quality Basin on the RiverPark Storm Drain Master Plan. As with the other water quality basins, flows from storms over a 10-year event will be routed directly into the Brigham-Vickers Water Storage/Recharge Basin.

Impact Analysis

The proposed Storm Drain Master Plan Facilities maintain the general drainage patterns established in the City’s Master Plan of Drainage. Table 4.11.1-1 summarizes the existing and proposed storm water flow characteristics for each drainage area affected by the project. The proposed storm drain system has adequate capacity to accept runoff from areas located east of Vineyard Avenue, from the industrial areas north of the Specific Plan Area and from the Specific Plan Area itself.

Table 4.11.1-1
Existing and Proposed Storm Water Flow Characteristics (10-year / 100-year)
RiverPark Specific Plan

	Existing Condition Volume (Ac-Ft)	Existing Condition Peak Discharge (cfs)	Proposed Condition Volume (Ac-Ft)	Proposed Condition Peak Discharge (cfs)
Drainage Area 1	62 / 109	270 / 473	55.3 / 97.0	241 / 422
Drainage Area 2a	6.6 / 11.6	41 / 72	20.3 / 35.5	126 / 221
Drainage Area 2b	21.0 / 36.0	123 / 216	27.8 / 48.8	167 / 293
Drainage Area 3a	20.9 / 36.7	101 / 177	20.9 / 36.7	101 / 177
Drainage Area 3b	36.7 / 64.5	172 / 302	36.7 / 64.5	172 / 302
Drainage Area 4	100.2 / 175.8	250 / 439	100.2 / 175.8	250 / 439

Source: Huitt-Zollars.

As can be seen in Table 4.11.1-1, the flow characteristics in the existing conditions and proposed conditions for drainage areas 1, 2a, and 2b are similar in nature. Because of minor re-routing of the storm flows to adjacent drainage areas, the proposed flow conditions actually drop in Drainage Area 1. In Drainage Area 2a some minor flows are picked up from Drainage Area 1, causing an increase in total volume discharged in to the river of 23.9 ac-ft (Q100) and an increase in peak flow of 149 cfs (Q100). This increase of 0.075 percent is negligible when compared to the total flows in Santa Clara River of 200,000 cfs.

As the proposed drainage system has adequate capacity to for on and off-site runoff, no significant impacts to drainage conditions in the area will result from the RiverPark Project.

Flood Protection

The current Federal Emergency Management Agency (FEMA) generated Flood Insurance Rate Maps (FIRM) along this reach of the Santa Clara River are based on a Q100 flow rate of approximately 160,000 cubic feet per second (cfs). The estimated 1969 flow at the Highway 101 bridge was approximately 165,000 cfs. The *1996 Santa Clara River Enhancement and Management Plan*, "Flood Protection Report" provided additional flood plain analysis using an updated Q100 flow rate of 200,000 cfs for this section of the river. As shown in Table 4.11.1-2 below, the levee currently provides a minimum of 3 feet of freeboard along this reach of the Santa Clara River. The RiverPark project will not be subject to any significant flooding impact from the Santa Clara River.

Table 4.11.1-2
Freeboard Analysis - RiverPark at Santa Clara River

Description	Station	Design Flow Line Elevation	Water Surface Elevation	Top of Levee Elevation	Freeboard
1,000' upstream of 101	250+00	64.2	79.4	82.7	3.3
6,000' upstream of 101	300+00	77.5	92.7	95.8	3.1
11,000' upstream of 101	350+00	90	105.2	111	5.8

Source: Jensen Design and Survey, Inc.
References: Flow Depth and Design Q's are from The Santa Clara River Enhancement and Management Plan, *"Flood Protection Report" June 1996 Final Draft, Table 4-2 Hydraulic Properties by Reach in Ventura County - Reach From Highway 101 to Highway 118. Present Condition Q100 Flow Quantity 200,000 cfs Flow depth 15.2 ft, Design Flow Line Elevations from Historical Profile Design Flow Line Fig 2-7 and Fig 2-8 NAV 1988 datum.*

Engineering Analysis was also completed to determine the capacity of the Large Woolsey and Brigham-Vickers Water Storage/Recharge Basins to accommodate runoff from the project. As proposed, the RiverPark project would route storm water flows from in excess of a 10-year event into the Water Storage and Recharge Basins. The amount of water available to be stored in the pits is based on two main variables, namely the size of the event and the level of groundwater. Assuming the worst case scenario for a storm event, a 100-year event, a total of approximately 326 acre-feet will be diverted to the Water Storage Infiltration Basins as shown in Table 4.11.1-3. Approximately 101 acre-feet would be diverted to the Large Woolsey Basin and 225 acre-feet would be diverted to the Brigham/Vickers Basin.

Table 4.11.1-3
100-year Storm Runoff Discharges to Water Storage/Recharge Basins

Drainage Area	100-year Event Volume (Ac-Ft)	Water Storage Basin Destination	Water Storage Basin Capacity (Ac-Ft) (1)	Resultant Freeboard (2)
3a	36.7	Large Woolsey		
3b	64.3			
Total	101.0	Large Woolsey	210	2.6’
2b	48.8	Brigham/Vickers		
4	175.8			
Total	224.6	Brigham/Vickers	623	3.2’

Notes:
(1) Storage is between elevation 75 and elevation 80.
(2) Freeboard calculation is an interpolation between storage capacity at elevation 75 and elevation 80. Freeboard is expressed as the distance from top of storage to elevation 80.

Assuming a worst case scenario of ground water at historic high levels (Elevation 75), the increment of storage between elevation 75 and 80 would available for storm water storage. As can be seen in Table 4.11.1-3 there is adequate storage capacity and freeboard for both the Brigham/Vickers Water Storage Basin and the Large Woolsey Water Storage Basin. Based on this analysis, no significant flooding impact from the water storage basins will result.

As proposed, the RiverPark Specific Plan would also allow the Water Storage/Recharge Basins to be used by the United Water Conservation District (UWCD) for the storage of water diverted from the Santa Clara River at the UWCD Freeman Diversion Dam. UWCD has indicated their intent would be to store water in the basins for infiltration to recharge groundwater in the Oxnard Plain Aquifer System. In addition, UWCD has indicated that water stored in these pits may be pumped to other existing groundwater spreading facilities or supply pipelines in the area. UWCD will have the ability to manage the level of water in the Water Storage/Recharge Basins to ensure that adequate capacity for stormflows and adequate freeboard is maintained. As indicated above in Table 4.11.1-3, there will be adequate freeboard in the Water Storage/Recharge Basins even during periods when groundwater is high for UWCD to store water and maintain a minimally acceptable freeboard of approximately 2.0 feet. No significant flooding impacts, therefore, will result from the proposed use of the Water Storage/Recharge Basins by UWCD for storage of water.

The RiverPark Specific Plan Project will not result in any structures being placed in any 100-year flood hazard area. No significant flooding impacts will be created by the proposed RiverPark Specific Plan Project.

CUMULATIVE IMPACTS

Two other projects proposed in the immediate vicinity of the RiverPark Project are located in the same drainage area. The Ventura County Juvenile Justice Center (JJC) is located on a site that historically has drained to the Large Woolsey Mine Pit. In addition, the drain from the Beedy Street Industrial Area crosses the JJC site. The drainage system designed for the JJC will collect storm flows into a large basin designed to overflow into the Large Woolsey basin only if the inflow exceeds the capacity of the basin. The design will accommodate well in excess of a 100-year storm. For this reason, overflow into the Large Woolsey Basin not occur on a regular basis.

A residential project is also proposed in the El Rio West Neighborhood immediately east of the RiverPark Specific Plan Area between Stroube and Sycamore Streets. This project is proposed in an area that would be served by the proposed storm drain in Myrtle Street, which has been designed to accommodate runoff from the portion of the El Rio West Neighborhood located south of Stroube Street.

Based on the drainage characteristics of these related projects and planned drainage improvements, no significant cumulative drainage impacts will result from the RiverPark Project and these related projects.

MITIGATION MEASURES

No mitigation measures are necessary as no significant impacts have been identified.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant impacts related to storm water drainage and flooding will result from the RiverPark Project.

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4.11 PUBLIC UTILITIES

INTRODUCTION

This section provides discussion on public utilities with respect to the RiverPark Project and is divided into four topics in the following subsections: 4.11.1, Stormwater Drainage; 4.11.2, Water Supply and Distribution; 4.11.3, Wastewater Service; and 4.11.4, Energy.

4.11.2 WATER SUPPLY AND DISTRIBUTION

INTRODUCTION

This section describes the existing water supply and water distribution system in the City of Oxnard, and evaluates the impacts of the RiverPark Specific Plan. Sources used in the preparation of this section include the City of Oxnard Water System Master Plan, Urban Water Management Plan *and the RiverPark Specific Plan.*

ENVIRONMENTAL SETTING

Water Supply

Plans and Policies for Water Supply

Urban Water Management Planning Act

California State Assembly Bill 797 (California Water Code Section 10610, et seq.), adopted in 1983, requires every urban water supplier providing water for municipal purposes to more than 3,000 customers or more than 3,000-acre-feet of water on an annual basis to prepare an Urban Water Management Plan (UWMP). The intent of the UWMP is to assist water supply agencies in water resource planning given their existing and anticipated future demands. A number of mandatory elements are identified for inclusion in the plan, including: an estimate of past, current, and projected water use; identification of conservation measures currently adopted and being practiced; a description of alternative conservation measures which would improve the efficiency of water use with an evaluation of their cost and environmental or any other significant impacts; a schedule for the implementation of proposed actions indicated by the plan; and several other mandated elements. The law requires that the plans be submitted to the State Department of Water Resources.

The UWMP requirements were updated in 1995. Current UWMP's now must also include a water supply and demand assessment of the reliability of water service to customers during normal, dry, and critically dry water runoff years. The water supply and demand assessment must compare the total water supply available to the water supplier with the total projected water use over a 20-year period, which must be analyzed in five-year periods for each scenario identified above. The management plans must also be updated every five years, with the updates occurring in years ending in 0 and 5.

Related Legislation

Two senate bills addressing the adequacy of water supplies were recently signed into law. Senate Bill 221 prohibits a local planning agency from approving a tentative map, parcel map or development agreement for residential subdivisions of more than 500 units unless the water supplier issues a written verification that a sufficient water supply is available for the project, or the local agency finds that alternate water supplies are, or will be, available prior to completion of the project. This legislation was signed by the Governor in October 2001 and goes into effect on January 1, 2002.

Senate Bill 610, also signed by the Governor in October 2001 and effective on January 1, 2002, modifies the requirements for the water supply assessments already required to be provided by water suppliers to local planning agencies for certain types of projects. This legislation also expands the requirements for certain types of information in an UWMP, including an identification of any existing water supply entitlements, water rights, or water service contracts held relevant to the water supply assessment for a proposed project, and a description of water deliveries received in prior years.

City of Oxnard Urban Water Management Plan

The City of Oxnard (City) recently completed an update of the City's UWMP. Adoption of the UWMP is scheduled for December 2001. The UWMP reflects strong concerns for developing and maintaining a stable, long-term water supply that can accommodate both existing demand and future growth, with the expectation that drought conditions and water shortages may occur periodically. The UWMP includes descriptions of the City's water service area, local water agencies, existing water supply sources and future outlook, frequency and magnitude of water supply deficiencies, existing water management programs and future water management projects.

Existing Water Use and Supplies

The City's current water supply consists of imported surface water and local groundwater sources. The City blends the water from these two sources to achieve a balance between water quality, quantity and cost. While the ratio of local groundwater to imported surface water has varied over time, the City's current practice is to blend these sources at an approximate 1:1 ratio.

The City's imported water source consists of water from the State Water Project, which is purchased from, and delivered by, the Calleguas Municipal Water District (CMWD). Local groundwater from the Oxnard Plain Groundwater Basin is provided to the City by the United Water Conservation District

(UWCD) and from local wells owned and operated by the City. For example, over the period of 1992 to 2000, the City consumed an average of 22,866 acre-feet of water per year. In 2000, the City consumed 26,490 acre-feet of water, of which 44 percent was local groundwater and 56 percent was imported water. Of this total, 5,320 acre-feet came from City groundwater wells; 6,420 acre-feet came from UWCD; and 14,750 acre-feet was imported water purchased from CMWD. Each of these sources of water is described further below.

Calleguas Municipal Water District

To provide for long-range improvement of its water quality, the City annexed to CMWD in February of 1961. CMWD is a member agency of the Metropolitan Water District of Southern California (MWD), from which CMWD purchases imported water. The MWD/CMWD imported water supply delivered to the City originates in northern California and is conveyed over 500 miles to southern California through the State Water Project's (SWP) system of reservoirs, aqueducts and pump stations. Water is filtered and disinfected at MWD's Joseph Jensen Filtration Facility in Granada Hills. CMWD receives the treated water from MWD via the MWD West Valley Feeder. CMWD then either stores the treated water in Lake Bard or feeds the water directly to the 18-million gallon Springville Reservoir near Camarillo. The City receives water from Springville Reservoir through the City's Oxnard and Del Norte Conduits that feed the City's four water blending stations.

United Water Conservation District

UWCD is a regional water management agency that obtains water from a variety of sources for the benefit of agricultural and municipal entities throughout western Ventura County. UWCD diverts surface water from the Santa Clara River either for direct delivery to agricultural entities or to several percolation ponds to augment the recharge of local groundwater basins. UWCD also operates several groundwater extraction wells, providing the groundwater to agricultural and municipal users, including the City. As noted above, groundwater obtained from UWCD currently provides about one quarter of the City's total water supply.

In particular, UWCD provides groundwater to the City through the El Rio groundwater wellfield, located at UWCD's El Rio Spreading Grounds. UWCD diverts Santa Clara River water at the Freeman Diversion Dam northwest of Saticoy and delivers a portion of the water to the El Rio Spreading Grounds through a pipeline. This water percolates into, and recharges, the underlying Montalvo Groundwater Basin. The eleven El Rio wells are located adjacent to the El Rio Spreading Grounds.

Three of these wells extract water from the lower aquifer system (LAS), and the remaining eight wells extract water from the upper aquifer system (UAS).

The El Rio wellfield has a total active pumping capacity of 53.0 cubic feet per second (cfs). Water extracted by these wells is delivered to UWCD's El Rio Pumping Station, chlorinated, and pumped directly through UWCD's Oxnard-Hueneme (O-H) Pipeline to the City's four water blending stations. UWCD built the O-H Pipeline in 1954 to move municipal groundwater extraction away from the coastal areas subject to seawater intrusion. The O-H Pipeline consists of 12 miles of distribution pipeline. The O-H Pipeline delivers potable water to several customers on the Oxnard Plain, including the City, Port Hueneme Water Agency, and a number of other smaller water users. The O-H Pipeline is designed to deliver up to 55 cfs of potable water.[1]

The City purchases water from United pursuant to a long-term water supply agreement. That agreement entitles the City to use up to 26.75 cfs of the O-H Pipeline capacity. In 1999 UWCD delivered 12,225 AF, or 16.9 cfs of water to the City. The City's existing peak capacity in the O-H Pipeline would allow for additional deliveries of groundwater of approximately 7,000 AF per year or 9.85 cfs. It should be noted that pumping capacity is a function of aquifer condition as well as the condition of the well, pumping equipment, groundwater levels, and distribution system pressure.

City of Oxnard Wells

The City owns seven wells in the Oxnard Plain Basin (two in the Upper Aquifer System (UAS) and five in the Lower Aquifer System (LAS)). The UAS wells include Nos. 22 and 23 that are located at the City Water Division Yard on 251 South Hayes Street. These wells pump groundwater from the Oxnard Aquifer into a 220,000-gallon clearwell reservoir. The reservoir acts as a suction forebay for water Blending Station No.1. This station boosts the water to above the system pressure for mixing with imported water at the water blending station. The UAS wells have a total active pumping capacity of 6,000 gpm. It should be noted that pumping capacity is a function of aquifer condition as well as the condition of the well, pumping equipment, groundwater levels, and distribution system pressure.

The LAS wells include Nos. 19, 20, 21, 24, and 25. Well Nos. 20 and 21 are located at the City Water Division Yard on 251 South Hayes Street and pump groundwater from the Hueneme Aquifer. Groundwater from Well Nos. 20 and 21 is blended with imported water at the water blending station. Well Nos. 19, 24, and 25 are currently being completed at the City's Blending Station No. 3 at the

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[1] United Water Conservation District (UWCD). *Surface and Groundwater Conditions Report Water Year 1998.*

intersection of Gonzalez Road and Rose Avenue. Well No. 19 pumps groundwater from the Fox Canyon Groundwater Basin, Well No. 24 pumps from the Oxnard Basin, and Well No. 25 pumps from the Hueneme Basin. Groundwater from Well Nos. 19, 24, and 25 is blended with imported water at the Blending Station No. 3. The LAS wells have a total active pumping capacity of 14,000 gpm.

Future Water Demand and Supplies

The City's UWMP includes a projection of water demand through the year 2020. Using a straight-line demand approach, the City is projected to use a total of 44,565 acre-feet in 2020 if all land uses allowed by the City's *2020 General Plan* are developed at maximum allowed intensities. Water demand is projected to increase by approximately 68 percent from the year 2000 to 2020, resulting in an approximate annual increase of 2.6 percent.

The City does not have an existing agreement with CMWD or MWD that guarantees the quantity of water the City may purchase. CMWD has also suggested that future imported water deliveries may be limited through rate restructuring.

Local groundwater extractions are managed by the Fox Canyon Groundwater Management Agency (FCGMA). To mitigate overdraft conditions in the Oxnard Plain Basin, the FCGMA has assigned allocations to each party or agency that pumps groundwater. The FCGMA is implementing a series of cutbacks in these allocations to reduce overall groundwater extractions to 75 percent of 1990 levels to eliminate the overdraft of the local aquifer system by 2010.

UWCD holds a groundwater sub-allocation from the FCGMA on behalf of the City. In 2000 this allocation was 5,302. As a result of the cutbacks of groundwater extractions scheduled by the FCGMA, this allocation will be reduced to 4,990 acre-feet in 2005 and 4,768 acre-feet in 2010. The City also has accumulated approximately 10,000 acre-feet of conservation credits. These credits can be used on a one-time basis to supplement the available allocation. Like the UWCD sub-allocation, the City also has a groundwater allocation from the FCGMA. For 2000, the City's allocation is 5,879 acre-feet. Cutbacks in 2005 and 2010 will result in allocations of 5,568 and 5,256 acre-feet, respectively. The City is also able to draw upon 600 acre-feet per year of unused allocation held by the Oceanview Municipal Water District that would be delivered by UWCD through the O-H Pipeline.

Availability of future water supplies is affected by the groundwater extraction restrictions imposed by the FCGMA, the capacity of the CMWD water distribution system and the reliability of the State

Water Project deliveries. To bolster the reliability and security of its water supplies to meet current and projected demands, the City is pursuing a variety of water resource programs.

First, the City is planning to improve its wells to allow increased groundwater extractions. The City is planning a manganese removal/treatment system and three new wells at the City's existing Blending Station No. 3. While these wells and the related treatment facilities will not secure additional groundwater rights, they will allow for increased extraction if additional groundwater rights become available and increased reliability and flexibility for the City's internal supply system.

Second, the City has exclusive rights to use capacity for delivery of additional local groundwater supplies in the O-H Pipeline. This additional capacity would allow delivery of up to 7,000 additional acre-feet per year provided additional groundwater extraction allocations can be acquired by the City.

Third, MWD and its member agencies, including CMWD, have made a number of investments since 1991 in conservation, water recycling, storage and supply. As a result of these efforts, CMWD's water supply deliveries to the City are anticipated to become 100 percent reliable over the next 10 years. CMWD, in cooperation with the MWD, has developed a below-ground storage reservoir in the Las Posas Groundwater Basin. The Las Posas Basin Aquifer Storage and Recovery project is designed to provide up to 300,000 acre-feet of imported water for use to meet emergency, drought and peak demands from CMWD's member agencies.

Fourth, the City is developing a new program called the Groundwater Recovery Enhancement and Treatment (GREAT) Program, to further enhance the reliability of its own local water supplies. Under the GREAT Program, the City will upgrade its wastewater treatment plant to produce tertiary recycled water. This water will also undergo advanced demineralization treatment and then provided in-lieu to UWCD to serve agricultural users. These users will in turn exchange their groundwater pumping allocation to UWCD who will provide additional groundwater to the City for domestic use. The City will enhance the quality of a portion of this groundwater supply through an additional demineralization treatment system to maintain the current water quality delivered to City customers.

The GREAT Program may produce more recycled water than can be directly used by agricultural customers. Additional recycled water will be treated to advanced standards and then injected into a seawater intrusion barrier. The City would obtain additional groundwater pumping credits from the Fox Canyon Groundwater Management Agency by establishing this seawater intrusion barrier.

Discussions held with the CMWD, Port Hueneme Water Agency, UWCD, and FCGMA indicated significant support for the project. The City is currently preparing an advanced planning study for the GREAT Program. This study, scheduled to be completed by the end of 2001, will address preliminary design, governance issues, and will contain a cost estimate and schedule for implementation of the GREAT Program.

The Urban Water Management Planning Act requires urban water suppliers to assess water supply reliability. This assessment must address the normal/average year, a single dry year and multiple dry years. The assessment in the City's UWMP indicates that the City's water supply is sufficient for a normal/average year but a deficit would exist in a single dry year or over a period of three dry years. The single dry year assessment assumed city-wide demand as projected in 2005 with no reduction in demand from drought conservation efforts, a 15 percent reduction in the delivery of imported water by CMWD and a 5 percent reduction in the availability of groundwater from UWCD and city wells as a result of the next FCGMA scheduled cutbacks in groundwater allocations. This scenario would result in a supply deficit of approximately 9,400 acre-feet. The assessment of multiple dry-years considered demand projections for the period of 2001 to 2003 with no reduction from drought conservation efforts and reductions of 5 percent per year in deliveries from CMWD, based on the drought conditions in the early 1990's. With this scenario, a supply deficit of 5,600 acre-feet would occur in the first year, 6,700 acre-feet in the second year and 7,700 acre-feet in the third year. Should either of these scenarios occur, the City would use most or all of its 10,000 acre-feet of accumulated conservation credits to pump additional groundwater and would rely on other programs to meet demands.

The supply and demand comparisons required by the UWMP are theoretical in nature and are intended to show the impacts of single and multiple dry year weather conditions to support water supply contingency planning. In the City's case, these impacts are further exacerbated by increasing demands and decreasing groundwater allocations. As required by the Urban Water Management Planning Act, the City's UWMP also contains a water shortage contingency plan. The planning and supply enhancement programs discussed above are designed to ensure the reliability of the City's water sources in normal and drought conditions. The UWMP includes a series of 14 specific demand management measures that are projected to reduce overall demand by 5 to 10 percent. The City currently anticipates that the GREAT Program will provide the majority of the additional water needed to meet projected demands through the year 2020.

Existing Water Use

Existing land uses within the Specific Plan Area include agriculture, commercial offices and institutional uses in the RiverPark Area ‘A’. Existing uses in RiverPark Area ‘B’ consist of the ready mix concrete batch plants, asphalt plant, and recycling plant on the existing mine site, agricultural uses on a portion of the County El Rio Retention Basin No. 2 site and a small parcel immediately north of the Retention Basin site on Vineyard Avenue. All of the existing agricultural uses and the sand and gravel mine site are supplied with local groundwater from wells located on these sites. The other existing uses are supplied with domestic water by the City.

Water Distribution System

Existing water lines in the vicinity of the Specific Plan Area are shown in Figure 4.11.2-1. As shown in this figure, an 18-inch water line currently located in Ventura Road and Town Center Drive provides water service to the two existing office buildings in the southwest corner of the Specific Plan Area. On the eastern side of the Specific Plan Area, a 14-inch line in Vineyard Avenue extends north to Simon Drive and a 12-inch line extends in Myrtle Street to Colonia Avenue.

PROJECT IMPACTS

Thresholds of Significance

Based on Appendix G of the CEQA *Guidelines*, the City considers impacts on water supply to be significant if:

- the City would not have a sufficient water supply to serve the project from existing entitlements and resources or new resources currently being developed;

In addition, the City considers impacts on water supply to be significant if:

- a project would use water in a wasteful manner

The City considers the impact of a project on the City’s water distribution system to be significant if:

- the City’s water distribution system would be unable to serve the Specific Plan Area with adequate flow and pressure per applicable City standards.

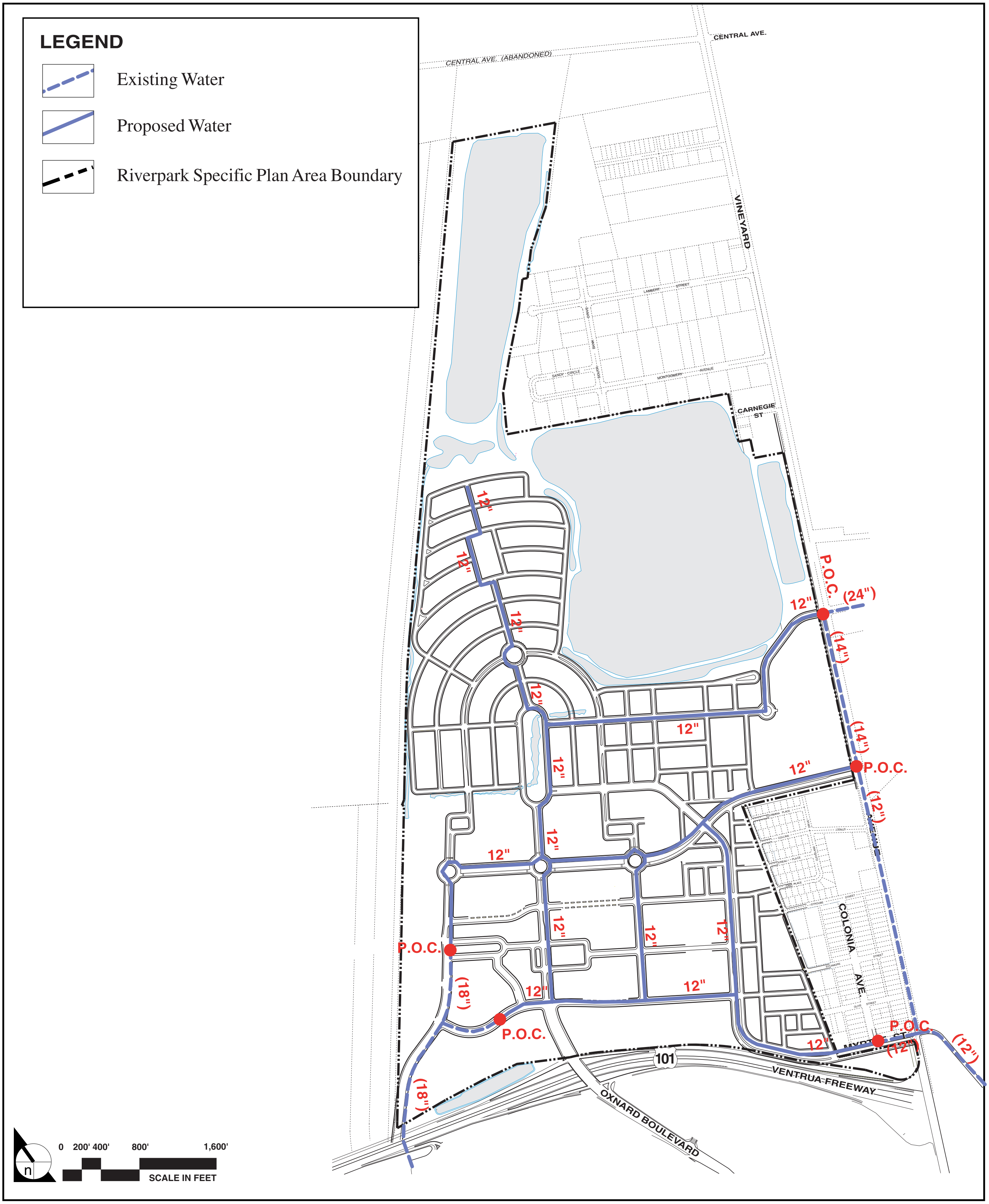

FIGURE 4.11.2-1

Riverpark Specific Plan Water Master Plan

Project Impacts

Water Supply

Project Water Demand

As shown in Table 4.11.2-1, the water demand for the uses allowed by the RiverPark Specific Plan was developed based on the water consumption factors outlined in the City's UWMP and historical city data. The factors for single family residential, multi-family residential, and commercial uses reflect an unaccounted for water loss factor of 5 percent added to historical demands. The water demand for parks and other irrigated open space areas were developed from historical city park irrigation demand data from 1999/2000. Based on the amount of parkland irrigated and the amount of water consumed, a unit demand factor of 2.2 acre-feet per acre was derived. If all uses permitted by the proposed RiverPark Specific Plan are built at the maximum allowed intensity, approximately 1,835 acre-feet per year of water would be required. This demand would build over time as individual building projects within the Specific Plan Area are developed. As described in Section 3.0, Project Description, the first occupancy of residences or commercial structures would be in 2003. It is anticipated that the Specific Plan Area would not be fully built-out until the year 2020.

Table 4.11.2-1
Projected Water Demand
RiverPark Specific Plan

Proposed Land Use	Units	Annual Water Consumption Acre-Feet/Acre[2]	Annual Water Demand in Acre-Feet
Single Family Residential	174 acres	2.46 acre-feet/acre	428
Multi-Family Residential	70 acres	8.57 acre-feet/acre	599
Commercial	164 acres	3.58 acre-feet/acre	559
Parks	113 acres	2.20 acre-feet/acre	249
Other Open Space	180 acres	N/A	N/A
Total	701 acres		1,835

Source: Impact Sciences

2 The Oxnard Urban Water Management Plan does not define water consumption rates for public facilities such as schools and fire stations. For this estimate, the proposed fire station site and the portion of the school sites that would be occupied with buildings and related facilities were included as commercial uses. The portions of the school sites that would be occupied by play fields and related recreational facilities was included as park uses. This estimate is based on 35 percent coverage of the 41 acres of school sites with buildings and related facilities.

As previously discussed, the FCGMA manages groundwater extractions within the Oxnard Plain Basin. These regulations are contained in FCGMA Ordinance 5.9, adopted in February 2001. To mitigate an overdraft condition in the basin, it has assigned allocations to each groundwater pumper. Historical extraction allocations are based on the average groundwater extraction between 1985 and 1989. The FCGMA also has implemented a series of cutbacks to reduce overall groundwater extractions to 75 percent of 1990 levels to eliminate overdraft conditions in the aquifer system by 2010 and create a safe yield of groundwater.

Article 3 of FCGMA Ordinance 5.9 addresses adjustments to extraction allocations. Section 2 of Article 3 defines the types of adjustments allowed, while Section 3 outlines the procedures for adjustments. When irrigated agricultural land changes to a Municipal and Industrial (M&I) use, the groundwater extraction allocation is transferred to the provider of the M&I water supply. The amount of allocation available for transfer from agricultural land is based on the amount of land irrigated for agriculture during the 1985-1989 base period. Up to two acre-feet can be transferred to the M&I provider for each acre of land irrigated for agricultural uses during the base period. Any remaining amount of the historic extraction allocation is eliminated. The FCGMA also allows the assignment of an extraction allocation from one party to another.

In the case of the RiverPark Project, the City will be the M&I service provider. The RiverPark Project will involve the conversion of agricultural land to M&I use. In addition, the extraction allocations associated with the existing sand and gravel mine site and the County retention basin property will be transferred to the City. The existing agricultural land and mine site currently pump water from eight wells within the Specific Plan Area.

The existing mine site in RiverPark Area 'B' contains three wells with M&I extraction allocations[3] and two wells with agricultural allocations.[4] A total extraction allocation of 1,508 acre-feet is available for transfer from the three M&I wells. The two agricultural wells have historic extractions allocations of 43 acre-feet established through agricultural use of 18.4 acres during the 1985-1989 base period. This permits an agricultural to M&I transfer allocation of 2 acre-feet per acre for the 18.4 acres of agricultural use during the base period. This results in an allocation for these two wells of approximately 37 acre-feet that can be transferred to the City.

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3 State Well Numbers 2N/22W-15Q01, 2N/22W-15Q03 and 2N/22W-15R01.

4 State Well Numbers 2N/22W-22H01, and 2N/22W-23D05.

The agricultural land in RiverPark Area 'A' contains 2 wells with agricultural allocations.[5] These wells have historic extraction allocations of 624 acre-feet established through agricultural use of 213 acres during the 1985-1989 base period. The allowable agricultural to M&I allocation transfer at 2 acre-feet for the 213 acres of agricultural use during the base period results in an allocation of 426 acre-feet that can be transferred to the City.

The El Rio Retention Basin No. 2 site contains one well with an agricultural extraction allocation. This well has a historical allocation of 280 acre-feet established through agricultural use of the entire 67.4-acre property during the 1985-1989 base period (prior to construction of the retention basin). The allowable agricultural to M&I allocation transfer at 2 acre-feet per acre for the 67.4 acres of agricultural use during the base period results in an allocation of 135 acre-feet that can be transferred to the City.

Based on this information, the total amount of extraction allocations that can be transferred to the City is approximately 2,106 acre-feet. As previously discussed, the FCGMA is reducing all groundwater allocations by 25 percent after 2009 under FCGMA Ordinance 5.9. With this reduction, the total amount of the extraction allocations transferred to the City will be approximately 1,580 acre-feet. The City will also have sufficient facilities to extract and-or accept delivery of this additional groundwater. As previously discussed, the City is developing additional well capacity at the City's Blending Station No. 3 and the City has additional capacity for delivery of additional local groundwater supplies in the UWCD O-H Pipeline.

This 1,580 acre-feet increase in the City's groundwater extraction allocation will offset the majority of the 1,835 acre-feet per year increase in water demand associated with the proposed project. As previously discussed, the City is developing additional local water supplies through its GREAT Program, which will be available to meet the additional 255 acre-feet per year annual demand for water not directly provided through the increased groundwater allocations associated with the project.

The proposed Specific Plan designates the reclaimed mine pits for use as water storage and recharge basins and allows the pits to be used by the United Water Conservation District (UWCD) as water storage and recharge basins at some future date. As discussed previously, UWCD built the Freeman Diversion Dam in 1991 to divert water from the Santa Clara River for groundwater recharge and agricultural use. The District's current ability to recharge the local aquifer system is limited after about four weeks of precipitation in wet years due to the limited capacity of the existing spreading

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5 State Well Numbers 2N/22W-21H01 and 2N/22W-22G01.

grounds. In addition, UWCD does not divert water from the river immediately after a storm due to the high level of silt. As a result, UWCD is not able to divert the full amount of water from Santa Clara River to which it is currently entitled. UWCD has expressed interest in using the existing mine pits within the Specific Plan Area, after implementation of the proposed reclamation plan, for the storage of water diverted from the Santa Clara River at the Freeman Diversion structure. Water stored in the pits would be allowed to infiltrate or be transferred to other UWCD facilities for recharge. This allowed use would increase the reliability of local groundwater resources and would be a beneficial impact of the project.

Water Conservation

Individual building projects within the Specific Plan Area would be required to meet standard requirements of the City, State and the Uniform Building Code. These requirements act to conserve potable water, ensure adequate water flow, and pay for the construction of improvements to the water distribution system as outlined in the City's Water System Master Plan. Requirements to which all future developments must conform include the following:

- All subdivisions must comply with Section 17921.3 of the *Health and Safety Code* which requires low-flush toilets and urinals.
- All subdivisions must comply with Title 20 of the *California Administrative Code* [Section 1604 (f)] which establishes efficiency standards for maximum flow rates for shower heads, lavatory faucets, and sink faucets.
- All subdivisions must comply with Title 24 of the *California Administrative Code* [Section 2-5307(b)] which establishes efficiency standards for maximum flow rates for shower heads, lavatory faucets, and sink faucets.
- All subdivisions must comply with Title 24 of the *California Administrative Code* [Section 2-5352(I) and (j)] which addresses pipe insulation requirements, which can reduce water used before hot water reaches equipment or fixtures, including the insulation of water-heating systems.
- All subdivisions must comply with Section 4047 of the *Health and Safety Code* which prohibits the installation of residential water softening or conditioning appliances unless they are accompanied by water conservation devices.
- All subdivisions must comply with Section 7800 of the *California Government Code* which requires that lavatories in all public facilities be equipped with self-closing faucets that limit flow of hot water.
- All subdivisions must pay all water connection fees in effect at the time of tract map or site plan approval.
- All subdivisions must comply with all City of Oxnard water conservation requirements in effect at the time of tract or site plan approval.

- All water supply lines must comply with City of Oxnard Water Division and Fire Department flow rate criteria.

Compliance with these standards would ensure that water is not used in a wasteful manner. No significant impact to the City's water supply would result, therefore, from the uses permitted by the proposed RiverPark Specific Plan.

Water Distribution

The proposed on-site water distribution system would consist of a looped network of 12-inch water transmission lines in the major streets, as shown in Figure 4.11.2-1. There would be 5 points of connection to the City's existing water delivery system. As shown, the water transmission system for the RiverPark Specific Plan Area would connect to the City's system at Ventura Road, Town Center Drive, Myrtle Street, and at two points on Vineyard Avenue, Santa Clara River Boulevard and Northpark Drive. The proposed water transmission system has been designed to conform to all City of Oxnard standards. A pipe sizing and water demand analysis was completed by the project civil engineers, Huitt-Zollars, based on a model of existing system pressures and flow rates at the connection points contained in the City's Water Master Plan. This analysis show that the proposed water distribution system would support the maximum day demand of all uses permitted by the proposed Specific Plan at the City's flow and pressure requirements. Commercial land uses are required to have a fire flow of 4,500 gallons per minute at 20 pounds per square inch (psi), and residential land uses are required to have a fire flow of 2,500 gallons per minute at 20 psi. During the maximum-day demand and peak-hour demand, the pressure ranged from 53 psi to 59psi and 52 psi to 59 psi, respectively.

During the maximum-day demand fire flow run, the lowest available flow was 4,537 gpm in the planned commercial areas and 2,513 gpm at 52 psi residual pressure in the planned residential areas. Based on this analysis, no significant impacts to the City's water distribution system will result.

CUMULATIVE IMPACTS

Water Supply

The City's UWMP contains projections that consider development of all land uses allowed by the City's *2020 General Plan*. As previously discussed in this section, the City is projected to use a total of 44,565 acre-feet in 2020 if all land uses allowed by the City's *2020 General Plan* are developed at maximum allowed intensities. This represents an increase of 18,077 acre-feet per year from the 26,488 acre-feet used by the City in 2000. The UWMP identifies sufficient water sources to meet projected demand. The City plans to meet the majority of this new demand with additional local water resources brought about by conservation and new water supply programs. As discussed above, existing groundwater extraction allocations can be transferred to the City under FCGMA Ordinance 5.9. An example is the groundwater allocations associated with the RiverPark site, which will provide additional water supplies to the City to offset the increase in water demand associated with the RiverPark Project. The City currently anticipates that implementation of the GREAT Program, as described above, will provide the majority of the additional water supply needed to meet projected demands through the year 2020. Based on the projections and other information in the Urban Water Management Plan, no significant cumulative impacts will occur.

Water Distribution

The City's Water System Master Plan considers development of all land uses allowed by the City's *2020 General Plan*. As other projects are approved, constructed, and occupied within the City, increased demand will be placed on the City's water distribution system. The Water System Master Plan identifies improvements to the City's water transmission system needed to ensure that enough water can be delivered at adequate pressure and fire flow levels to new customers that are added to the system. Further, each individual project will be required to provide an on site water distribution system that meets all City standards. Considering the above, no significant cumulative impacts will occur.

MITIGATION MEASURES

No mitigation measures are required as no significant impacts have been identified.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant impacts on water supply or distribution will result from the RiverPark Project.

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4.11 PUBLIC UTILITIES

INTRODUCTION

This section provides discussion on public utilities with respect to the RiverPark Project and is divided into four topics in the following subsections: 4.11.1, Stormwater Drainage; 4.11.2, Water Supply and Distribution; 4.11.3, Wastewater Service; and 4.11.4, Energy.

4.11.3 WASTEWATER SERVICE

INTRODUCTION

This section describes the existing and planned wastewater collection, conveyance, and treatment system in the City of Oxnard, and evaluates the operation of this system with development of the proposed RiverPark Project. Sewage flows from the proposed Specific Plan would be conveyed through the Central Trunk Sewer of the City's sewer system to the Oxnard Waste Water Treatment Plant. Sources of information for this section include the City of Oxnard Wastewater Collection System Master Plan and the RiverPark Specific Plan.

ENVIRONMENTAL SETTING

Sewage Collection and Conveyance Network

A sewage collection system, consisting of roughly 300 miles of trunk sewers and 16 sewage lift stations, conveys flows from seven major sewer trunk systems in the City to the Oxnard Waste Water Treatment Plant (OWWTP), located at the southern end of the City in the Ormond Beach area. The development and operation of this sewage system is outlined in the City's Wastewater Collection System Master Plan (2001), which outlines the general location and sizing of existing and planned sewage lines in the City. The existing and planned sewage collection and conveyance system as presented in the Master Plan is based upon known and calculated wastewater flows generated by existing and future development in the City, as allowed by the City's *2020 General Plan*. The Wastewater Collection System Master Plan Report divides the City into service areas. Trunk and collector lines are designed to serve uses within these defined areas. The maps in the Wastewater Collection System Master Plan provided detailed information on the location and size of individual lines within the City, including information on the location of manholes and other pertinent information.

As shown in Figure 4.11.3-1, the Central Trunk System is the primary trunk sewer system in the northern portion of the City, and would convey wastewater from the proposed Specific Plan Area. The Central Trunk System consists of a network of trunk sewer lines primarily made of vitrified clay pipe with diameters ranging from 8 inches to 36 inches. As shown in Figure 4.11.3-1, at its northern end the Central Trunk Sewer splits into East and West Branches. The East Branch extends up Vineyard Avenue and the West Branch extends into the RiverPark Specific Plan Area. As shown, the East Branch currently extends to the northern edge of the El Rio West Neighborhood and provides service to this neighborhood and other properties along Vineyard Avenue. The West Branch is a 21-inch sewer line that crosses under the Ventura Freeway and runs along El Rio Road to the eastern edge of the County El Rio Maintenance Yard. A 10-inch line connects the West Branch Sewer to an existing sewer lift station at the end of Town Center Drive. Sewer service to the two existing office buildings in the southwest corner of the Specific Plan Area is provided by sewer lines in Town Center Drive and Ventura Road that drain to the lift station.

The capacity of the Central Trunk System was determined in the City's Master Plan through use of a hydraulic model. Flow estimations were made by first determining and assessing the tributary areas of the Central Trunk System. Using the flow rates, design parameters of the sewer system, and pipeline data, the hydraulic model calculated Average Dry Weather (ADF) flow and Peak Wet Weather Flows (PWWF). The capacity of each pipeline was compared to the flow. If the model indicated the level of flow within a pipeline exceeded the established design parameters the pipeline was identified as deficient. If the depth over diameter was greater than 0.67 for 12-inch or greater diameter pipelines or 0.50 for 10-inch diameter pipelines, the pipeline was identified as deficient. A pipeline flowing at 100 percent full or greater was identified as surcharged. With existing ADF, the Central Trunk System contains neither deficiencies nor surcharged conditions. With existing PWWF, portions of the 36-inch diameter segments of the Central Trunk System are currently deficient.

Wastewater Treatment

Wastewater from the City of Oxnard, the City of Port Hueneme, the U.S. Navy Construction Battalion Station, the Point Mugu Naval Air Station and some limited adjacent areas is treated at the OWWTP. As a result of expansions completed in December, 1991, the OWWTP currently has an average dry weather flow (ADWF) capacity of 31.70 million gallons per day (mgd) and a peak wet weather flow (PWWF) capacity to 68.2 mgd. Total volume treated at the OWWTP was 21.75 mgd in the year 2000. A second expansion phase of the OWWTP, planned to coincide with the growth in the demand for treatment, would allow an ADWF of 39.6 mgd and a PWWF of 75.4 mgd. With this expansion, adequate future capacity in the treatment plant would be provided for the Oxnard Planning Area at the year 2020 build-out of the Oxnard 2020 General Plan. Based upon a conservative assumption of a five percent increase in flow per year, the ADWP will likely exceed the OWWTP's current maximum capacity of 31.7 mgd in the year 2008.[1]

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1 Mark Norris, Wastewater Superintendent, Wastewater Division, City of Oxnard Utilities Department, letter to Edmund F. Sotelo, City Manager, City of Oxnard, August 18, 2000.

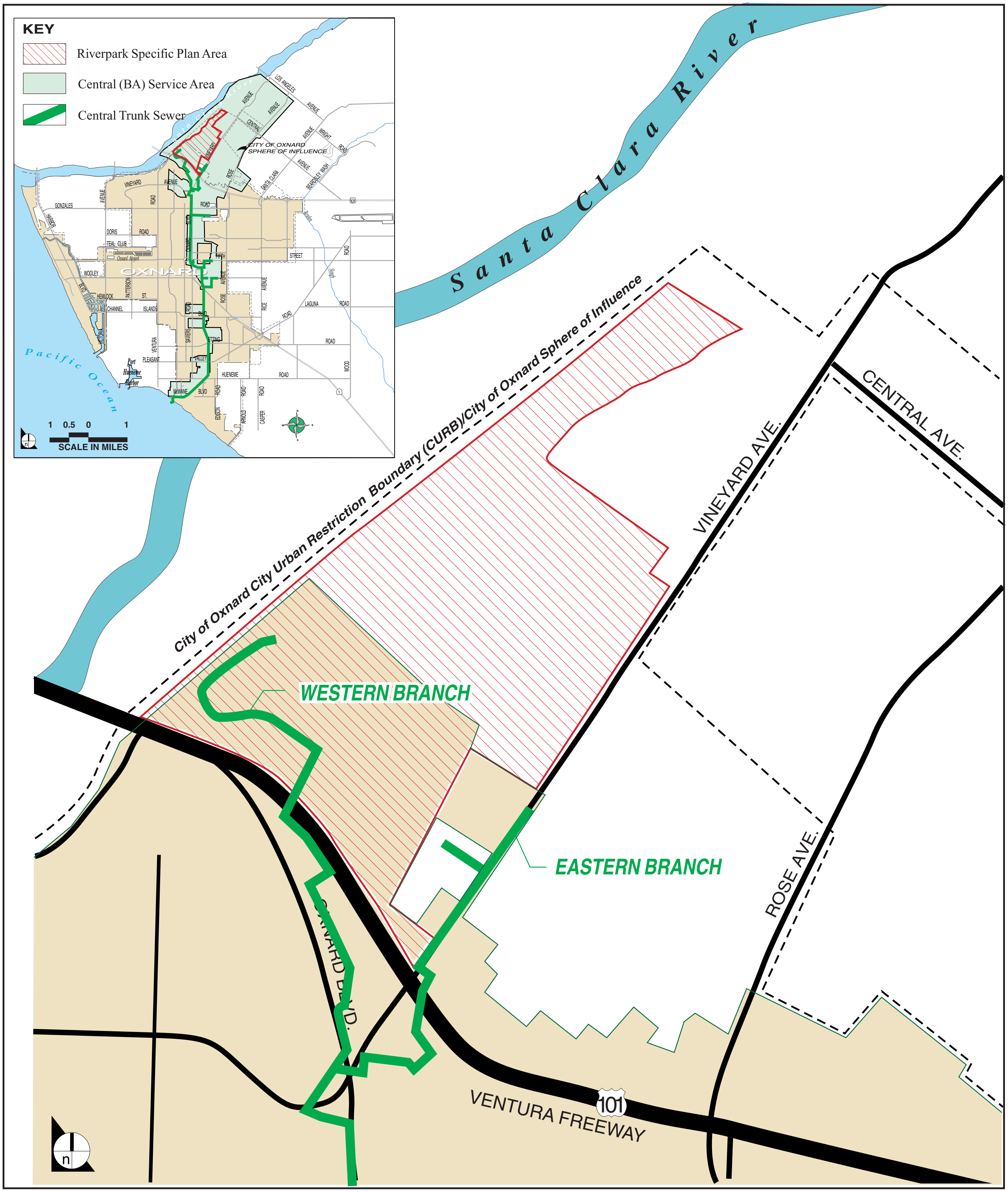

FIGURE 4.11.3-1

Central Trunk System

The OWWTP provides primary and secondary level treatment to incoming sewage effluent. Wastewater is treated in several stages. Primary treatments consist of effluent screening and pumping, and primary sedimentation. Secondary treatment consists of an activated sludge process, effluent disinfection, and solids stabilization with anaerobic digestion.[2] Treated effluent from the OWWTP is discharged into the Pacific Ocean via a 48-inch ocean outfall pipe that extends 8,684 feet from the plant into the ocean, at a depth of approximately 55 feet below sea level. The final section of the outfall pipe limits the actual capacity of the treatment system to 50 mgd. A flow equalization facility has been installed at the treatment plant to limit total outflows to this amount, even with the planned plant expansion and ultimate flows of 68.2 mgd.

PROJECT IMPACTS

Thresholds of Significance

The city of Oxnard considers the impact of a project on wastewater collection and treatment facilities to be significant if:

- Existing wastewater collection and conveyance lines do not have sufficient capacity to accommodate wastewater from the project.
- Projected wastewater flows would exceed the present capacity of the OWWTP.

Project Impacts

Proposed Improvements

The proposed RiverPark Specific Plan Sewer Master Plan is shown in Figure 4.11.3-2. The on-site collection and conveyance system and sewage lift station have been designed in compliance with City of Oxnard flow standards to handle the expected sewage generation of the project. The proposed sewer lines within the Specific Plan Area have been sized according to the specifications of the City of Oxnard based on a minimum flow velocity of 2 fps.

As shown in Figure 4.11.3-2, the proposed sewer improvements include a backbone sewer, an onsite sewer network, and a relocated pump station. The 18-inch diameter backbone sewer for the Specific Plan site runs in a northwest/southeast alignment roughly down the middle of the site. The backbone sewer line would connect with the existing 21-inch line that runs along the northerly Ventura Freeway frontage

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2 Alderman, Swift & Lewis: *City of Oxnard Sewer Master Plan Report*, p. 58. Santa Ana, California: May 1979.

and would ultimately discharge into the Central Trunk Sewer. An on-site network of 8- and 10-inch diameter sewer lines and smaller laterals would extend along the streets within the Specific Plan Area to collect and convey wastewater to the backbone sewer. A new sewer lift station is proposed within RiverPark Area 'B' to lift sewage flows to meet the City's requirement for minimum scour velocities of 2 fps. The existing sewage lift station located at the eastern end of Town Center Drive, Pump Station 10, will be relocated to accommodate the planned street improvements.

RiverPark Project Wastewater Generation

The wastewater generation factors contained in the Oxnard Wastewater Collection System Master Plan were used to estimate the amount of wastewater that would be generated by the RiverPark Specific Plan at full build-out of all the allowed uses. As shown in Table 4.11.3-1, RiverPark would generate approximately 780,000 gallons per day of wastewater when fully built.

Table 4.11.3-1
Estimated Wastewater Generation

Land Use Classification	Units	Unit Flow Rate (gpad)	Basic Sanitary Flow (mgd)
Single Family Residential	174 acres	1,230	0.21
Multi-Family Residential	70 acres	4,525	0.32
Commercial *	191 acres	1,300	0.25
Open Space	266 acres	N/A	
Total	701 acres		0.78

Source: City of Oxnard Waste water Collection System Master Plan, January 2001, p. 2-7.
** includes schools and other public facilities.*

As proposed, occupancy of homes and/or commercial structures would begin in 2003 with full build-out dependent on market conditions, but expected by 2020.

Impacts to the Collection and Conveyance Network

All of the proposed sewage lines within the Specific Plan Area have been sized to accommodate the wastewater generated by the proposed uses. After collection in the onsite sewer system, wastewater will be conveyed in the Central Trunk Sewer to the Oxnard Wastewater Treatment Plant. Wastewater from the RiverPark Specific Plan Area will build in volume over time as the Specific Plan Area is built-out.

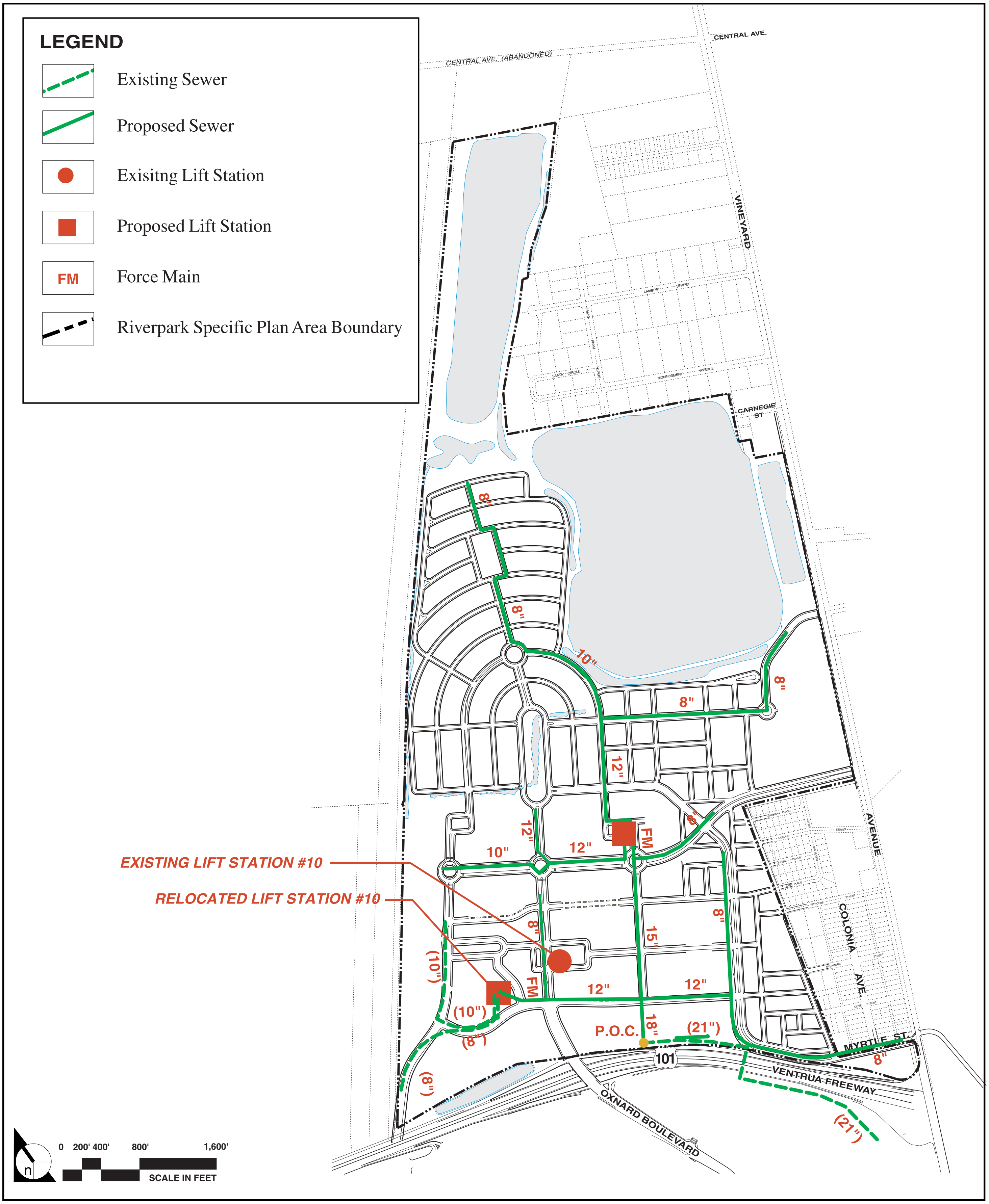

FIGURE 4.11.3-2

Riverpark Specific Plan Sewer Master Plan

The Oxnard Wastewater Collection System Master Plan includes projected Design Peak Wet Weather Flows (PWWF) for full build-out conditions. The City's Master Plan also contains analysis of the impact of these flows on the City's wastewater collection and conveyance network. Projected flows were calculated using a hydraulic model. For the Central Trunk Sewer, projections of future wastewater flows were made by first determining and assessing the tributary areas of the Central Trunk System. The tributary areas were then transferred on to the City of Oxnard's Geographic Information System (GIS), which contains current and future land use information based on the Oxnard 2020 General Plan, in order to determine their land use designations. Individual flows were determined by combining unit wastewater flow rates with land use projections. A pipeline was identified as deficient if the model indicated the level of flow within a pipeline exceeded the established design parameters. A pipeline flowing at 100 percent full or greater was identified as surcharged.

The projected PWWF for the Central Trunk Sewer reflects the build-out of all uses allowed by the 2020 General Plan. The projected flows for the Central Trunk Sewer also includes projected flows from the RiverPark Project. The Master Plan was being prepared concurrently with the planning of the RiverPark Project and the build-out model included the RiverPark Project for planning purposes. The build-out model also reflects providing service to other existing developed areas outside of the City but within the City's sphere of influence, including the El Rio Community. The El Rio Community is currently located outside of the incorporated City Limits of Oxnard but within the sphere of influence of Oxnard. Presently, private septic systems are used to treat sewage in El Rio. In August 1999 the Regional Water Quality Control Board adopted a resolution prohibiting all use of septic systems on properties less than 5 acres in size overlying the Oxnard Forebay by January 2008. Under this order, El Rio and other properties on septic systems are likely to connect to the City's sewer system by this date. In addition, the Master Plan includes flows from the Ventura County Juvenile Justice Center, currently under construction on Vineyard Avenue between the RiverPark Specific Plan Area and Central Avenue.

As shown in Table 4.11.3-2, the Master Plan modeling shows that the projected 2020 flows will significantly impact the capacity the Central Trunk Sewer. Major portions of the Central Trunk Sewer have insufficient capacity to convey the projected flows. The Master Plan identifies the improvements to the Central Trunk Sewer needed to accommodate projected flows. The City of Oxnard requires individual building projects to pay the City's sewer connection fees, which provides funds to the City to make the improvements identified in the Wastewater Collection System Master Plan. In addition, the City requires individual building projects to provide adequate capacity to convey sewage to a safe point of discharge. In this manner, the existing sewage collection and conveyance system would be upgraded as necessary to accommodate sewage created by development of the land uses allowed by the RiverPark Specific Plan. No significant impacts, therefore, will result from the RiverPark Specific Plan project.

Table 4.11.3-2
Oxnard Wastewater Master Plan 2020 Build-out Flow Projections - Central Trunk System

Flow Condition	Diameter (inches)	Length (feet)	Percent Capacity	Deficient?
Ultimate Peak Wet Weather	16	275	67	Borderline
	24	2,971	69-271	Yes, Surcharge
	27	1,252	73-88	Yes
	36	13,927	67-232	Yes, Surcharge

Source: City of Oxnard Wastewater Collection System Master Plan Report (2000).

2001 Master Plan Improvements

The Oxnard Wastewater Collection System Master Plan Report contains a three-phased Capital Improvement Program based on areas of known future development. The Master Plan identifies 35 capital improvements to mitigate hydraulic deficiencies for current and build-out conditions. Capital improvement projects were developed for three consecutive 5-year phases based on anticipated development. Phase 1 (2000 to 2005) projects are required to relive sewers with capacity deficiencies for current PWWF conditions or where development is expected to occur in the next 5 years. Phase 2 (2006 to 2010) projects are recommended to correct ultimate PWWF deficiencies occurring in the next 5 to 10 years and Phase 3 (2011 to 2020) projects will be required for to correct deficiencies for the last 10 to 20 year period.

Phase 1 improvements address the Central Trunk Sewer. Improvements to both the Eastern and Western Branch of the Central Trunk Sewer are planned, including upgrades to Sewage Lift Station Number 10, located within the RiverPark Specific Plan Area. Extension of the Eastern Branch of the Central Trunk Sewer north in Vineyard Avenue to Central Avenue is included in these Phase 1 Improvements. The RiverPark Specific Plan Sewer Master Plan includes the improvements to the Eastern Branch and Lift Station 10 included in the City's Wastewater Master Plan. Other improvements needed to create sufficient capacity in the other portions of the Central Trunk Sewer are included in Phases 2 and 3 of the City's Master Plan. The City will fund and implement the Capital Improvement Program through collection of the City's wastewater connection fees and construction of the phased improvements with these fees.

Wastewater Treatment

The OWWTP currently has an average dry weather flow (ADWF) capacity of 31.7 million gallons per day (mgd) and a peak wet weather flow (PWWF) capacity to 68.2 mgd. Total volumes treated at the

OWWTP in 2000 was 21.75 mgd. Currently, the plant has the capacity to treat an additional 9.95 mgd of wastewater. An expansion of the OWWTP, planned to coincide with the growth in the demand for treatment, would provide for treatment of an ADWF of 39.6 mgd and a PWWF of 75.4 mgd. With this expansion, adequate future capacity in the treatment plant would be provided for all projected growth in the City's Oxnard Planning Area. The Oxnard Wastewater Treatment Plant has the existing and planned capacity to treat the 0.78 mgd of additional wastewater that would be generated by the RiverPark Specific Plan. No significant impact on wastewater treatment capacity will result.

CUMULATIVE IMPACTS

The City's Wastewater Collection System Master Plan includes projections for the full build-out of the land uses allowed by the City's 2020 General Plan, other land uses in the City's Planning Area provided wastewater service by the City and the RiverPark Specific Plan Project. Facilities have been master planned to serve all of these uses. The City of Oxnard requires individual building projects to pay the City's sewer connection fees, which provides funds to the City to make the improvements identified in the Wastewater Collection System Master Plan. In addition, the City requires individual building projects to provide adequate capacity to convey sewage to a safe point of discharge. In this manner, the existing sewage collection and conveyance system would be upgraded as necessary to accommodate sewage created by projected growth in the City's Planning Area. No significant cumulative impacts will result.

A planned expansion of the OWWTP is planned to coincide with the growth in the demand for treatment, would allow an ADWF of 39.6 mgd and a PWWF of 75.4 mgd. With this expansion, adequate future capacity in the treatment plant would be provided for the Oxnard Planning Area at the year 2020 build-out of the Oxnard 2020 General Plan. With the construction of the planned improvements to the OWWTP, all wastewater generated by cumulative development could be accommodated by the plant, and no cumulative significant impacts will occur.

MITIGATION MEASURES

No mitigation measures are required as no significant impacts have been identified.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant impacts to the City's wastewater collection, conveyance or treatment system will result from the proposed RiverPark Project.

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4.11 PUBLIC UTILITIES

INTRODUCTION

This section provides discussion on public utilities with respect to the RiverPark Project and is divided into four topics in the following subsections: 4.11.1, Stormwater Drainage; 4.11.2, Water Supply and Distribution; 4.11.3, Wastewater Service; and 4.11.4, Energy.

INTRODUCTION

This section evaluates the availability of electricity and natural gas supplies and distribution facilities to serve RiverPark Specific Plan Area. At present, Southern California Edison (SCE) and The Gas Company (TGC) are the respective suppliers of these energy resources to the City of Oxnard and the Specific Plan Area.

ENVIRONMENTAL SETTING

Natural gas and electricity are provided to all developed portions of the City of Oxnard, including the Specific Plan Area, by TGC and SCE, respectively.

Electrical Service

The basic elements of an electric power system include electric generating plants or stations, transmission lines, and high voltage or bulk power substations. These elements are described below.

Distribution

Electricity is distributed by SCE through a network of generating stations, substations, and transmission lines. The electricity generated by SCE is typically transmitted for use via 66 kilovolt (kV) lines. The electricity is then passed through a substation from which it is distributed to individual customers via lower voltage lines.

The primary electrical transmission facility in the vicinity of the Specific Plan Area is the 66 kV Santa Clara-Gonzales line that runs above ground along Vineyard Avenue. There are two lower voltage electrical transmission facilities in the vicinity of the Specific Plan Area. One is a 16 kV Saticoy line which runs above ground along the Ventura Freeway. The 16 kV Buckaroo line runs above ground along the northeastern border of the Specific Plan Area parallel to Montgomery Avenue.[1]

Power Generation and Demand

Table 4.11.4-1 provides a breakdown of in-state electrical energy generation by type, for the ten-year period from 1989 to 1999. As shown, electricity in California is generated from a variety of sources with

[1] RiverPark Electric Master Plan. November 2001.

Table 4.11.4-1
California Electrical Energy Generation, 1983 to 1999; Total Production, by Resource Type (millions of kilowatt hours)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total Generation:	238,567	252,355	242,343	245,535	242,026	256,719	256,367	253,621	255,080	276,412	275,792
Hydroelectric	32,742	26,092	23,244	22,373	41,595	25,626	51,665	47,883	41,400	48,757	41,617
Nuclear	33,803	36,586	37,167	38,622	36,579	38,828	36,186	39,753	37,267	41,715	40,419
Coal	19,702	21,402	23,442	32,435	22,907	25,095	17,925	25,460	27,114	34,537	36,327
Oil	9,275	4,449	523	107	2,085	1,954	489	693	143	123	55
Gas	78,916	76,082	75,828	87,032	70,715	95,025	78,378	66,711	74,341	82,052	84,703
Geothermal	15,247	16,038	15,566	16,491	15,770	15,573	14,267	13,539	11,950	12,554	13,251
Organic Waste	5,204	6,644	7,312	7,362	5,760	7,173	5,969	5,557	5,701	5,266	5,663
Wind	2,139	2,418	2,669	2,707	2,867	3,293	3,182	3,154	2,739	2,776	3,433
Solar	471	681	719	700	857	798	793	832	810	839	838
Other	4	4	0	2	0	0	0	343	896	230	0
Energy Imports	41,064	61,959	55,873	37,704	42,892	43,354	47,514	49,696	52,720	47,563	49,487

Source: California Energy Commission, Electricity Analysis Office, 2000.

the top five including hydroelectric, nuclear, coal, natural gas, and geothermal. These sources have remained stable producers over the ten-year period representing roughly 70 percent of the power generated in the state over this time.

These are not the only sources of power available to residents of the state since power generation and distribution systems located throughout the western United States are linked together by a network of transmission lines and relay substations. Under normal circumstances, California exports electricity in the winter months when demand is lower and imports electricity during the summer when peak loads are high. This is evident on Table 4.11.4-1, which also identifies the energy imported into the state during this same 10-year period.

For purposes of comparison, Table 4.11.4-2 provides a breakdown of electrical demand for the State of California from 1980 through the year 2010. This represents a measurement of the amount of electricity used at homes and business within California and does not include the actual amount of energy provided by generators and supplied over the grid to account for losses during distribution. As shown, the state has experienced an annual average growth rate of 3.2 percent for the ten-year period from 1980 to 1990. Due to the recession of the early 1990s, the demand slowed during the period from 1990 to 1998 with an annual average rate of growth calculated at 0.9 percent. Total electrical consumption in the state was 244,409 gigawatt hours for the year 1998. Future demand is projected to increase at a 2.0 percent annual average rate for the period 1998 to 2010.

Table 4.11.4-2
Electricity Consumption Year 1980 to 2010 (GWh)

Year	PG&E	SMUD	SCE	LADWP	SDG&E	Other	State
1980	66,197	5,352	59,624	17,669	9,730	8,406	166,979
1990	86,806	8,358	81,673	21,971	14,798	14,432	228,038
1998	95,601	9,123	88,434	23,004	17,630	10,617	244,409
2004	109,219	10,460	100,822	24,985	20,539	13,541	279,565
2010	121,041	11,692	113,137	26,684	23,022	14,293	309,868

Source: California Energy Commission, Technical Report to California Energy Outlook, June 2000.

Regulatory Environment

Deregulation

The Electricity Utility Industry Restructuring Act of 1996 allowed the generation of electricity to become a competitive market in the State of California. This law was intended to benefit consumers by allowing energy companies to become competitive with one another, lowering prices of energy; and creating competition between energy companies to develop better technologies. Problems arose in the summer of 2000 when retail prices hit all time highs in California and generation capacity shortages forced temporary power outages in northern California. The energy problem involved a combination of large increases in wholesale electricity prices; intermittent power shortages during peak demand periods and deterioration of the financial stability of California's three major investor-owned utilities, Pacific Gas and Electric, Southern California Edison, and San Diego Gas and Electric.

The State of California developed a three-part plan to address the situation consisting of increasing power supplies, improving energy conservation, and stabilizing the electricity industry in California. To increase energy supplies, the Governor issued executive orders designed to expedite the construction and permitting of generation facilities and boost the output from existing generation plants in the State. The orders provide incentives for renewable and distributed generation. Conservation is also being emphasized to reduce demands.

Title 24 of the California Administration Code

In response to the energy crisis of 2000, the California Assembly passed AB 970 or the California Energy and Reliability Act of 2000. The legislation modified Title 24 of the California Government Code in order to promote energy efficiency in new construction. The new energy reducing standards were issued and implemented into building permits issued after June 1, 2000. The act created a team that formulated amendments to standards focusing on reducing peak electricity consumption and demand in the shortest time possible without disturbing construction practices, increasing cost of construction significantly and length of time to change specifications. Since AB 970 was adopted in 2000, there have been more additions to the requirements in order to save energy.[2] These requirements are duct sealing; air conditioner calibration and testing; radiant barriers in attics; and improved fenestration. Most of these new requirements only apply to homes that are in hot climates where air conditioning energy contributes significantly to California's summer electricity peak. The mandatory measures established by AB 970 are listed below:

List of Mandatory Measures

1. Certified space conditioning equipment sizing regulated by the Uniform Building Code (UBC)
2. Intermittent Ignition device on Gas Cooking Appliances, Clothes Dryers, Central Furnaces, and Pool Heaters

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2 Residential Manual for Compliance with California's 2001 Energy Efficiency Standards, June 2001, page 1-3.

3. Tighter Air Ducts Installed and Insulated
4. Kitchen and Bathroom Lighting: 40 Lumens/Watt Efficiency
5. IC (Insulation Cover) Approved Recessed Lighting Fixture
6. Insulation Certificate for Heater
7. Certificate for All Manufactured Devices
8. Appliances Certified and Labeled
9. Certified Wall Insulation
10. Insulation on First 5 Feet of Inlet and Outlet Pipes for Storage Tank Water Heaters
11. Fireplace Measures: Closeable Doors, Outside Air Intake for Combustion with Damper & Control, Flue Damper & Control
12. Raised Floor Insulation
13. Joints and Penetrations Caulked & Sealed
14. Manufactured Doors & Windows Certified as Meeting Air Leakage Standards and Certified as to U-factor and SHGC; Field-Fabricated Doors & Windows Weather-stripped
15. Roof/Ceiling Insulation

Natural Gas Service

Natural gas is imported to Ventura County by TGC from its interstate system and distributed to the area through a fixed transmission and distribution system. Existing facilities in the area include a 4-inch high pressure natural gas line running along Vineyard Avenue, a 4-inch line along the Ventura Freeway and another 4-inch line along Carnegie Street and along the northeastern border of the Specific Plan Area parallel to Montgomery Avenue.[3]

IMPACT ANALYSIS

Thresholds of Significance

Based on Appendices F and G of the *CEQA Guidelines*, the City of Oxnard considers a project to result in a significant energy impact if it would:

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3 RiverPark Gas Master Plan. November 2001.

- consume fuel or energy in a wasteful manner or fail to comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the *California Administrative Code*).
- Consume energy in an amount that could not be accommodated within the long-term electricity source and distribution planning of the utilities serving the area.
- Consume energy in an amount that would result in the need for new power system; and/or
- Require significant alterations to an existing distribution system.

Electricity

Short-Term Construction Impacts

Electrical energy would be consumed on a temporary basis during construction activities. The energy would serve construction trailers, power tools, tool sheds, work and storage areas, and other facilities associated with construction activity. Construction activity is not expected to consume significant amounts of SCE energy, because the construction of residential subdivisions and other allowed uses would occur in phases over a 15 to 17 year period.

Operational Impacts

Development of the uses allowed by the project would place new demands on electrical service provided by SCE, and would require new or upgraded delivery infrastructure to transmit the energy to uses on the site. Table 4.11.4-3 identifies consumption rates by land use type and estimates the total amount of electricity that would be consumed if all uses permitted by the proposed Specific Plan were built out at the maximum allowed intensity.

Table 4.11.4-3
Projected Electrical Consumption at Total Build-out of the Project

Land Use	Quantity	Units	Usage Rate (watts/unit/year)	Total Watts/year
Single Family Residential	1,477	Units	10,000	14,770,000
Multi-Family Residential	1,328	Units	10,000	13,280,000
Public Facilities	668,000*	SF	10 Watts/SF	6,668,000
Commercial/Office	2,485,000	SF	10 Watts/SF	24,850,000
Total	N/A	N/A	N/A	59,568,000

Source: Impact Sciences. Usage rates provided by Huitt-Zollars, Inc.
** Assumes 35 percent of the total acreage of both the school and fire station sites are occupied with buildings.*

As shown in Table 4.11.4-3 the total amount of electricity consumed at build-out of the project is estimated at approximately 60 million kilowatt-hours (kWh) per year.

The development of new energy power resources is steadily developing. By the end of the 2001 year, there will be 39 new power generation stations developed and online creating a total of 2,236 megawatts of new power. There are 23 additional projects estimated to be online by September 1, 2002 expected to produce 3,749 megawatts of additional new power for the State.[4] The California Energy Commission projects the demand for electricity to be about 67,000 megawatts of energy in 2004 during the peak energy season. The estimated supply in 2004 is estimated at about 74,000 megawatts.[5] This projections shows California will have a surplus of 7,000 megawatts of power by 2004.

As shown previously in Table 4.11.4-2, anticipated growth within the state is expected to increase total demand to approximately 309,868 GWh in 2010.[6] A total of 14 large-scale power plants have been approved by the CPUC throughout the state to meet anticipated demand. Table 4.11.4-4 provides a list of these power plants and identifies the estimated date the plants will be activated. As shown, approved facilities located in central and southern California alone will provide approximately 3,613 additional megawatts, which is enough power to supply over 2.7 million homes.[7] Approved plants include the Pastoria Energy Facility (750 megawatts), Antelope Valley (1,000 megawatts), La Paloma (1,043 megawatts), Sunrise Power (320 megawatt) and Elk Hills (500 megawatt). In a report prepared for the California Energy Commission, staff concluded that if only eleven power plants are placed into service between 2001 and 2003, there would be more generation available than load growth requires for most of the following decade.[8]

The additional electrical demand of the project can be accommodated within the long-term source and distribution planning. In addition, individual building projects within the Specific Plan Area would be required to comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the *California Administrative Code*) as mitigation against the wasteful use of energy. For these reasons, no significant impacts on electrical supply or service will result from the project.

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4 2002 Monthly Electricity Forecast: California Supply/Demand Capacity Balance for January – September 2002.
5 Staff Draft California Energy Outlook: Electricity and Natural Gas Trends Report, September 2, 2001.
6 California Energy Commission Technical Report to California Energy Outlook 2000.
7 One megawatt represents enough energy to power 750 homes.
8 California Energy Commission, Market Clearing Prices Under Alternative Resource Scenarios 2000 to 2010. March 13, 2000.

Table 4.11.4-4
Approved Power Plants

Project	Size (megawatt)	Project Type	Location	Date Approved or Denied[3]	Construction Start(s) [4]	Estimated On Line
Blythe Energy (99-AFC-8)	520 MW	Combined Cycle	Blythe, Riverside County	APPROVED by Commission 3/21/00	May 11, 2001 ground breaking	March 2003
Contra Costa Repower (00-AFC-1)	530 MW	Combined Cycle	Antioch Contra Costa County	APPROVED by Commission 5/30/01	August 3, 2001	August 2001
Delta Energy Center (98-AFC-3)	880 MW	Combined Cycle	Pittsburg, Contra Costa County	APPROVED by Commission 2/9/00	April 2000 34% complete	July 2002
Elk Hills (99-AFC-1)	500 MW	Combined Cycle	Elk Hills, Kern County	APPROVED by Commission 12/6/00	April 2001	March 2003 (simple cycle 3/2002)
High Desert (97-AFC-1)	720 MW	Combined Cycle	Victorville San Bernardino County	APPROVED by Commission 5/3/00	April 2001	July 2003
Huntington Beach Modernization (00-AFC-13)	450 MW	Combined Cycle	Huntington Beach Orange County	APPROVED by Commission 5/10/01	May 2001	August 2001
La Paloma (98-AFC-2)	1,048 MW	Combined Cycle	McKittrick area Kern County	APPROVED by Commission 10/6/99	January 2000 65% complete	12/2001 for turbines #1&2 3/2002 for turbines #3&4
Los Medanos Energy Center (98-AFC-1)	559 MW	Combined Cycle	Pittsburg, Contra Costa County	APPROVED by Commission 8/17/99	July 1999 81% complete	July 2001
(Western Midway-Sunset (99-AFC-9)	500 MW	Combined Cycle	McKittrick, Kern County	APPROVED by Commission 3/21/01	August 2001	March 2003
Moss Landing (99-AFC-4)	1,060 MW	Combined Cycle	Moss Landing, Monterey County	APPROVED by Commission 10/25/00	November 2000 14% complete	June 2002
Mountainview (00-AFC-2)	1,056 MW	Combined Cycle	San Bernardino County	APPROVED by Commission 3/21/01	September 2001	December 2002
Otay Mesa (99-AFC-5)	510 MW	Combined Cycle	Otay Mesa area, San Diego County	APPROVED by Commission 4/18/01	October 2001	April 2003
Pastoria (99-AFC-7)	750 MW	Combined Cycle	Tejon Ranch, Kern County	APPROVED by Commission 12/20/00	July 2001	January 2003
Sunrise Power (98-AFC-4)	320 MW	Simple Cycle (Peaker)	Fellows, Kern County	APPROVED by Commission 12/6/00	December 2000 75% complete	August 2001
Sutter Power (97-AFC-2)	500 MW	Combined Cycle	Yuba City area, Sutter County	APPROVED by Commission 4/14/99	July 1999 93% complete	July 2001
15 plants	9,903 MW	--	--	--	6,037 MW 9 plants	2,353 MW by end 2001,4-1/2 plants

[1] Applicant's filing date of Application For Certification (AFC).
[2] Date Commission formal process begins following Executive Director recommendation and Commission acceptance of Data Adequacy of the AFC.
[3] Date Commission issues final decision accepting or denying the application.
[4] Construction Information Current As of May 10, 2001

Natural Gas

Short-Term Construction Impacts

Due to the nature of construction activities, natural gas would not be consumed during site construction. Some natural gas, however, may be consumed during the installation and upgrade of natural gas distribution lines through the Specific Plan Area and during their testing; however, the amount consumed would be negligible and this is not considered a significant impact.

Operational Impacts

As residential subdivisions and commercial uses are constructed within the project, new demands would be placed on TGC natural gas service for heating and cooling. Branching natural gas mains from existing primary transmission lines would also need to be constructed.

In order to determine the volume of natural gas consumed at build-out of the proposed project, Impact Sciences, Inc. calculated consumption based on the allowed land uses using natural gas consumption published by the South Coast Air Quality Management District in its 1994 *Air Quality Handbook*. Table 4.11.4-5 identifies predicted consumption rates by land use type.

Table 4.11.4-5
Projected Natural Gas Consumption at Total Build-out of the Project

Land Use	Quantity	Units	Usage Rate (Ft.^{3}/year)	Total Ft.^{3}/year
Single Family Residential	1,477	Units	79,980	135,086,000
Multi-Family Residential	1,328	Units	48,138	63,927,000
Public Facilities	15.4	KSF	24	370
Commercial/Office	2,485	KSF	34.8*	86,478,000
Total	N/A	N/A	N/A	285,492,000

Source: South Coast Air Quality Management District, Air Quality Handbook for Preparing EIRs, Revised April 1987.
** Higher usage factor of Commercial and Office in the South Coast Air Quality Management Guide.*

As shown in Table 4.11.4-5, total natural gas consumption by the project at build-out would be approximately 285,491,000 cubic feet per year. According to the 1999 Fuels Report, that natural gas supplies to California will remain plentiful for the next several decades. The total resource base for the lower 48 states is estimated to be 975 trillion cubic feet, enough to continue current production levels for more than 50 years. Technology enhancements will continue to enlarge the resource base; however production capacity increases remain less certain. Despite this concern, production from lower 48 states is expected to increase from its base year of 1994 from 17.1 trillion cubic feet to 25.9 trillion cubic feet in 2019.[9]

Because the RiverPark project can be accommodated within the long-term source and distribution planning of TGC, and because future uses on the project site would be required to comply with Title 24 of the *California Administrative Code* as mitigation against the wasteful use of energy, it is concluded that the project would not result in significant impacts to natural gas service provided by TGC.

CUMULATIVE IMPACTS

Build-out of the City of Oxnard's *2020 General Plan* along with development of other uses in the service areas of SCE and TGC will result in the development of a variety of projects which will require natural gas and electricity service. Such projects would contribute to a cumulative increase in energy demand within the City and region. As discussed above, energy supply projections prepared by the California Energy Commission indicate supplies will be sufficient to meet anticipated demands for the foreseeable future. Based on these projections, no significant cumulative impact on energy supplies is anticipated. Both SCE and TGC have ongoing facilities planning to ensure that distribution networks with sufficient capacity are built to serve new development. For this reason, no significant cumulative impacts to energy distribution networks are anticipated.

MITIGATION MEASURES

No mitigation measures are required as no significant impacts have been identified.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant impacts to energy supplies or distribution networks will result from the RiverPark Project.

9 California Energy Commission, 1999 Fuels Report, September 1999.

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4.12 CULTURAL RESOURCES

INTRODUCTION

This section discusses existing cultural resources conditions in the proposed RiverPark Specific Plan Area and identifies potential cultural resources impacts that would result from the development of the proposed Specific Plan. This section incorporates information from a historical resources study prepared by San Buenaventura Research Associates in November 12, 2001 and a Phase I Archaeological Survey conducted by W & S Consultants December 2000. These studies are contained in Appendix 4.12 of this EIR. Additional sources of information used in this section include the City of Oxnard 2020 General Plan, the General Plan Final EIR, aerial photographs, and historical and archaeological maps of the project area.

The historical resources study was conducted to determine whether any cultural resources present within the Specific Plan Area meet the definition of an historical resource as defined in Section 15064.5 (a) of the CEQA Guidelines. The Phase I Archaeological Survey was conducted to provide background review of pertinent research to determine if any known archaeological sites were present within the project site and provide a field survey to determine the presence of any archeological resources.

ENVIRONMENTAL SETTING

Prehistoric Setting

The area around the RiverPark Specific Plan site, and Ventura County in general, lies within the territory of the Ventureno dialect of the Chumash ethnolinguistic group. At the time of first European contact, the Chumash population numbered in the thousands and their territory stretched from the Malibu area in Los Angeles County to northern San Luis Obispo County, and inland as far as the western edge of the San Joaquin Valley. The Ventureno Chumashan speakers' territory included most of Ventura County.

Archaeological data indicate that the southern coastal areas of California have been occupied for the past 9,000 years. The prehistory of the Santa Barbara Channel region is divided into three periods: Early (8,000 to 3,350 Before Present [BP]), Middle (3,350 to 8,00 B.P.), and Late (800 to 150 B.P.). The Early Period is characterized by a primarily seed processing, subsistence economy. The middle period is marked by increasing sedentism and hunting. The full development of the Chumash culture, one of the most socially and economically complex hunting and gathering groups in North America, occurred during the Late Period.

Historical accounts of the Ventureno Chumash date back to the 1542 voyage of Juan Rodriguez Cabrillo. Spain began to colonize Alta California in 1769. In 1782, Father Serra founded San Buena Ventura Mission near the Chumash village of Shisholop. The mission padres recruited Chumash both as neophytes and laborers.

Spanish rule in Alta California came to an end in 1821 with Mexican Independence. The missions were secularized in 1832. The break up of San Buenaventura Mission resulted in a dispersion of the Ventureno Chumash, whose numbers had already been decimated by disease. However, the Chumash did not simply disappear, either as a people or as a culture, following secularization of the mission system. Many went to work on new ranchos, others took up residence around the missions or returned to existing villages. Several intermarried with Mexican citizens, and a few became property owners. Descendants of Native American Indian families whose names can be found on the San Buena Ventura Mission register live in the County today.

Following Independence, the Mexican government of Alta California began granting large pieces of land to Mexican citizens. During Mexican rule, missions declined in influence and large cattle ranches called Ranchos came into dominance in Ventura County.

Following the 1848 Treaty of Guadalupe Hidalgo, by which Mexico relinquished Alta California to the United States, the American Period began in California. Between 1860 and 1900 farming and oil production joined cattle ranching as a major industry in the Ventura area.

Historical Setting

Lists from various national, state, and local agencies were consulted to identify any previously recorded architectural historical resources. These lists included the California State Historical Resources Inventory Data Base, National Register of Historical Places (NRHP), California Historical Landmarks, California Points of Historic Interest, and the Ventura County Historical Landmarks (Ventura County *General Plan*, Resources Appendix). None of these lists identified any architectural historical resources the project site. The historical study also evaluated the potential for listing of the existing structures within the Specific Plan Area that would be demolished.

The historic character of the area is defined primarily by the original Town of Colonia (El Rio West Residential Neighborhood) directly adjacent to the project site on the east. This area was primarily developed between 1900 and 1945. Additional housing north of this area and east of the project site was developed after 1950. RiverPark Area 'A' contains a nineteenth century farmhouse, a 1950s residence, a metal barn, a 1960s former automobile showroom, Ventura County Maintenance Facilities, and the recent town center high-rise buildings. RiverPark Area 'B' contains a 1950s farmhouse on Vineyard Avenue on the El Rio Detention Basin No. 2 and the former Hanson Aggregates (formerly Southern Pacific Milling Company) property.

The unincorporated town of El Rio (The River) has had several names over its long history. El Rio was originally located at the crossroads where the boundary of two ranchos (El Rio de Santa Clara o La Colonia and Rancho Santa Clara del Norte) are bisected by Vineyard Avenue (State Highway 232). El Rio's name probably came from the rancho and its location directly adjacent to the Santa Clara River. The Ventura Freeway, originally called the Conejo Road and later Ventura Road, separated the two ranchos.

The 44,883-acre Rancho El Rio de Santa Clara o La Colonia was granted by the Mexican Government to eight Santa Barbara soldiers in 1837. Settlers came to the area in the late 1860s as the large ranchos began to be subdivided. When the land was finally patented to the original grantees in 1872, a map was prepared by surveyor John Stow, showing subdivision and ownership of the Rancho. Many of the early settlers of the Oxnard area were German and Irish, with names such as Borchard, Maulhardt, Donlon, and McGrath.

On April 11, 1876 a grant deed was recorded showing that Christian Borchard sold a 7-acre parcel of land, located at the intersection of the Conejo Road (later to be called Ventura Boulevard/Ventura Freeway) and the Hueneme and Saticoy Road (later to be called Vineyard Avenue) to Simon Cohn, for forty dollars in gold.

Shortly afterwards, Simon Cohn, a native of Germany, had a general merchandise store built at the intersection of Vineyard Avenue and Ventura Boulevard. Cohn had come to Ventura County to join his brother Morris Cohn, who operated a general merchandise store in Saticoy. Simon married Minnie Cohn in 1885. The couple raised eight children; all of whom attended the local El Rio School located on Vineyard Avenue adjacent to the Colonia Tract. The family lived in a house Simon had built behind his store.

When Simon Cohn built his store, no other commercial buildings were located in the area, just scattered farmhouses along Conejo Road (Ventura Boulevard). Cohn gradually acquired land on three of the four corners at the intersection of Vineyard Avenue and Ventura Boulevard. A larger brick building was constructed on the northeastern corner of Ventura Boulevard and Vineyard Road in the late 1890s, following the purchase of two more parcels of land. Two of Cohn's brothers built stores on the other corners. Simon Cohn used profits from his lucrative merchandise business to purchase additional lands in the 1880s and 1890s. In 1887 he purchased a 47-acre parcel where the present Wagon Wheel Junction is located.

Following the subdivision of the Town of Colonia in 1887, Cohn purchase all of Block Seven in 1889 for $500, as well as eleven individual lots in Blocks 3, 4 and 9 for $915. Simon and his brothers Morris and David also invested heavily in land throughout Ventura County including the towns of Santa Paula and Camarillo.

Numerous articles about his life relate to his generosity in the community. He provided credit to farmers so that they were able to pay him back when their crops came in. He would provide goods free, when possible, to people who were unable to pay. When Cohn died in 1936 at the age of eighty-four, one of his children told about the boxes of bills they found owed by people who could not afford to pay. Their father had never mentioned them, so they didn't either. Another story about the family's generosity related to the large cornfield behind their home. Customers were welcome to pick as much corn as they could carry home.

Simon was referred to as the "Mayor" of El Rio, although it was in name only since El Rio was never incorporated as a city. Certainly Simon Cohn can be considered the founder of New Jerusalem/El Rio, as the first merchant to establish himself in the area. Although Cohn started with little when he opened his business, he prospered over time by purchasing land at low prices. In 1910 his assessed value was $73,930, making him among the ten wealthiest landowners in the EL Rio/Oxnard area. He owned many large parcels of land surrounding his original purchase, and upon his death, he owned the acreage that was eventually to become Wagon Wheel Junction and the Esplanade Shopping Center in later years.

The town was first officially referred to as New Jerusalem and is said to have been given its name by Judge J.D. Hines, the first Superior Court Judge in Ventura County, who in 1876 named it to honor the first Jewish merchants in the area, the Cohn Family. Simon Cohn had the name New Jerusalem painted on his store, which at first was a small woodframe building that was replaced by 1891 with a larger brick masonry building that stood at the same location for over seventy-five years until the freeway paved over the site. In 1891 when the town of New Jerusalem was visited by Yda Storke, she wrote, "The town has two large general merchandise stores, a church and other businesses."

In 1882 the first post office was open in New Jerusalem, and Simon Cohn served as postmaster. In 1895, the post office shortened the name of the town to Jerusalem, and a few months later, on June 6, 1895, the name was changed to Elrio (all one word). In 1905 the post office name was finally changed to El Rio and stayed that way until the post office closed in 1911.

The Rio School District was established by the Board of Supervisors in 1885, and a school house was built on the western side of Vineyard Avenue about three-tenth of a mile east of the intersection with Ventura Boulevard. A Catholic Church was built in the 1870s on Conejo Boulevard (Ventura Boulevard) adjacent to one of Simon Cohn's properties. It is said that Simon Cohn, although he was not a Catholic, contributed to its construction. It may have been that he donated land. In later years, when the freeway was built, the church was moved to Rose Avenue. A Methodist Church was also built on Vineyard Avenue across from the Myrtle Avenue intersection.

In 1887 the Town of Colonia, a twelve-block subdivision by Taylor and Jepson, was recorded by surveyor J.B. Stow. This was the first housing development in the New Jerusalem area at the time. It was located adjacent to Vineyard Avenue and the Conejo Road (Ventura Boulevard/Ventura Freeway). Within the tract was one main road, Colonia Avenue, and bisected by three streets: Myrtle, Olive, and Sycamore Streets. The first school was built in this tract and faced onto Vineyard Avenue.

When the town of Oxnard was established in 1898, it is said that some of the buildings from El Rio were moved to Oxnard. The small community of El Rio retained its rural agricultural character until World War II. Farmland was used for such crops as lima beans, walnuts, grain and citrus. Following the war, there was pressure to develop in Ventura County, and El Rio was no exception. Former agricultural lands east and west of Vineyard Avenue were turned into housing tracts. A new El Rio School was built on the east side of Vineyard Avenue, and the old school was torn down to make way for commercial development. The final blow to the original town center of New Jerusalem where Simon Cohn's store, the Catholic Church, and other commercial buildings were located, came with the construction of the Ventura Freeway in the mid-1950s. The widening of the old Conejo Road (Ventura Boulevard), combined with the construction of the Vineyard overpass, wiped out the entire original crossroads where Simon Cohn's store and other stores, as well as farm houses, once stood.

Vineyard Avenue became the new commercial center of El Rio following World War II and the freeway construction. New commercial buildings and small shopping centers continue to be built on Vineyard

Avenue. During the early 1950s, the County of Ventura began to develop the El Rio Maintenance Yard on El Rio Drive Drive, following the freeway's construction. This large site contained a number of buildings including the animal shelter, shelter office, weights and measures shop and storage, weights and measures garage, calibration station, truck scales, office and labs, communications building, pound master's residence, firemen's residences, fire station, and private garages.

Santa Paula architect, Roy C. Wilson, drew up the master plan for the facility yard in 1953. The buildings were constructed between 1953 and 1959 with other buildings added in the 1960s. These new buildings included several public works buildings: office, warehouse, joint operations, and equipment repair. During the 1980s, the animal shelter buildings were removed from the site.

The land adjacent to the Santa Clara River has been used by several mining companies since the 1930s. During the 1940s, the El Rio Rock Company, specializing in excavating and grading, was located west of Vineyard Avenue and two miles north of Ventura Boulevard. The Southern Pacific Milling Company, formerly a grain storage and milling business with warehouses adjacent to the Southern Pacific Railroad depots throughout Ventura County, transitioned out of this business in the 1940s into rock, sand, ready mix concrete and asphaltic concrete production. It opened its offices at its present location at 3555 Vineyard Avenue in 1952, having acquired the lease for the property that year. The site was developed between 1952 and 1960.

PROJECT IMPACTS

Thresholds of Significance

Archaeological Resources

Based on the CEQA *Guidelines* (item j of Appendix G), the City of Oxnard considers the impact of a project to result in a significant impact on cultural resources if it will disrupt or adversely affect a prehistoric or historic archaeological site or a paleontological site except as a part of a scientific study.

Historic Resources

Based on Section 15064.5(b) of the CEQA *Guidelines*, the City of Oxnard considers a project with an effect that may cause a substantial adverse change in the significance of an historical resource as a project that may have a significant effect on the environment. 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 significance of an historical resource is materially impaired a project does the following.

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

Archaeological Resources

With regard to prehistoric archaeological resources, the majority of RiverPark Area 'A' was systematically surveyed by archaeologists in 1985 as part of the planning and environmental review process conducted by the City to support the preparation of the Oxnard Town Center Specific Plan.[1] No archaeological sites were recorded within the study area during this or other surveys of portions of the study area, and no sites were known to be present within the Specific Plan boundaries.

The archival and historic records search conducted by the California State University, Fullerton, Archaeological Information Center (AIC) identified two prehistoric archaeological sites within a one-half mile radius of the project area. These archaeological sites are designated CA-VEN-545 and CA-VEN-1234.

With regard to historic archaeological resources, an intensive and systematic Phase I Archaeological Survey was conducted on the site in December 2000. The ground surface was examined by walking transects across the study area spaced at 15-meter intervals to identify artifacts that might be present on the ground surface.

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1 Bissell, R.M. 1985 Cultural Resources Evaluation, Oxnard Town Center Site, Ventura County, California. Report on file, City of Oxnard.

No sites of any kind had been previously recorded within the study area or adjacent properties, and no new sites were discovered during the Phase I survey. However, a low density, mixed scatter of historical debris, possibly dating between 1879 and 1884, was found in the southeastern extreme of the study area, southeast of Myrtle Street and El Rio Drive. This is currently an open lot which is in a disturbed state as a result of the fairly recent demolition of structures that were present on this parcel. As a result of this recent disturbance, this site currently contains a mixture of recent and older trash. This area lacks historical remains in sufficient quantity and with adequate integrity to warrant the recording of a historical site; however, it is possible that a buried historical deposit may be present at this location. Development of the proposed project would result in grading and earthwork at this location that may impact potential historical deposit. This is considered a potential significant impact on archaeological resources before mitigation.

Historical Resources

CEQA requires evaluation of project impacts on historic resources, including properties "listed in, or determined eligible for listing in, the California Register of Historic Resources [or] included in a local register of historical resources." A resource is eligible for listing on the California Register of Historical Resources if it meets any of the criteria for listing, which are:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

The California Register may also include properties listed in "local registers" of historic properties. A "local register of historic resources" is broadly defined in §5020.1 (k), as "a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution." Local registers of historic properties come essentially in two forms: (1) surveys of historic resources conducted by a local agency in accordance with Office of Historic Preservation procedures and standards, adopted by the local agency and maintained as current, and (2) landmarks designated under local ordinances or resolutions. (Public Resources Code §§ 5024.1, 21804.1, 15064.5)

By definition, the California Register of Historic Resources also includes all "properties formally determined eligible for, or listed in, the National Register of Historic Places," and certain specified

State Historical Landmarks. The majority of "formal determinations" of NRHP eligibility occur when properties are evaluated by the State Office of Historic Preservation in connection with federal environmental review procedures (Section 106 of the National Historic Preservation Act of 1966). Formal determinations of eligibility also occur when properties are nominated to the NRHP, but are not listed due to owner objection. The criteria for determining eligibility for listing on the National Register of Historic Places (NRHP) have been developed by the National Park Service. Properties may qualify for NRHP listing if they meet the following criteria.

- Criterion A: Are associated with events that have made a significant contribution to the broad patterns of our history; or
- Criterion B: Are associated with the lives of persons significant in our past; or
- Criterion C: Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history.

According to the National Register of Historic Places guidelines, the "essential physical features" of a property must be present for it to convey its significance. Further, in order to qualify for the NRHP, a resource must retain its integrity, or "the ability of a property to convey its significance."

The seven aspects of integrity are:

- Location (the place where the historic property was constructed or the place where the historic event occurred);
- Design (the combination of elements that create the form, plan, space, structure, and style of a property);
- Setting (the physical environment of a historic property);
- Materials (the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property);
- Workmanship (the physical evidence of the crafts of a particular culture or people during any given period of history or prehistory);
- Feeling (a property's expression of the aesthetic or historic sense of a particular period of time), and;
- Association (the direct link between an important historic event or person and a historic property).

The relevant aspects of integrity depend upon the National Register criteria applied to a property. For example, a property nominated under Criterion A (events), would be likely to convey its significance primarily through integrity of location, setting and association. A property nominated solely under Criterion C (design) would usually rely primarily upon integrity of design, materials and workmanship. The California Register procedures include similar language with regard to integrity.

The minimum age criterion for the National Register of Historic Places (NRHP) and the California Register of Historic Resources (CRHR) is fifty years. Properties less than fifty years old may be eligible for listing on the NRHP if they can be regarded as "exceptional," as defined by the NRHP procedures, or in terms of the CRHR, "if it can be demonstrated that sufficient time has passed to understand its historical importance" (Chapter 11, Title 14, §4842(d)(2)) Section 1368 of the Ventura County Cultural Heritage Ordinance sets out the following criteria for designation of a Ventura County Landmark:

1. It exemplifies or reflects special elements of the County's social, aesthetic, engineering, architectural or natural history;
2. It is identified with persons or events which are significant in national, state or local history;
3. It shows evidence of habitation, activity or the culture of prehistoric man;
4. It embodies elements of architectural design, detail, materials or craftsmanship which represent a significant structural or architectural achievement or innovation;
5. It is representative of the work of a master builder, designer, artist or architect;
6. It is imbued with traditional or legendary lore;
7. It has a unique location or singular physical characteristics or is a view or vista representing an established and familiar feature associated with a neighborhood, community or the County of Ventura;
8. It is one of the few remaining examples in the County possessing distinguishing characteristics of an architectural or historical type or specimen.

The historic resource study identified 33 existing buildings and structures on the project site that would be demolished. Eighteen of these buildings, including the Newport Boats Showroom, the residence at 2423 Colonia Avenue, and sixteen buildings in the Ventura County Facility Yard, are not eligible as historic resources under CEQA because they are not fifty or more years of age.

Three buildings, as well as some of the buildings and structures on the South Pacific Milling Company site, are fifty years or more of age and are thus eligible as potential historic resources based on age.

These three buildings consist of a single family home on El Rio Drive, the Myrtle Street residence, and the Grubb/Campbell Farmhouse at 3091 Vineyard Avenue.

The home on El Rio Drive is not to be associated with any significant historic event (Criterion A) that occurred in the El Rio area, nor is it associated with a significant person (Criterion B). Architecturally it is not sufficiently distinctive to be eligible for the National Register or the California Register under Criterion C, especially since it no longer resembles its original historic appearance. Changes have been made to siding and additions have been made. It does not to meet the criteria for eligibility as a Ventura County landmark.

The Myrtle Street Residence, west of Colonia Avenue is not to be associated with any significant historic event (Criterion A) that occurred in the El Rio area, not is it associated with a significant person (Criterion B). Architecturally it is not sufficiently distinctive to be eligible for listing on the National Register or the California Register under Criterion C, especially since it no longer resembles its original historic appearance. This building was moved to the site in the mid-1930s. It was a pump house converted to a residence with an addition made on the west side. Although it has served as a residence for almost 75 years, its original use was a pump house and the building was moved from the Eastwood ranch on Gonzales Road. It does not meet the criteria for listing as a Ventura County landmark.

The Grubb/Campbell Farmhouse, located at 3091 Vineyard Avenue, is not eligible for listing on the California Register or the National Register of Historic Places because no significant events occurred on the property (Criterion A). The property was once part of a larger walnut ranch that included two residences, but the integrity of the property has been lost with the removal of the other older residence and the walnut trees, and a portion of the original acreage. No significant individuals are associated with this property (Criterion B). The Grubb family were ranchers and owned the land from at least 1912 until circa 1970 when it was purchased by the Campbell family. There are no buildings on the property with distinctive architectural designs (Criterion C). The main house is a modest, fairly unaltered example of the Ranch house style. A garage and a mobile home are also located on the property. The property is not eligible under any of the Ventura County Landmark criteria.

The remaining ten buildings and structures are located on the Southern Pacific Milling Company site, currently occupied by Hanson Aggregates at 3555 Vineyard Avenue. The El Rio Rock Company was established circa 1942 by Donald Woolsey primarily in response to the need for asphalt with the construction of the Naval Base at Port Hueneme that same year. These buildings were all located on site prior to the leasing of the property by the Southern Pacific Milling Company in 1952. This grouping of buildings, including the asphalt plant, which was modernized by SP Milling, was one of three industrial rock mining operations in the Ventura-Santa Clara Valley region. The El Rio Rock Company contributed mainly to the construction of roads and airfields. Later, with the addition of a concrete and rock plant by SP Milling, the company supplied materials used in the construction of a large number of buildings throughout Ventura County. The materials produced by SP Milling were used locally and in the Southern California region for highways and streets, housing projects, industrial and commercial buildings, oil refineries, schools, dams and parking structures, airports and naval bases.

Of these ten buildings and structures on the SP Milling site, five are not eligible as historic resources under CEQA because they are not fifty or more years of age. These five are an office/residence (circa 1952), the Administrative Building (circa 1959), the Asphalt Plant (circa 1940 and upgraded continuously), the Concrete Plant (after 1952), and the Rock Plant (after 1952).

The remaining five buildings and structures, which are an office building (circa 1920), a residence/lab/garage (circa 1942), and three metal storage buildings, (circa 1942) are of sufficient age to be potential historic resources. In this case, these five buildings and structures are associated with an industry that has made a significant contribution to the physical development of Ventura County through the construction of roads, bases, airfields, and buildings.

In order to qualify for the NRHP, a resource must retain its integrity, or "the ability of a property to convey its significance." When judging the integrity of the property, the entire site as well as it surroundings must be considered.

Because the vicinity of the property no longer resembles its original historic appearance, with the encroachment of urbanization to the east, west, and south, and the loss of adjacent agriculture, the setting (physical environment of a property) is effectively lost. The property's location is the same. The design and materials of the property is partially intact. Although only minor modifications to the buildings have occurred, the access road into the property has been moved twice, and some buildings were added to the site after 1950, while others have been removed. The feeling and association of the property as a rock and cement company is partially intact. While some materials processing still occurs onsite, mining has ceased.

Because of the significant loss of integrity in setting and design, the remaining buildings on the property do not appear to be eligible for listing on the NRHP or the CRHR.

However, they may be eligible for listing as Ventura County Landmarks, a designation that has no integrity criteria. The El Rio Rock Company/SP Milling Company site appears to qualify as a Ventura County Landmark under Criterion 1 because it reflects special elements of the County's mining engineering history. It also appears eligible under Criterion 8 as one of the few remaining examples in the County possessing distinguishing characteristics of a historical industrial type. Based on the eligibility of these resources for listing as Ventura County Landmarks, these resources are considered to be historic resources.

With the thresholds of significance being used for this analysis, the impact of the project is significant impact if it would result in the demolition, destruction, relocation, or alteration of an historic resource. The demolition of the Residence on El Rio Drive, the Myrtle Street Residence, and the Grubb/Campbell Farmhouse would not result in a significant impacts under this threshold. This is because these three buildings are not eligible for the National or the California Registers based on the fact that they are not associated with significant persons or events and are not architecturally distinctive. However, the demolition of the remaining structures on the El Rio Rock Company/SP Milling site and the construction of new residential uses will result in the loss of the entire rock and concrete mining site. This is a significant impact under the thresholds being used.

CUMULATIVE IMPACTS

There are several related projects in the area at this time. These projects include commercial projects south of the Ventura Freeway in established regional commercial areas, a small residential project proposed in the El Rio West Neighborhood adjacent to the Specific Plan Area and, to the east of the Large Woolsey Mine Pit, the Ventura County Juvenile Justice Center. These projects would involve the redevelopment of existing commercial sites or the development of vacant and agricultural land. No historic resources exist on these sites and for this reason, no cumulative impacts to historic resources will result from the development of these projects and the RiverPark Project.

MITIGATION MEASURES

The following mitigation measure is required, since prehistoric and historic archaeological resource impact is potentially significant.

Archaeological Resources

To ensure that any unpredicted cultural resources, including Chumash artifacts, which are uncovered during earthwork, are properly handled, the following mitigation measure is recommended:

4.12-1 A qualified Archaeological Monitor shall be present at the site during grading and earthwork activities. If any unpredicted cultural resources are uncovered during earthmoving activities, construction work shall stop immediately and the appropriate local and regional authorities shall be consulted.

Historic Resources

CEQA *Guidelines* 15126(b) addresses mitigation of impacts to historic resources.

- Where maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, or reconstruction of the historical resource will be conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (1995), Weeks and Grimmer, the project's impact on the historical resource shall generally be considered mitigated below a level of significance and thus is not significant.

- In some circumstances, documentation of an historical resource, by way of historic narrative, photographs or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur.

A principle of environmental impact mitigation is that some measure or combination of measures may serve to reduce adverse impacts, and that feasible measures which mitigate environmental impacts should be implemented, even where residual impacts may remain. In reference to mitigating impacts on historic resources, the CEQA *Guidelines* state:

> *Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource. (PRC §15064.5 (b)(3))*

These standards and the supporting literature describe the principles of historic preservation as well as accepted methodologies for carrying out preservation, restoration and rehabilitation projects. The documentation of a resource in preparation for its demolition, for example, would not comply with the

Secretary of the Interior's Standards, although documentation of a resource in connection with its relocation to another suitable site arguably may.

In direct reference to documenting historic resources as a mitigation technique, the CEQA *Guidelines* state:

> *In some circumstances, documentation of an historical resource, by way of historic narrative, photographs or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur. (PRC §15126.4 (b)(2))*

Implied by this language are circumstances where documentation may mitigate impacts to less than significant levels. The conditions under which this may be said to have occurred are not specified in the CEQA *Guidelines*.

Taken in total, the language in the CEQA *Guidelines* steers the methodology for mitigation of impacts on historic properties towards conformance with the Secretary of the Interior's Standards. However, the CEQA *Guidelines* also leave open the potential for reducing impacts to levels below significance thresholds by means other than the application of the Standards, under circumstances which the CEQA *Guidelines* do not define. A logical resolution of the language in the CEQA *Guidelines* is to consider the level of eligibility of the property, as well as by what means it derives its significance, in determining the appropriate level and type of mitigation to be employed, and in concluding whether residual impacts will exist after mitigation.

In general practice, mitigation programs for impacts on historic resources tend to fall into three broad categories: documentation, design, and interpretation. Documentation techniques involve the recordation of the site according to accepted professional standards, such that the data will be available to future researchers. Design measures could potentially include direct or indirect architectural references to the historic property, e.g., the incorporation of historic artifacts, into the new development. Interpretation measures might include commemorating a significant historic event or the property's connection to historically significant themes.

As the existing mine property derives some of its significance from the historic industrial style it represents, recordation should be regarded as an appropriate mitigation technique. Since the significance of the property is not in its architecture, design-based mitigation would not be appropriate. As the property derives its significance partially from its associations with historic themes, interpretative measures are warranted. Accordingly, the following measures are recommended:

4.12-2 Documentation. Prior to the issuance of a demolition permit, the applicant shall produce a documentation survey of the property in accordance with the Historic American Building Survey (HABS) standards. This documentation shall include archival quality photographs of exterior features, elevations of the seven historic buildings. The 1960 Inspection Report Map prepared by Marsh & McLennan-Gosgrove & Company shall be included as the site plan. The documentation package will be archived at an appropriate location determined by the City of Oxnard.

4.12-3 Interpretation. In consultation with a qualified historian, the applicant shall produce an oral history with the former president of SP Milling Company, Bill Hamilton, and any other employees with knowledge of the company history. The taped history, done according to professional oral history standards, shall be indexed and copies made available to the Ventura County Museum of History and Art Oral History Archive and the Oxnard Historical Society and any other appropriate repository.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant impacts to archeological resources will result from the RiverPark Project.

With regard to mitigation for significant impacts to historical resources, the CEQA *Guidelines* state that a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings can generally be considered to have mitigated any impact to a level that is less than significant. The CEQA *Guidelines* also state that, in some cases, documentation of an historical resource as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur. As discussed above, historical documentation is considered to be the most appropriate measure to mitigate the impact of the demolition of the remaining buildings and structures on the El Rio Rock Company site. Nonetheless, in consideration of the language in the CEQA *Guidelines*, the demolition of these remaining structures is considered an unavoidable significant impact on these local historic resources.

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INTRODUCTION

This section addresses the potential for impacts related to the presence and use of hazardous materials by existing and historical uses within the proposed Specific Plan Area and the proposed land uses. These risks are primarily associated with the potential for on-site hazards from abandoned oil wells, storage of materials categorized as hazardous under existing regulations, underground and aboveground storage tanks, and the operations of facilities historically located within the boundaries of the proposed Specific Plan Area.

ENVIRONMENTAL SETTING

The Specific Plan Area currently contains the Hanson Aggregates sand and gravel mine site, including concrete and asphalt production facilities; retention basins; agricultural crops, including strawberry production; commercial and institutional uses. Historically, the project area has been used for intensive agricultural production, and for oil and gas extraction as part of the now abandoned El Rio oil field. There are existing industrial areas located east of the existing mine pits that several permitted underground storage tank facilities, industrial uses that generate waste products categorized as hazardous under existing regulations, and other industrial uses that utilize hazardous materials in their operations. Considerable information is currently available on the potential to encounter hazardous materials and wastes during the development of the project area under the proposed Specific Plan. A summary of the findings of previous environmental site assessments completed for the properties within the Specific Plan Area is provided below.

Phase I and II Environmental Site Assessment (ESA) Methodology and Findings

The purpose of a Phase I ESA is to address the environmental conditions associated with past and present operations conducted at the subject property and adjacent properties. Phase I ESAs are typically conducted utilizing generally accepted industry standards in accordance with the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments (E-1527-00). The scope of a Phase I ESA generally includes review of the subject property history, physical characteristics, current conditions, regulatory database review, and review of activities conducted at the property and at adjacent properties with regards to release of regulated substances to the environment. A Phase I ESA also provides recommendations for Phase II studies to further assess any area of potential concern. Phase II studies involve the sampling and testing of soils and groundwater as warranted.

A summary is provided for each available Phase I and Phase II ESA conducted within the proposed Specific Plan Area. Together, the available studies address all portions of the proposed Specific Plan Area. A complete listing of all studies referenced is contained in Section 8.0, References, of this EIR. The report *Limited Phase II Environmental Site Assessment, Approximate 212-Acre Area "A" and 66-Acre Campbell Basin*, prepared by Applied Environmental Technologies Inc., is provided in Appendix 4.13.

North El Rio Detention Basin No. 1 and Magallon Property (APNs 133-0-010-615 and 133-0-010-190)

These parcels are located on the north side of Vineyard Avenue and are comprised of a total of approximately 15 acres. Specifically, the North El Rio Retention Basin No. 1 consists of a flood control basin on 14.98 acres. The Magallon property consists of 0.36 acres and consists of a vacant commercial property formerly utilized as a sandblasting business. Each parcel was historically utilized for agricultural purposes.

Materials categorized as hazardous are not currently utilized at the location of Basin No. 1. The basin accepts runoff from agricultural areas east of Vineyard Avenue and includes an outlet structure constructed at the southwest corner of the basin which connects it to the North El Rio Detention Basin No. 2, located to the southwest. Records indicate that an oil well was drilled on this site in 1960. Review of the Oil Field Map No. 214, published by the State of California Division of Oil, Gas, and Geothermal Resources (DOGGR), indicated Chevron's Brigham No. 1 well is located within the basin area. The well was drilled to a total depth of 11,500 feet, however it was reported that "no commercial showing of oil or gas" was observed at the well location. Reportedly, the well location was abandoned as a dry hole in 1961 by placement of cement within the well casing at specific intervals in addition to the placement of a wooden plug at a depth of 25 feet, and sealing of the well casing to the well cellar at the surface with cement.

Storage of materials categorized as hazardous was observed at the location of the Magallon property during the time of the site reconnaissance activities. Miscellaneous containers and substances observed included: one 500-gallon capacity empty propane tank, one 30-gallon unlabeled container full with unknown substance, one unlabeled five-gallon container, and two empty 55-gallon poly tanks. A small shed and two storage containers were observed to be located on the Magallon property. These structures were identified as potentially containing asbestos-containing building materials (ACM) and lead based paint based on the date of construction. This site was reported to have formerly been used for a sand blasting operation, which has resulted in large amounts of sand deposited on the site that may possibly containing elevated concentrations of heavy metals.

A Limited Phase II ESA soil screening of the 0.36-acre Magallon Property was prepared in response to the historical sandblasting business by Applied Environmental Technologies (AET). A total of two surface samples of loose sand (Samples SB-1 and SB-2) were collected and submitted to a state certified analytical laboratory for chemical analyses. The samples were analyzed for the California List of 17 heavy metals.

The laboratory reported that no mercury, arsenic, berylium, selenium, silver, and thallium were detected in the samples. Concentrations of antimony, barium, cadmium, chromium, cobalt, copper, molybdenum, nickel, vanadium and zinc were detected below the Total Threshold Limit Concentration (TTLC) and below 10-times the Soluble Threshold Limit Concentration (STLC) and are considered to be background concentrations. The TTLC and STLC standards have been established to identify hazardous wastes for purposes of transport and disposal. Soils with concentrations of contaminants over these thresholds would be categorized as hazardous wastes. Lead was reported at 74.8 milligram per kilogram (mg/kg) and 111 mg/kg in the two samples. The concentrations are below the TTLC value of 1,000 mg/kg but are greater than 10-times the STLC value (50 mg/kg).

Based on the results of the heavy metals analysis, there are apparent elevated lead concentrations in the loose sand on the surface of the Site, however, the reported lead concentrations are below the TTLC value for hazardous waste and below the U.S. EPA Preliminary Remediation Goals (PRG) for residential soil (450 mg/kg) and for industrial soil (750 mg/kg) and are not considered to be a present hazard.

North El Rio Detention Basin No. 2 Property (APNs 132-0-020-160 and 132-0-020-190)

The properties containing the North El Rio Retention Basin No. 2 (APNs 132-0-020-160 and 132-0-020-190) are located at 3009 and 3091 Vineyard Avenue on the north side of Vineyard Avenue and are comprised of a total of 67.40 acres. Specifically, the North El Rio Retention Basin No. 2 is comprised of 66.40 acres and is currently utilized for a combination of strawberry crop production and as a flood control basin. Additionally, a 1-acre portion of this site along Vineyard Avenue contains a single-family residence.

Materials categorized as hazardous are not currently used within the basin property. The portion of the property located along Vineyard Avenue and a portion of the basin itself are currently used for strawberry crop production. Prior to the excavation of the basin material these parcels were utilized for agricultural purposes, typically row crops and orchards.

Review of the Oil Field Map Nos. 213 and 214, published by the DOGGR dated 1990 and 1998, respectively, indicated the locations of two abandoned oil or gas wells within the subject parcels. Chevron's Standard-Sun J.H. Grubb No. 1 well was drilled in 1960 to a total depth of 10,765 feet. The well was abandoned in 1962, reportedly due to low production, by placing a wooden plug at a depth of 31 feet capped with cement to the surface. The well casing was cut off at a depth of five feet below surface grade. SWEPPI's Grubb No. 1 well was drilled in 1928 to a total depth of 5,310 feet, however was reported that "no commercial showing of oil or gas" was observed at the well location. The well was abandoned as a dry hole in 1928 by filling the casing with drilling mud. A wooden plug was set at 600 feet and cement was placed above to a depth of 10 feet. Another wooden plug was set at 10 feet with cement placed above into the well cellar at the surface. During the site reconnaissance a vertical metal casing was observed within the detention basin area, and is believed to be the Standard-Sun J.H. Grubb No. 1 abandoned well location.

Materials categorized as hazardous were observed at the equipment storage area located adjacent to the residence at Vineyard Avenue along the northeast boundary of this site. Substances observed at the equipment storage area include a 500-gallon capacity aboveground storage tank (AST), likely containing diesel fuel, one car battery, and an open 5-gallon container of used motor oil. Additionally, three storage containers and an office trailer were observed within the equipment storage area. The residence on this site was surrounded by a locked chain-link fence. One 250 gallon capacity AST, one propane tank, and a cutting torch cart with two compressed gas vessels were observed within fenced are of the residence. Additionally, a metal cover was observed within the driveway of the residence which may overlie an underground vault or tank.

A Limited Phase II ESA of the 66.4-acre North El Rio Detention Basin No. 2 Property was prepared, due to the historical agricultural uses of this site, by Applied Environmental Technologies (AET). A group of four shallow soil samples, collected from the four quadrants of the strawberry field in the lower elevation of the Campbell Basin were submitted for laboratory analysis. The laboratory made one composite sample from the 4 samples for analysis (Sample C-16). In addition to the composite sample, three discrete samples were collected from the at-grade portion of the Site located between the Basin and Vineyard Avenue (Samples SSA-1, SSA-2 and SSA-3). All four samples were analyzed for organochlorine pesticides, and one sample (SSA-2) was also analyzed for chlorinated herbicides and the California List of 17 heavy metals.

The laboratory reported that no chlorinated herbicides were detected in the sample analyzed. No mercury, arsenic, berylium, cadmium, selenium, silver, and thallium were detected in the sample analyzed. Concentrations of antimony, barium, chromium, cobalt, copper, lead, molybdenum, nickel, vanadium and zinc were below the total threshold limit concentration (TTLC) and below 10-times the soluble threshold limit concentration (STLC) and are considered to be background concentrations.

The laboratory reported that concentrations of DDD, DDE and DDT were detected in all four samples. No other organochlorine pesticides on the list were detected. The highest concentrations of DDD, DDE and DDT were reported in Sample SSA-3 at 0.034 mg/kg, 0.155 mg/kg and 0.062 mg/kg, respectively.

The U.S. EPA Region 9 Preliminary Remediation Goal (PRG - EPA Region 9, November 22, 2000) values were reviewed by AET. The residential soil PRG values for DDD, DDE, and DDT, reported for planning purposes, are: 2.4 mg/kg; 1.7 mg/kg; and 1.7 mg/kg, respectively. While a PRG is specifically not intended as a stand-alone decision-making tool, a chemical concentration exceeding a PRG suggests that further evaluation of the potential risk is appropriate. Based on the results, none of the sample results exceed the residential PRG values.

Hanson Aggregates Property (APNs 133-0-01-011, 133-0-01-057, and 133-0-01-060)

A Phase I ESA was prepared for the 54-acre portion of the mine site containing the materials processing plants and administrative facilities. Historically the mine site and associated production area was utilized for agriculture, and was developed as an aggregate mining and processing facility in 1942. The active plant facilities include two ready mix concrete batch plants operated by Associated Ready Mix, an asphalt plant operated by Sully Miller, a recycling plant operated by Hanson Aggregates, and related shop areas and offices. Hanson Aggregates has recently removed some facilities and completed other site maintenance activities in accordance with the approved mine reclamation plan for the site. Over the past year Hanson Aggregates has removed a rock and sand plant, various equipment in other locations on the property, an underground asphalt oil tank, and three transformers. In addition, two structures, a tire shop and a quonset hut, have been removed from the site.

The Phase I ESA found that materials categorized as hazardous are used at the production facilities as part of the daily operations. The majority of these materials are maintained at the shop area, and some of these materials are used at the ready-mix batch plant, and at the fuel dispenser area. These materials include: crankcase oil, waste oil, grease, antifreeze, transmission fluid, gear lube, welding gases, and cleaning solvents and were observed in their sealed original containers and in designated storage areas. Minor discoloration was observed within the containment area, however no major cracks were observed within the concrete surfaces of the storage areas.

The fuel dispenser area is located north of the shop/maintenance area. Regulated materials utilized at the fuel dispenser area include diesel fuel, hydraulic oil, propane, and turbine oil. These materials are maintained in multiple ASTs contained within concrete containment areas. Minor staining was observed beneath the fill ports of the ASTs, however the material did not appear to be migrating from the containment area.

Records show that a total of 23 above ground and under ground storage tanks have been in service at some time on this site. Of the 12 Underground Storage Tanks (USTs) reported at the site, eight are reported as being either inactive or removed. The remaining four USTs identified at the site are associated with the asphalt plant and the containment of asphalt emulsion, and are exempt from registration. Of the 11 ASTs at the site, one AST containing asphalt emulsion was recently removed. The remaining 10 ASTs are utilized for various materials associated with the operations at the site. No storage violations were reported for the ASTs at the site.

Information pertaining to historical ASTs at the site included the review of a fire insurance report, dated June 1960, prepared for the site. Five ASTs containing fuel oil and weed oil were identified as being located approximately 100 feet north of the asphalt plant. No additional documentation regarding the installation or removal was available for review.

Review of available documentation at the Ventura County Environmental Health Department (VCEHD) revealed that the Hanson Aggregates Facility is listed with a "case closed" status on the facility listing. The review indicated that a total of six USTs were removed during the period of 1987 through 1991. Contaminated soil resulting in release from the USTs was reported for one of the six USTs removed. The Hanson Aggregates Facility also appears on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List) as a leaking underground tank site. The site was also identified on the VCEHD Leaking Underground Fuel Tank (LUFT) list, however appropriate action was taken and the contamination was removed and properly disposed off-site at a licensed disposal facility. The Hanson Aggregates Facility is currently listed by the VCEHD with case closed status in regards to aboveground and underground storage tanks.

The ready-mix batch plant utilizes materials categorized as hazardous in the manufacturing process of concrete. The materials utilized, such as calcium chloride liquid, typically contain high pH levels. These materials were observed to be stored in high-density plastic containers on concrete pads at the ready-mix batch plant facility. Moderate staining was observed on the surface areas of material storage. Additionally, an acid wash area is located adjacent to the ready-mix batch plant operation. The acid wash area consists of two concrete lined bays where concrete batch trucks remove the hardened concrete using a low pH acid solution. The residual solution is contained within the bays and typically evaporates. Moderate staining and corrosion was observed on the concrete surface of the containment bays. Stained soil was observed to extend approximately 10 feet beyond the entrance to the bays.

The surface areas of the site are unpaved and graded to provide some slope and swale to direct surface water away from on-site buildings. Concrete surfaces at the locations of the shop/maintenance area and the fuel dispenser islands were observed to be highly degraded with cracks and moderate staining. According to personnel at the site, a release of diesel fuel occurred in the vicinity of the fuel dispenser islands impacting the soil adjacent to the concrete pad surface. Approximately 40 cubic yards of diesel-containing soil was excavated and disposed off-site a licensed disposal facility. A report documenting this spill and remediation activities submitted to VCEHD in December 1997.

Review of the historical aerial photographs of the site revealed dark surface staining in the vicinity of the diesel fuel spray rack associated with the asphalt plant at the site. The diesel fuel spray rack is an unpaved area where diesel fuel was formerly sprayed into the beds of the trucks prior to loading the asphalt to reduce the potential for the hot asphalt to adhere to the truck bed during transportation. At the time of the site reconnaissance, the use of diesel fuel has been discontinued per California Department of Transportation (Caltrans) requirements, and surface staining was not observed at this area.

The Phase I ESA identified the following areas that were determined to have potentially impacted the environmental integrity of the site.

- Former washout area at the northeast corner of the site.
- AST containing diesel at northeast portion of the site.
- Truck and equipment storage area at northeast portion of site.
- Fuel staging area near fuel dispensers and AST containment areas.
- Equipment maintenance area.
- Former paint storage and spray area, in the vicinity of the clarifier and the waste water UST.
- Former washout area along the western boundary of the site.
- Wastewater discharge in the area of the recycle plant.
- Ready-mix batch plant, including the batch truck washout area and the acid wash off area.
- Asphalt plant including the diesel fuel spray rack and five ASTs former located approximately 100 feet north of the asphalt plant.

A Limited Phase II ESA of Hanson Aggregates property was prepared in response to the Phase I ESA findings. As part of the Phase II ESA, Padre advanced a total of 24 soil borings and total of 25 soil samples were submitted to a state certified analytical laboratory for chemical analyses. Laboratory analyses of selected samples included total petroleum hydrocarbons (TPH); benzene, toluene, ethylbenzene, and total xylenes (BTEX); volatile organic compounds (VOCs); heavy metals; and pH values.

Laboratory analytical results generally indicated non-detectable concentrations of TPH, BTEX, and VOCs; and background concentrations of heavy metals. Levels greater than 7.0 pH units were reported for all seven soil samples analyzed for levels of pH. The average soil pH value was 9.1 pH units. Background levels of pH for the site range from 7.4 to 8.4 pH units.

Elevated concentrations of TPH as diesel fuel (TPH-d) (2,300 milligrams per kilogram [mg/kg]), were reported for soil samples collected from the vicinity of the diesel fuel spray rack. Soil pH values as great as 12.2 pH units were reported in the vicinity of the former washout area at the northeast corner of the site.

Additional assessment activities were conducted in late 1998. The area of the diesel fuel spray rack was further assessed to determine the vertical and lateral extent of diesel fuel-containing soil and ground water. Following the completion of the assessment activities, approximately 3,500 cubic yards of petroleum hydrocarbon-affected soil in the diesel fuel spray rack area was excavated and either transported off-site for proper disposal or treated on-site utilizing bioremediation techniques. Regulatory closure for the remediation of diesel fuel-containing soil in the vicinity of the diesel fuel spray rack was granted by the Regional Water Quality Control Board, Los Angeles Region in a letter dated June 15, 2000.

Ventura County El Rio Maintenance Yard (APN 132-0-020-205)

This site contains several small office buildings, a fire station, vehicle maintenance buildings, and various portable storage buildings. Information regarding the use of this site prior to 1966 was not found. For the purpose of the assessment the parcel has been divided into four areas referred to as Areas 1 through 4 which are described below.

Area 1 is located at the south end of the parcel and consists of 13 buildings that are used for offices, a fire station, a weight calibration station, and a vehicular electric installation facility. Materials categorized as hazardous were not reported as being used in this area.

Area 2 is located to the north of Area 1, and consists of three buildings that are utilized for offices, vehicle maintenance, a paint and body shop, and for storage of materials categorized as hazardous. Substances observed within this area include one 500-gallon capacity AST containing waste oil and three 55-gallon hydraulic fluid reservoirs. Additionally, materials considered hazardous were observed to be stored in and around three portable storage containers located within the south central portion of this area. Equipment utilized within this area includes four hydraulic lifts, three parts washers, and an air compressor, in addition to ten pole mounted electrical transformers. Minimal staining was observed at the base of the waste oil AST and beneath the parts washers. Moderate leakage from the piping of one of the four hydraulic lift fluid reservoirs was observed. Excessive oil was observed to have leaked from the air compressor located within the northeast portion of the vehicle maintenance building. Additionally, heavy staining was observed within the vehicle maintenance building as a result of vehicle maintenance. The paint and body shop was observed to be well maintained, and hazardous materials were not observed to be stored at this location.

Area 3 is located to the north of Area 2, and consists of two buildings, a shelter of metal construction, and portable storage containers. The buildings in this area are generally utilized for offices, a sign shop, a vehicle wash, vehicle maintenance, hazardous materials storage, and a paint booth. Substances observed within this area include one 500-gallon capacity AST containing motor oil; two 55-gallon drums containing motor oil; small quantities of gasoline and propane; pesticides and other hazardous materials. Equipment utilized within this area includes an air compressor, five hydraulic lifts, four parts washers, and a paint spray booth. Hazardous materials within the area were observed to be sealed in their original containers and properly stored in a specific location. Propane and gasoline were observed to be stored at the exterior of the sign shop in a specific enclosure. The storage area was reported to be in poor condition and minor surficial staining was observed. Minor staining was generally observed at all locations of hazardous materials storage within Area 3.

Area 4 is located at the northernmost portion of the parcel boundary, and consists of four buildings, materials storage sheds, gardening equipment shelter, fuel dispenser islands with associated USTs, and an equipment storage yard. Substances observed within this area include two pallets of dry pellet fertilizer, three 35-gallon drums of liquid fertilizer, and an AST containing asphalt release agent. Equipment utilized within this area includes an air compressor and two pole-mounted electrical transformers. Reportedly, two USTs containing gasoline and diesel fuel are located within this area, and are associated with the fuel dispenser islands, however no other information was provided. Minor staining was observed in the vicinity of the on-site equipment and in the areas of materials storage. Asphalt release agent was observed on the ground surface within the storage area.

Developed and Agricultural Parcels within RiverPark Area 'A'

Previous Phase I site assessment reports were not available for review for the remaining properties within RiverPark Area 'A', including the two existing office buildings in the southwestern corner of RiverPark Area 'A' and the agricultural fields. As the office buildings were recently developed, there is a low potential for impacts related to hazardous materials and no additional investigation of these properties is warranted.

The primary areas of environmental concern are the agricultural fields in RiverPark Area 'A' due to the potential for the historical use of environmentally persistent pesticides on agricultural fields, presence of abandoned oil wells associated with the abandoned El Rio oil field, and possible unauthorized dumping sites. Elevated concentrations of environmentally persistent pesticides have been identified within the upper two feet of soils throughout the Oxnard Plain from the historical application of DDT and Toxaphene during agricultural operations. DDT and Toxaphene are now banned in the United States but have half-lives of greater than 30 years, so elevated concentrations may remain in soils for a very long time. Given the historical use of this part of the site for agriculture, the potential exists for soils to contain residual levels of these pesticides.

A Limited Phase II ESA of the approximate 155-acre agricultural portion of RiverPark Area 'A' was completed by Applied Environmental Technologies (AET). Area A was divided into 15 primary parcels of approximately 14 acres each. Each primary parcel was divided into four quadrants of approximately 3.5 acres each. AET collected one shallow (1 to 6 inches) soil sample from the approximate center of each of the quadrants (60 samples total from Area A). All 60 samples were submitted to a State Certified Analytical Laboratory. The laboratory made one composite sample from each set of four samples. One composite sample was analyzed from each primary 14-acre parcel (Samples C-1 through C-15).

In addition to the 15 composite samples, four discrete samples were collected from a depth of approximately 2-feet below ground surface from 4 of the 14-acre primary parcels to evaluate the vertical extent of any resistant chemicals detected in the shallow soil (Samples S-7, S-12, S-32 and S-40), and two discrete samples were collected from the fallow vacant land in the northwest corner of RiverPark Area 'A', near the Santa Clara River levee (Samples SSB-1 and SSB-2). All 21 samples were analyzed for organochlorine pesticides. Seven samples (C-1, C-3, C-5, C-9, C-12, C-14 and SSB-2) was also analyzed for chlorinated herbicides and five samples (C-3, C-9, C-12, C-14 and SSB-2) were analyzed for the California List of 17 heavy metals.

The laboratory reported that no chlorinated herbicides were detected in any of the six samples analyzed. No mercury, arsenic, berylium, cadmium, selenium, silver, and thallium were detected in the sample analyzed. Concentrations of antimony, barium, chromium, cobalt, copper, lead, molybdenum, nickel, vanadium and zinc were below the Total Threshold Limit Concentration (TTLC) and below 10-times the Soluble Threshold Limit Concentration (STLC) and are considered to be background concentrations.

The laboratory reported that concentrations of DDD, DDE and DDT were detected in all 17 surface samples analyzed. Dieldrin was detected in 15 of the samples and Endrin was detected in 14 of the samples. Other organochlorine pesticides, including Toxaphene, were not detected in any of the samples. The highest concentrations of DDD, DDE and DDT were reported in Sample C-11 at 0.161 mg/kg, 0.337 mg/kg and 0.280 mg/kg, respectively. The highest concentrations of Dieldrin was reported in Samples C-1 and C-11 at 0.051 mg/kg and 0.016 mg/kg, respectively. The highest concentration of Endrin was reported in Sample C-11 at 0.013 mg/kg. The laboratory reported significantly lower concentrations of the pesticides in the two discrete surface samples from the fallow land.

The U.S. EPA Region 9 Preliminary Remediation Goal (PRG - EPA Region 9, November 22, 2000) values were reviewed by AET. The residential soil PRG values for DDD, DDE, and DDT, reported for planning purposes, are: 2.4 mg/kg; 1.7 mg/kg; and 1.7 mg/kg, respectively. The residential PRG values for dieldrin and endrin are 0.03 mg/kg and 18 mg/kg, respectively. While a PRG is not intended as a stand-alone decision-making tool, a chemical concentration exceeding a PRG suggests that further evaluation of the potential risk is appropriate. One sample (C-1) had a concentration of dieldrin at 0.051 mg/kg that exceeded the residential PRG value of 0.03, however it did not exceed the Industrial/Commercial PRG value of 0.15 mg/kg. All other sample results were below residential PRG values.

REGULATORY SETTING

The following section provides a brief description of some of the applicable state and federal regulations relating to the use, storage, and disposal of hazardous substances and petroleum.

Federal Laws/Regulations

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). Under CERCLA, owners and operators of real estate where there is hazardous substances contamination may be held strictly liable for the costs of cleaning up contamination found on their property. No evidence linking the owner/operator with the placement of the hazardous substances on the property is required.

CERCLA, also known as Superfund, established a fund for the assessment and remediation of the worst hazardous waste sites in the nation. Exceptions are provided for crude oil wastes that are not subject to CERCLA.

In 1986, Congress established the "innocent landowner defense" in the 1986 amendments to CERCLA known as the Superfund Amendments and Reauthorization Act (SARA). To establish innocent landowner status, the landowner "must have undertaken, at the time of acquisition, all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial and customary practice in an effort to minimize liability." In an effort to clarify what constitutes "all appropriate inquiry," the ASTM has developed a standard that provides specific definition of the steps one should take when conducting a "due diligence" environmental site assessment for commercial real estate.

Federal Water Pollution Control Act of 1972 (Clean Water Act). The Clean Water Act governs the control of water pollution in the United States. This Act includes the National Pollutant Discharge Elimination System (NPDES) program, which requires that permits be obtained for point discharges of wastewater. This Act also requires that storm water discharges be permitted, monitored, and controlled for public and private entities.

Resource Control and Recovery Act of 1974 (RCRA). RCRA was enacted as the first step in the regulation of the potential health and environmental problems associated with solid hazardous and non-hazardous waste disposal. RCRA and the formation of the U.S. Environmental Protection Agency (EPA) to implement the Act provide the framework for national hazardous waste management, including tracking hazardous wastes from point of origin to ultimate disposal.

Hazardous and Solid Waste Amendments of 1984 (HSWA). The HSWA law was enacted to close RCRA loopholes and regulated leaking underground storage tanks specifically.

Asbestos Hazard Emergency Response Act of 1986 (AHERA). This Act is the federal legislation that governs the management and abatement of asbestos-containing materials in buildings.

National Emission Standards for Hazardous Air Pollutants; Asbestos, 40 CFR Part 61. This regulation requires the assessment and proper removal of asbestos-containing materials that could release asbestos when disturbed prior to the demolition of buildings.

California Laws/Regulations

Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code). The Porter-Cologne Act established a regulatory program to protect water quality and protect beneficial uses of the state's waters. The Porter-Cologne Act also established the State Water Resources Control Board and nine regional boards as the main state agencies responsible for water quality in the state. Discharges of wastes (including spills, leaks, or historical disposal sites) where they may impact the waters of the state are prohibited under the Porter-Cologne Act, including the discharge of hazardous wastes and petroleum products. The assessment and remediation of these wastes are regulated by the regional boards, the Los Angeles Regional Water Quality Control Board in the vicinity of the proposed project.

California Code of Regulations, Title 14, Division 3, Oil and Gas. The California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) has regulatory authority over the drilling, re-working and abandonment of oil wells, per Public Resources Code Section 3208.1.

Current oil well abandonment standards require the placement of cement plugs placed across oil or gas production zones, fresh water/saltwater interface zones, fresh water zones, and a minimum 25-foot surface plug. Abandoned well casings are required to be cut off at a minimum of five-feet below ground surface, and to have a metal plate with the well number welded to the top of the remaining casing (PRC Section 1723 et seq.). DOGGR also regulates the placement of buildings over abandoned well casings.

PROJECT IMPACTS

Thresholds of Significance

For the purposes of this EIR, a potential impact related to the presence of hazardous materials and/or risk of upset impact of hazardous materials is identified as significant based on the following thresholds:

1. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials.

2. Create a significant hazard to the public or the environment through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

3. Emit hazardous emissions or handle hazardous or acutely hazardous materials within one-quarter mile of an existing or proposed school.

4. Be located on a site which is 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 the environment.

5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles or a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.

6. For a project within the vicinity of a private airstrip, would the project result in the safety hazard for people residing or working in the project area.

7. Impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

8. Expose people or structures to a significant risk or loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Environmental Impacts

The project would not create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials. The proposed project does not include construction of industrial uses that would use large amounts of hazardous materials or generate hazardous wastes. However, small quantities of hazardous wastes will be generated by residences, businesses, and park facilities. These materials will be required to be handled, stored, transported, and disposed in accordance with state and federal hazardous materials and hazardous waste regulations. Therefore, the impact from the use of these materials by the proposed project is considered less than significant.

Development of the project area could potentially expose construction workers and future residents to potentially hazardous concentrations of environmentally persistent pesticides. The surface and shallow surface soils at the RiverPark Project area that historically been utilized for intensive agricultural production may contain residual concentrations of environmentally-persistent pesticides or heavy metals above adopted human health thresholds. Chlorinated pesticides, such as DDT and Toxaphene, were extensively used throughout the Oxnard plain prior to their prohibition in the mid-1970s. The U.S. Environmental Protection Agency, Region IX, has developed Preliminary Remediation Goals (PRGs) for toxic compounds in soil for residential and commercial properties. The PRGs are health risk standards that have been developed for a wide range of toxic compounds, including volatile organic compounds, metals, semi-volatile organic compounds, and pesticides. The Ventura County Environmental Health Department applies PRGs to clean-up sites when reviewing site remediation and development proposals. Previous remediation programs for former agricultural properties in the Oxnard Plain area have included importing top soil to cover the original surface soils, or scraping off the upper one to two feet of existing surface soils and placement of the soil under impervious surfaces such as buildings, parking lots, or roads to eliminate exposure pathways for future residents and workers. This impact is considered potentially significant given the historical agricultural use of this portion of the site, but can be mitigated to a level that is less than significant through the application of PRG cleanup targets to former agricultural properties and the use of common remediation techniques.

The results of a Limited Phase II Soil Screening, consisting of the collection and analysis of 60 shallow soil samples composited into 15 samples for laboratory analysis and the analysis of 9 discrete shallow and deeper soil samples, indicate that the Site soils contain concentrations of the organochlorine pesticides DDD, DDE, DDT, Dieldrin and Endrin. The U.S. EPA Region 9 Preliminary Remediation Goal (PRG - EPA Region 9, November 22, 2000) values were compared to the laboratory reported concentrations. The residential soil PRG values for DDD, DDE, and DDT, reported for planning purposes, are: 2.4 mg/kg; 1.7 mg/kg; and 1.7 mg/kg, respectively. The residential PRG values for dieldrin and endrin are 0.03 mg/kg and 20 mg/kg, respectively. While a PRG is specifically not intended as a stand-alone decision-making tool, a chemical concentration exceeding a PRG suggests that further evaluation of the potential risk is appropriate. One sample (C-1) had a concentration of dieldrin at 0.051 mg/kg that exceeded the residential PRG value of 0.03, however it did not exceed the Industrial/Commercial PRG value of 0.15 mg/kg. All other sample results were below residential PRG values. This sample was from a 14-acre area located in the northwestern portion of RiverPark Area'A'. The proposed land use plan from the RiverPark Specific Plan shows that high-density residential uses (apartments) are planned in this portion of the site. As the residential PRG value for dieldrin was exceeded in a sample from this portion of the site, there is some potential health risk to future residents that is considered significant. All of RiverPark Area 'A,' including the 14-acre area where this sample was taken will be mass graded to support construction of the major roads and utilities planned and create the desired drainage patters. The existing elevations range from approximately 70 to 90 feet in RiverPark Area 'A'. The maximum cut or fill in RiverPark Area 'A' will be about 7 feet with an average of 5 feet of material that will need to be removed and recompacted. Overall, approximately 1.9 million cubic yards of earth materials will be excavated in RiverPark Area 'A'. The resulting grades will be 75 to 90 feet. As a result of this grading about 5 feet of the soil in the 14-acre area where sample C-1 was taken will be graded as part of the mass grading process. The removal, mixing and relocation of this soil through the planned grading operation will effectively mitigate the potential impact associated with the concentration of dieldrin detected in this one portion of the site.

The Rio School District (RSD) proposes to construct new elementary and middle schools on the portion of RiverPark Area 'B' now occupied by the El Rio Detention Basin No. 2 and the buffer strip of land located between the basin and Vineyard Avenue. The excavation of the surface and shallow subsurface soils in the basin is anticipated to have removed potential residual pesticides in the soil. In addition, this 15 foot deep basin will be filled as part of the overall mass grading operation to reclaim the basin for use. As the basin will be filled, risks to school children from environmentally persistent pesticides in the basin is not anticipated to pose a significant risk. The adjacent buffer strip is in agricultural use and may contain residual amounts of pesticides. However, Assembly Bill 387 and Senate Bill 162 require that all new school sites be assessed for potential contamination through the Phase I Environmental Site Assessment process with oversight by the State of California Department of Toxic Substances Control (DTSC). If contamination is suspected at the proposed site, a Preliminary Endangerment Assessment (PEA) must be prepared with oversight by the DTSC. The PEA process includes sampling and chemical analysis of environmental media, an environmental risk evaluation, and a public participation process. Due to the established procedures for assessment and the results of the limited soil sampling and laboratory analysis, this impact is considered less than significant.

Sites within the project site have the potential to contain hazardous waste containers, site contamination, and underground storage tanks which may pose an environmental concern during redevelopment activities. These sites are in various stages of assessment of potential contamination, and remediation of known contaminated sites. The Hanson Aggregates site appears on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List) as a leaking underground tank site. The leaking underground storage tank case at the Hanson Aggregates facility site was successfully remediated and the case has been closed by the VCEHD.

Other known leaking underground storage tank sites are present in areas adjacent to the project area and may pose environmental concern to the project site from migration of subsurface contamination. As of October 25, 2001, there are three known active leaking underground storage tank sites in the industrial areas to the north of the Specific Plan Area. These sites consist of:

- Poole Oil Company, 3885 E. Vineyard Avenue. Contamination from this site has reached groundwater and the extent of the contamination is currently being characterized.

- Ventura Oil, 3815 E. Vineyard Avenue. Contamination from this site has been limited to the soil and is being actively remediated.

- Sparkletts/McKesson, 210 Beedy Street. Contamination from this site has been limited to the soil and a preliminary site assessment is underway.

Analysis of the potential for the subsurface groundwater contamination at the Poole Oil site, which is located in the Carnegie Street industrial area immediately east of the existing Small Woolsey/Brigham Mine Pits, is provided in Section 4.5, Water Resources. This analysis determined that no significant potential exists for the contamination on the Poole site to migrate into the Specific Plan Area. Established cleanup goals will be applied to contaminated sites and the sites remediated before development is allowed to occur. Therefore, the existence of contamination at these sites is considered a less than significant impact.

Presence of abandoned oil wells and oilfield site contamination at the project site. Abandoned oil wells are located within the project area which were not abandoned to current Division of Oil, Gas and Geothermal Resources (DOGGR) well abandonment standards. These abandoned oil wells may present a hazard to future residents either as a physical hazard (open hole) or through the leakage of potentially explosive or asphyxiating gasses. This impact is considered significant but can be mitigated to a level that is less than significant through conformance with current regulatory requirements.

Presence of asbestos-containing materials and lead-based paint in existing buildings. Older buildings within the project site may have asbestos-containing materials and lead-based paint. Asbestos-containing materials are required to be abated prior to demolition activities as part of the federal National Emissions Standards Hazardous Air Pollutants (NESHAP) notification process required to be satisfied by the applicant prior to the issuance of any demolition permit. The Ventura County Air Pollution Control District (APCD) reviews NESHAP demolition notifications and is responsible to ensure that asbestos-containing material that could release asbestos fibers during demolition are properly contained and removed from the structure. Loose or flaky lead-based paint can potentially contaminate the ground surface unless properly removed prior to demolition activities. Sandblasting of lead-based paint is prohibited by the APCD. Impacts from the presence of asbestos-containing materials is anticipated to be less than significant. Exposure to lead based paint is potentially significant, but can be mitigated to a level that is less than significant through conformance with current regulatory requirements.

The project does not lie within the jurisdiction of an airport land use plan or within two miles or a public airport or public use airport, or within the vicinity of a private airstrip. The project site is not in close proximity to public or private airports, therefore no significant impacts from aircraft hazards are anticipated.

The project will not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The project site will provide adequate emergency access and evacuation of residents in the events of emergencies.

The project site will not expose people or structures to a significant risk or loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. The project site is located within an area designated as a low wildland fire hazard area, therefore no significant risks from wildland fires are anticipated.[1]

CUMULATIVE IMPACTS

As discussed above, the site assessments prepared for the various portions of the Specific Plan Area included consideration of surrounding properties to determine the potential for cumulative impacts. No conditions on surrounding properties were identified that would result in significant cumulative impacts.

MITIGATION MEASURES

4.13-1 Buildings or enclosed spaces shall not be constructed over abandoned oil wells, where feasible. If no feasible alternative is available, the responsible party shall locate the abandoned oil well casing and inspect the well casing for leaking oil or gasses in the presence of a DOGGR inspector. If the well is found to be leaking, the responsible party shall conduct all appropriate plugging and reabandonment of the well casing to DOGGR specifications.

4.13-2 In the event that an abandoned oil well is encountered during construction activities, the regional DOGGR office in Ventura shall be notified immediately of the discovery. The oil well casing shall be checked for leaking oil or gasses. The DOGGR representative shall determine appropriate actions, up to and including re-abandonment of the oil well casing.

4.13-3 If abandoned oil sumps or associated oilfield site contamination are located within the project site during grading or other construction activities, remediation shall be completed in accordance with existing regulations and subject to the oversight of VCEHD prior to development of the individual properties.

4.13-4 Asbestos and lead-based paint that could potentially result in surface contamination of the project site shall be properly abated from project site buildings prior to demolition activities, with oversight by the APCD and VCEHD.

1 Source: Ventura County *General Plan*, Hazards Appendix, Fire Hazard Map, 1988.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant impacts related to the presence of hazardous materials will result from the RiverPark Project.

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5.0 ALTERNATIVES

PURPOSE

This section of the EIR provides a comparative analysis of the merits of alternatives to the proposed project pursuant to Section 15126.6 of the State CEQA Guidelines*. According to the* Guidelines*, the discussion of alternatives should focus on alternatives to a project or its location which can avoid or substantially lessen the significant effects of the project. The CEQA* Guidelines *indicate that the range of alternatives included in this discussion should be sufficient to allow decision-makers a reasoned choice. The alternatives discussion should provide decision-makers with sufficient information to allow for meaningful evaluation, analysis and comparison with the proposed project.*

INTRODUCTION

The CEQA *Guidelines* state that an EIR needs to describe a range of reasonable alternatives to a project, or the location of a project, which would feasibly attain most of the basic objectives of the project while avoiding or substantially lessening the significant effects of the project. When addressing feasibility, the CEQA *Guidelines* state that "among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency…, jurisdictional boundaries, and whether the applicant can reasonably acquire, control or otherwise have access to the alternative site." The CEQA *Guidelines* also state that the alternatives discussion should not be remote or speculative, and need not be presented in the same level of detail as the assessment of the proposed project.

Therefore, based on the CEQA *Guidelines*, several factors need to be considered in determining the range of alternatives to be analyzed in an EIR and the level of detail of analysis that should be provided for each alternative. These factors include: (1) the nature of the significant impacts of the proposed project; (2) the ability of alternatives to avoid or lessen the significant impacts associated with the project; (3) the ability of the alternatives to meet the basic objectives of the project; and (4) the feasibility of the alternatives. These factors are unique for each project. A summary of the identified impacts of the RiverPark Project and the objectives of the project are provided below.

Impacts of RiverPark Project

The alternatives selected for analysis in this section were developed with the aim of avoiding or lessening the significant environmental impacts of the RiverPark Project as identified in this EIR while still meeting the basic objectives of the project. Section 4.0, Environmental Impact Analysis, of this EIR identified both significant impacts and unavoidable significant impacts associated with implementation of the proposed RiverPark Project.

Unavoidable significant impacts to Mineral Resources, Water Resources, Agricultural Resources and Cultural Resources are identified in this EIR. Development of the 155 acres of agricultural land in RiverPark Area 'A' will result in the unavoidable loss of this agricultural land. In addition, development of this portion of the site will also result in the loss of access and future ability to mine the sand and aggregate resources located beneath this agricultural land. While this portion of the Specific Plan Area has been approved for urban development since 1986, is partially developed and is located in a redevelopment area, the loss of this remaining agricultural land is considered an unavoidable significant impact. Likewise, analysis in this EIR demonstrates that mining of the aggregate resources on this portion of the site is not economically feasible. Nonetheless, the impact of loss of access to these mineral resources is also identified as an unavoidable significant impact.

Reclamation and development of RiverPark Area 'B' will result in the demolition of the remaining structures associated with the mining and materials processing activities that have historically occurred on this portion of the Specific Plan Area. Of the 10 remaining structures on the mine site, 5 are considered to have local historical significance for their association with mining in Ventura County, an industry that has made a significant contribution to the physical development of Ventura County through the construction of roads, bases, airfields, and buildings. This local historical significance is not related to the architectural character of these remaining structures. Appropriate mitigation, in the form of historical documentation, is proposed for this impact. Permanent removal of these structures is, however, considered an unavoidable significant impact of the project. Extensive analysis of the impact of the proposed RiverPark Project on surface and groundwater quality has been conducted. Conservative numerical thresholds of significance were selected for this analysis. The project as proposed includes a stormwater quality treatment system. The analysis shows that concentrations of four pollutant constituents will remain above the numerical thresholds of significance used. Runoff from storms that are more frequent than a 10-year event storm will be conveyed to the reclaimed mine pits. Concentrations of iron, manganese and nickel in this runoff are calculated to remain above the thresholds being used. Given the frequency of these large storm events, this impact would not occur often. As runoff from storms with a frequency less than a 10-year event would not enter the pits, overall mass loading of these and other pollutant constituents would be reduced. This impact to groundwater is, however, identified as an unavoidable significant impact. The quality of surface runoff discharging to the Santa Clara River will also be treated and improved when compared to existing conditions. Concentrations of one constituent analyzed, fecal coliform, will be consistent with ambient conditions in the river, but not lower than the threshold used in the analysis. This impact to surface water quality is also identified as an unavoidable impact of the project.

Significant impacts of the project that can be mitigated to a level that is less than significant have also been identified related to the topics of aesthetics, geologic and soils hazards, biological resources, traffic, air quality, noise, public schools and police services. Impacts to school facilities are mitigated by the provision of school sites in the project and the payment of impact fees. Impacts to police services will also be mitigated by the provision of additional facilities within the Specific Plan Area.

Noise from construction activities could impact existing uses around the Specific Plan Area. Potential noise and aesthetic impacts have also been identified for one of the specially-permitted uses in the Specific Plan Area. As proposed, the RiverPark Specific Plan would allow development of a ballpark facility in Planning District D, the Town Square Commercial District, subject to the approval of a Special Use Permit by the City. Depending on the final location and design of this facility, residential uses allowed by the Specific Plan could by impacted by light and noise associated with this facility. With regards to biological resources, construction could impact active bird nests in trees on the site and new light sources and the use of non-native plants in landscaping could indirectly impact surrounding natural habitat. Traffic generated by the proposed uses will impact the operation of intersections in the area and the associated air emissions will exceed the threshold of significance used in the analysis for these emissions. The existing soil conditions on the site could also result in impacts to the land uses as proposed. Measures to mitigate all of these significant impacts to a level that is less than significant have been identified in this EIR.

Objectives of RiverPark Project

The City of Oxnard and the project applicant have identified the following objectives for the RiverPark Specific Plan in response to existing physical, environmental, demographic and market conditions:

- Create a distinctive community with a strong and inherent “sense of place”;
- Provide for development of a balanced community with a diverse mix of land uses within the City’s City Urban Restriction Boundary (CURB);

- Provide a character and quality of housing consistent with the existing character of the area and complementary with the overall range of housing opportunities provided by the City's 2020 *General Plan*;
- Promote the redevelopment of the RiverPark Area 'A' consistent with the goals of the Oxnard Community Development Commission's (CDC) Historic Enhancement and Revitalization of Oxnard (HERO) Redevelopment Project;
- Reclaim the existing sand and gravel mine site in RiverPark Area 'B' to provide additional housing opportunities in the City;
- Reclaim the existing mine pits in RiverPark Area 'B' in a manner that protects surface and groundwater quality and creates compatibility with existing and planned surrounding land uses;
- Enhance groundwater quantity and quality in the Oxnard Aquifer System by making the reclaimed mine pits available for incorporation into United Water Conservation District's groundwater recharge system;
- Provide a planning vision and guidelines for development of the RiverPark community;
- Encourage the development of a compact, cohesive community consisting of residential, commercial, open space, and public facilities connected by a coherent network of interconnected streets;
- Create a community that is compatible with the Santa Clara River by providing additional native vegetation within the Specific Plan Area to complement the natural habitat in the river and providing for connections to the regional trail planned along the river;
- Integrate public transit into neighborhoods and surrounding community;
- Provide strong pedestrian connections between land uses and provide a harmonious variety of housing choices and institutional activities.

ALTERNATIVES SELECTED FOR EVALUATION

Section 15126.6 (e) of the CEQA *Guidelines* require the analysis of a "No Project" Alternative. The purpose of describing and analyzing a No Project Alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The CEQA *Guidelines* state that the No Project Alternative is the circumstance under which the project would not proceed. If the No Project Alternative will not result in the preservation of existing conditions, the consequences of not approving the project should also be discussed. In addition to the No Project Alternative, other alternatives were identified that could avoid one or more of the significant impacts of the project and meet the basic objectives of the project.

A brief description of the eight alternatives selected for evaluation in this analysis and the reasons for selecting these alternatives is provided below. Comparative analysis of these alternatives follows.

No Project/Existing Conditions Alternative

The No Project/Existing Conditions Alternative would leave the project site in its present condition. This alternative assumes no further development occurs within the Specific Plan Area. Analysis of this alternative is required by the CEQA *Guidelines*.

No Project/Existing Approvals Alternative

As a result of existing approvals, the No Project Alternative is not likely to result in the preservation of existing conditions. The majority of RiverPark Area 'A' is located within an existing specific plan area. This plan, the Oxnard Town Center Specific Plan, would allow development of up to 4.4 million square feet of commercial and public facilities uses. RiverPark Area 'B', currently located outside of the City of Oxnard, is subject to an existing mine reclamation plan approved by the County of Ventura. This alternative considers implementation of these existing plans. This alternative is also examined to meet the requirements of the CEQA *Guidelines*.

RiverPark 'A' Only Alternative

This alternative considers development of the uses proposed by the RiverPark Specific Plan for RiverPark Area 'A' only. With this alternative RiverPark 'B' would remain outside of the City of Oxnard and would not be developed. This alternative looks at reducing the magnitude of the impacts of the project by reducing the size of the Specific Plan Area.

Reduced Density Alternative

The Reduced Density Alternative considers development of the entire 701-acre Specific Plan Area under the proposed Specific Plan at approximately 75 percent of the density proposed for residential and commercial uses. This alternative was formulated to provide information on how the impacts of the project could be lessened or avoided by reducing the amount of development allowed.

Water Quality Treatment Alternative No. 1

This alternative analyzes a different water quality treatment system designed to eliminate all runoff from entering the mine pits located in RiverPark Area 'B'.

Water Quality Treatment Alternative No. 2

This alternative analyzes a different water quality treatment system designed to further improve the quality of runoff discharged to the Santa Clara River.

Historic Preservation Alternative

Preservation of the 5 existing buildings and structures on the mine site in RiverPark Area 'B' identified as having local historical significance is assessed with this alternative.

Alternative Locations

This alternative looks at the availability and suitability of other sites within the City's Planning Area for the proposed project.

ALTERNATIVES ANALYSIS

A description of each alternative is presented on the following pages along with analysis comparing the impacts that would result from the project as proposed with the alternatives.

No Project/Existing Conditions Alternative

Description

The "No Project" alternative would leave the Specific Plan Area in its present condition. Existing uses and improvements within the proposed Specific Plan Area would remain as described in Section 2.0, Environmental Setting, of this EIR.

Environmental Analysis

All of the significant impacts identified for the RiverPark Project in Section 4.0, Environmental Impact Analysis, of this EIR would be avoided by maintaining the Specific Plan Area in its current condition. No further development of RiverPark Area 'A' would preserve the existing agricultural land and future access to the aggregate resources under this land. RiverPark Area 'B' would not be annexed to the City and would remain in its current state. This would avoid the loss of the existing building and structures on the mine site identified as local historical resources. Existing drainage patterns and facilities would not be altered and the water quality impacts identified for the proposed project would be avoided. In addition to avoiding these unavoidable significant impacts of the project, all of the other significant impacts summarized above associated with the proposed residential and commercial uses would be avoided. Those effects of the RiverPark Project that are beneficial would not occur with this alternative. Specifically, the RiverPark Project would result in a net increase in groundwater quantity and an increase in the quantity and quality of native habitat on the site.

No Project/Existing Approvals Alternative

Description

Both RiverPark Areas 'A' and 'B' have existing approvals for actions that would be implemented if the proposed project is not approved. The majority of RiverPark Area 'A' is located within an existing specific plan area. This plan, the Oxnard Town Center Specific Plan, would allow development of up to 4.4 million square feet of commercial, light industrial and public facilities uses. A small portion of the proposed RiverPark Specific Plan Area, generally located between Myrtle Street, Vineyard Avenue and the Ventura Freeway, is located outside of the Oxnard Town Center Specific Plan Area. This area is currently designated for regional commercial land uses complementary to those allowed by the Oxnard Town Center Specific Plan.

RiverPark Area 'B' is currently located outside of the City of Oxnard. The mine site is subject to an existing reclamation plan approved by the County of Ventura. The remainder of RiverPark Area 'B' consists of the existing El Rio Retention Basins, owned by the Ventura County Flood Control District. This alternative considers continued implementation of the existing Oxnard Town Center Specific Plan and the reclamation plan for the mine site. A summary of the characteristics of each of these existing approved actions is presented below.

The adopted Oxnard Town Center Specific Plan allows the development of up to 4.4 million square feet of office, research and development space, hotels, restaurants, a shopping mall, a cultural arts facility and a neighborhood park. This Specific Plan allows the development of a cluster of 12- to 24-story high-rise buildings containing office and hotel uses, surrounded by 2- to 6-story buildings. The Oxnard Town Center Specific Plan circulation plan calls for Oxnard Boulevard to be extended north from the new Oxnard Boulevard/Ventura Freeway Interchange north and then east to connect to Stroube Street in the El Rio West Neighborhood to provide access from Vineyard Avenue. Ventura Road was to be extended north and then loop to the south to connect to Oxnard Boulevard. Town Center Drive was also planned to connect Ventura Road and Oxnard Boulevard. The allowed shopping mall was located in the southeast corner of the site. Two-story research/development and office buildings were planned along the western and northern edges of the site, as well as along the eastern edge of the site to the north of Stroube Street. A two-acre neighborhood park was also provided adjacent to the El Rio West Neighborhood north of Stroube Street.

The existing reclamation plan for the mine site in RiverPark Area 'B' was approved by the County of Ventura in 1979. This plan requires refilling the existing mine pits to an elevation within 30 feet below the original grade. Refill materials are required to consist of inert granular materials with laboratory permeabilities of 1×10^{-2} cm/sec or greater, in accordance with Condition 34 of Conditional Use Permit (CUP) 1942 issued by the County in 1980. Subsequently, the County administratively approved excavation of the stockpile area to 5-foot above the historic high groundwater level, which is above the 30-foot refill level required by the approved reclamation plan. The County has stated that the material located between the 30-foot refill level and the 5-foot above historic high groundwater level on the stockpile area can be credited towards the requirement to refill the existing pits.

Environmental Analysis

Land Use Planning, Programs & Policies

As proposed, the RiverPark Specific Plan is consistent with applicable local and regional land use plans and policies. The Oxnard Town Center Specific Plan and the approved reclamation plan are also consistent with applicable land uses plans and policies. The mix of uses, density and character of development allowed by the Oxnard Town Center Specific Plan is consistent with applicable plans and policies related to land use. The approved reclamation plan for the mine site is also consistent with applicable plans and policies. The RiverPark Specific Plan includes residential uses in RiverPark Area 'A' where the Oxnard Town Center calls for all commercial uses. The RiverPark Project includes a proposed amendment to the 2020 General Plan Land Use Map. This amendment would change the existing Regional Commercial land use designation on the northern and eastern portions of RiverPark Area 'A' and the existing El Rio West neighborhood to residential land use designations. This amendment would create a land use pattern that is more consistent and compatible with the existing El Rio West residential neighborhood.

Aesthetics

Analysis of the consistency of the proposed RiverPark Specific Plan is contained in Section 4.2 of this EIR. The RiverPark Specific Plan would not result in development of a scale that would obstruct views of scenic areas or degrade the visual character of the area. The only significant impact identified is the potential for lights from the ballpark facility conditionally allowed in Planning District D to impact surrounding residential uses allowed by the Specific Plan. The RiverPark Specific Plan calls for residential development along the eastern edge of the Specific Plan Area against the El Rio West residential neighborhood. Commercial buildings allowed west of Myrtle Street and south of Santa Clara River would be 3 to 5 stories in height with the exception of the hotel allowed west of Oxnard Boulevard between Town Center Drive and Santa Clara River Boulevard. The proposed Specific Plan would allow this hotel building to be up to 18 stories in height.

With the Oxnard Town Center Specific Plan, a cluster of 12- to 24-story high-rise buildings surrounded by 2- to 6-story low- and mid-rise office, hotel and research/development buildings would be developed. The RiverPark Specific Plan would result in less of a visual impact than the Oxnard Town Center Specific Plan due to the reduction in area occupied by commercial buildings and the reduction in the height of commercial buildings.

Earth Resources

RiverPark Area 'A' has relatively stable soils compared to the varied conditions in RiverPark Area 'B' that have resulted from long-term mining operations. All impacts to development in RiverPark Area 'A' can be mitigated with standard grading procedures.

Implementation of the existing reclamation plan for the mine site in RiverPark Area 'B' would involve filling the mine pits to 30 feet below original grade. Filling the pits in this manner would provide lateral support along the existing slopes, thereby increasing the factor of safety and also reducing seismically-induced lateral movements. As no urban uses are allowed by the current reclamation plan, less remedial grading would be required on the mine site. Impacts associated with development of RiverPark Area 'B' would be avoided.

Biological Resources

The remaining undeveloped portion of RiverPark Area 'A' primarily consists of agricultural land. No natural habitat exists on this portion of the site that would be impacted by development of this portion of the site. Potential indirect impacts associated with the use of non-native plants in landscaping and lighting along the Santa Clara River in RiverPark Area 'A' would be the same with this alternative. Reclamation of the mine site for open space use would reduce the potential for indirect impacts associated with the residential development proposed in RiverPark Area 'B'. As the current reclamation plan does not provide for the establishment of the native woodland habitat along the levee included in the RiverPark Specific Plan, this additional native habitat would not be provided with this alternative. This alternative would not avoid the impacts to biological resources associated with the proposed project.

Water Resources

Impacts on surface water quality would not be substantially changed with this alternative. Runoff from both commercial and residential uses would be discharged to the Santa Clara River through the existing Stroube Street Drain. The Stroube Street Drain is master planned to collect runoff from the El Rio West residential neighborhood. This runoff would be combined with runoff from the commercial uses allowed by the Oxnard Town Center Specific Plan. While the Oxnard Town Center Specific Plan does not contain the type of water quality treatment features included in the RiverPark Specific Plan, treatment would be required to meet the currently applicable NPDES General Permit standards.

Drainage conditions in RiverPark Area ‘B’ would remain largely unchanged. The existing El Rio Retention Basins would remain and runoff from the agricultural area east of Vineyard Avenue and north of the El Rio Community would continue to be retained in these basins. Drainage patterns on the mine site would be altered by the cutting and filling required to implement the current reclamation plan. Currently, runoff from the adjacent industrial areas discharges to mine pits. If this runoff is routed away from the mine pits, the impact to groundwater quality would be less than the impact of the proposed project. With the proposed project, runoff from storms larger than a 10-year storm event would be conveyed from the water quality treatment basins to the mine pits. Concentrations of some metals and mineral constituents in this runoff would be above the numerical threshold of significance used in the water quality impact analysis in this EIR. As storms of this magnitude are infrequent, the identified impacts related to metals and minerals in the runoff would also occur infrequently. If runoff from the industrial areas continues to drain to the pits, impacts to groundwater quality would be greater with this alternative.

With regard to groundwater balance, the analysis of baseline conditions in Section 4.5, Water Resources, concludes that the 20-year average impact to groundwater from existing conditions is –573 acre feet per year (AFY). Partial filling of the mine pits would reduce the amount of time groundwater is exposed. This impact on water balance would, therefore, be reduced to some extent. The proposed RiverPark Project will result in a net gain of approximately 8,000 AFY in groundwater due to the reduction of pumping on the site for agricultural and industrial use and the use of the pits by United Water Conservation District for storage and recharge of surface flows from the Santa Clara River.

Continued implementation of the adopted Oxnard Town Center Specific Plan and the approved mine reclamation plan would not avoid the impacts to surface and groundwater identified for the proposed project, as similar land uses generating runoff with similar characteristics would be built. Impacts to groundwater quality could be less if the drainage from the existing industrial areas is routed away from the mine pits. Impacts to groundwater quantities would be greater with implementation of the existing approved plans. The proposed project would result in a beneficial impact on groundwater quantities that would not be realized with this alternative.

Agricultural Resources

This alternative would impact the approximately 155 acres of agricultural land in RiverPark Area 'A' impacted by the proposed project. This alternative, therefore, would not lessen or avoid this impact.

Transportation & Circulation

The uses allowed by the proposed RiverPark Specific Plan would generate approximately 94,500 daily trips, of which 9,860 would occur in the evening peak traffic period. Of the total daily trips, 78,840 would leave the Specific Plan Area. The remainder of the daily trips would be trips between the allowed residential, commercial and school uses contained within the Specific Plan Area. As discussed in Section 4.7, Transportation and Circulation, these additional trips would significantly impact 8 of the 33 intersections studied. All of these impacts can be mitigated to a level that is less than significant with roadway improvements.

The traffic study completed for the Oxnard Town Center Specific Plan EIR indicates that the proposed commercial uses would generate approximately 91,860 daily trips, with 9,380 of these trips occurring during the evening peak traffic period. As the Town Center project only includes commercial uses, all of these trips would be to and from locations outside the specific plan area, as opposed to the 78,840 trips that would leave the Specific Plan Area with the proposed RiverPark Project. For this reason, impacts on roadways and intersections in the area would, therefore, be greater with the Oxnard Town Center Specific Plan. The uses allowed by the Oxnard Town Center Specific Plan are currently reflected in the City's Traffic Model. This model indicates that the existing Oxnard Town Center Specific Plan would result in greater impacts than the proposed RiverPark Specific Plan, with significant impacts at 11 of the 33 intersections studied.

In addition, the Oxnard Town Center Specific Plan would result in greater traffic impacts to the El Rio West Residential Neighborhood, as eastbound trips would access Vineyard Avenue via Stroube Street.

The Oxnard Town Center traffic study shows 17,000 daily trips on Stroube Street. The RiverPark Specific Plan circulation system does not connect to Stroube Street. The RiverPark Specific Plan provides three connections to Vineyard Avenue that would carry a total of 3,000 daily trips. Traffic intrusion into residential neighborhoods would be reduced with the proposed RiverPark Specific Plan Project.

Air Quality

The proposed project would result in significant impacts to air quality due to the amount of ROC and NO_X emissions that would be generated. The proposed RiverPark project would generate approximately 89 pounds per day of reactive organic compounds (ROC) and 198 pounds per day of oxides of nitrogen (NO_X). Through the incorporation of mitigation measures, these impacts would be reduced to levels that are less than significant.

The air quality analysis in the Oxnard Town Center Specific Plan EIR estimated that approximately 264 pounds per day of ROC and 208 pounds per day of NO_X would be generated by the commercial uses allowed by this specific plan. This alternative would also result in a significant impact. Air quality impacts would be less, therefore, by the RiverPark Specific Plan. This is largely attributable to the mix of residential and commercial uses allowed by the RiverPark Specific Plan, which reduces trips. Both this alternative and the proposed RiverPark Project would, however, result in significant air quality impacts.

Noise

The proposed project is expected to result in significant noise impacts to existing residential uses during construction. With no development in RiverPark Area 'B', the duration of construction would be lessened. As a result, the duration of construction noise impacts would also be lessened, but not avoided. Construction noise impacts would remain as site development and individual building projects would still occur in the No Project/Existing Approvals Alternative. With the proposed mitigation measures, these construction-related noise impacts would be reduced to less than significant levels. The potential for noise from a ballpark facility in RiverPark Area 'A' to impact the residential uses around it would be avoided with this alternative as no stadium use is proposed. No significant roadway noise impacts were identified for the project. As discussed above, the Oxnard Town Center Specific Plan would result in greater traffic volumes on streets in the surrounding area, including Stroube Street. The RiverPark Project would not result in any significant roadway noise impacts.

Public Services

Public Schools

Assuming full build-out of the allowed residential uses, the proposed RiverPark Specific Plan would generate approximately 1,990 new K-12 students in the Rio Elementary and Oxnard Union School Districts. Based on the current capacity of the schools in these districts, this would result in a significant impact. The Specific Plan includes sites for two new elementary and one new intermediate school to house these students. Provision of these sites and school impact fees will mitigate the impacts of the project.

With the No Project/Existing Approvals Alternative, no residential uses would be developed in the Specific Plan Area. As no residential uses would be developed, no students would be generated and schools would not be impacted. Impacts on school facilities would be avoided.

Fire Protection

This alternative would result in the development of new uses in an area that cannot be adequately served by existing City fire stations, equipment and manpower. A new City fire station is needed in the northern portion of the City to provide adequate service. Development in RiverPark Area 'A' will also require the relocation of the existing Ventura County Fire Station located in the County's El Rio Maintenance Yard. The proposed Specific Plan includes sites for new City and County Fire Stations in RiverPark Area 'B'. These sites would not be provided with the existing Oxnard Town Center Specific Plan. Impacts on fire services would not, therefore, be substantially lessened or avoided. As sites for new fire stations would not be provided, impacts to fire protection services would be significant.

Police Protection

The Oxnard Police Department currently provides patrol service to the existing uses in RiverPark Area 'A'. Service can be provided to this area without significant impacts. Build-out of the uses under the Oxnard Town Center Specific Plan would not significantly impact police services. This alternative would avoid impacts associated with the development of the entire RiverPark 'B' area.

Parks & Recreation

The proposed RiverPark Specific Plan would generate an estimated population of 7,220 persons. Based on the City's park planning standards, approximately 11 acres of neighborhood parkland and 11 acres of community parkland would be required to meet the recreation needs of this number of residents. As the proposed project would provide the amount of parkland required, this impact would be less than significant. The proposed Specific Plan would provide one neighborhood park in RiverPark Area 'A' and two in RiverPark Area 'B'. Community park space would be provided in the form of the playfields on the elementary/intermediate school site in RiverPark Area 'B' though a joint use agreement between the City and the Rio School District.

With the No Project/Existing Approvals Alternative, no additional parkland would be required to serve new residents in the area. The Oxnard Town Center Specific Plan provides a two-acre neighborhood park for the El Rio West neighborhood. The RiverPark Specific Plan would also provide a neighborhood park for use by residents of the El Rio West neighborhood and the new residential neighborhood proposed along the El Rio West neighborhood. The RiverPark Specific Plan would also provide community parkland in the form of playfields on the elementary/intermediate school site proposed to the north of the El Rio West neighborhood. As the RiverPark Specific Plan includes sufficient neighborhood and community parkland, no impacts would be avoided or lessened with the existing plan. With the Oxnard Town Center Specific Plan, no community parkland would be provided.

Solid Waste Management

Construction waste associated with the proposed project is estimated at approximately 52,000 cubic yards. The allowed uses would generate approximately 15,100 tons per year of solid waste. As the City of Oxnard currently diverts and recycles 66 percent of the solid waste generated in the City, the total amount of solid waste to be disposed of in landfills is estimated at 5,145 tons per year. As the city is currently exceeding the mandated diversion rate for solid waste, solid waste generation impacts are considered less than significant.

As the amount of solid waste is proportional to the amount of land uses proposed within a given project, the reduction of land uses in the No Project/Existing Approvals Alternative would also result in a reduction in the amount of total solid waste generated. With the No Project/Existing Approvals Alternative construction solid waste would be reduced to an estimated 13,500 cubic yards, while solid waste from the allowed uses would be approximately 1,781 tons per year after diversion. Compared to the proposed project, construction solid waste would be reduced by 74 percent while waste from the allowed uses disposed in landfills would be reduced by 65 percent.

Library Services

Approximately 7,220 new residents would be generated by the 2,805 residential units included in the proposed RiverPark Specific Plan. This increase in residents would result in an increase in the demand for library materials and space. The Specific Plan permits the development of a storefront library facility to serve the residents in the Specific Plan Area, as well as residents throughout the City. As such, no impact related to library facilities would occur. As no residential uses are currently allowed by the existing Oxnard Town Center Specific Plan or the reclamation plan, no impacts on library services from new residents would result.

Public Utilities

Stormwater Drainage

Drainage facilities included in the RiverPark Specific Plan provide for adequate drainage of the area and provide for drainage of offsite areas consistent with the City of Oxnard Drainage Master Plan. With the existing approved plans, the Stroube Street drain would be extended to Stroube Street, as it would with the RiverPark Project. No significant drainage impacts would occur with the project as proposed and none would occur with the existing approved plans for the site. With the RiverPark Project, an additional new storm drain would be extended in Santa Clara River Boulevard to Vineyard Avenue. This additional drain would provide an additional drainage facility to serve the northern portion of the El Rio West Community located to the east of Vineyard Avenue.

Water Supply and Distribution

Based on the calculations for the proposed project, projected potable water demand is approximately 1,835 acre feet per year (AFY). The City would gain 1,580 AFY of groundwater extraction allocations as a result of annexation of RiverPark Area 'B' and conversion of existing agricultural uses to urban uses. Individual building projects within the Specific Plan Area would be required to meet standard water conservation requirements with regards to potable water, ensure adequate water flow, and pay for the construction of improvements to the water distribution system as outlined in the City's Water System Master Plan. No significant impacts to the City's water supply would result from the RiverPark Specific Plan.

Based on the land uses allowed by the Oxnard Town Center Specific Plan, a total of 730 AFY of potable water would be required to serve this development. This is a reduction of 1,105 AFY compared to the water demand of the project. As RiverPark Area 'B' would not be annexed, the City would only acquire 426 AFY in groundwater extraction allocations associated with the agricultural use in RiverPark Area 'A'. For this reason, while demand would be lessened, the impact on the City's water supplies would be greater. Based on the information in the City's Urban Water Management Plan, sufficient supplies would be available to meet this demand and the impact of this alternative would not be significant.

Wastewater Service

The proposed project would generate an expected 0.78 million gallons per day (mgd) of wastewater. Currently, the existing wastewater conveyance system would not be able to accommodate the proposed increase in wastewater flow. Construction of the improvements identified in the City's Wastewater Collection System Master Plan would mitigate this impact. No significant impacts to the City's wastewater collection or treatment facilities would result.

The amount of wastewater is directly proportional to the amount and intensity of the proposed land uses. The land uses allowed by the Oxnard Town Center Specific Plan would generate a total of 0.30 mgd. This is a 0.48 mgd (62 percent) reduction in the amount of wastewater generated in comparison to the proposed project. With the improvements of the existing wastewater conveyance system, impacts would also be less than significant.

Energy

Construction activity is not expected to consume significant amounts of energy or natural gas due to the nature of construction activities and because the construction of residential subdivisions and other allowed uses would occur in phases from 2002 through 2020. The uses allowed by the proposed Specific Plan would consume approximately 59.6 million watts of electricity and approximately 285.5 million cubic feet of natural gas per year once fully developed. The additional electrical and natural gas demand of the project can be accommodated within long-term source and distribution planning. In addition, the project would comply with all current energy conservation standards. For these reasons, no significant impacts on electricity or natural gas supplies will result from the project.

The land uses allowed by the Oxnard Town Center Specific Plan would consume a total of 38.7 million watts of electricity and 134.5 million cubic feet of natural gas per year. This is a reduction of 35 percent in electrical demand and 53 percent in natural gas demand. No significant impact would result from the build-out of the Oxnard Town Center Specific Plan. As the proposed project would not result in a significant impact, no significant impact would be avoided or lessened.

Cultural Resources

Reclamation and development of RiverPark Area 'B' would result in the demolition of the remaining structures associated with the mining and materials processing activities that have historically occurred on this portion of the Specific Plan Area. Of the 10 remaining structures on the mine site, 5 are considered to have local historical significance for their association with mining in Ventura County, an industry that has made a significant contribution to the physical development of Ventura County through the construction of roads, bases, airfields and buildings. This local historical significance is not related to the architectural character of these remaining structures. Appropriate mitigation, in the form of historical documentation, is proposed for this impact. Permanent removal of these structures is, however, considered an unavoidable significant impact of the project. This alternative would not avoid this impact as the existing reclamation plan would also require removal of the existing structures as a result of the grading required to partially fill the pits, which would involve excavation of the existing plant area where these buildings are located.

Hazards

The only impacts related to hazardous substances on the site identified for the project are related to existing abandoned oil wells within RiverPark Area 'B' and the possibility of the existing buildings containing building materials with asbestos and lead paints. Compliance with existing regulations would mitigate these impacts to a level that is less than significant. As the existing abandoned oil wells are located in RiverPark Area 'B', this alternative would avoid potential impacts associated with development of this area as the existing reclamation plan would leave this part of the site as open space.

RiverPark 'A' Only Alternative

Description

This alternative would involve the development of the uses proposed only in RiverPark Area 'A' in the RiverPark Specific Plan. A mix of residential and commercial uses would be allowed within this reduced Specific Plan Area. Residential uses would include 200 medium density residential units and approximately 1,340 high density units. These residential units would be located in the northern and eastern portions of RiverPark Area 'A'. Commercial uses, consisting of 590,000 square feet of office, 1.345 million square feet of regional commercial uses and a 510,000 square foot hotel/conference center would be built on the remainder of the site.

Environmental Analysis

Land Use Planning, Programs & Policies

As proposed, the RiverPark Specific Plan is consistent with applicable local and regional land use plans and policies. This alternative would involve only development of the portion of the Specific Plan Area currently within the City of Oxnard. The mix of uses, density and character of development would be consistent with applicable plans and policies related to land use.

Aesthetics

Analysis of the consistency of the proposed RiverPark Specific Plan is contained in Section 4.2 of this EIR. The RiverPark Specific Plan would not result in development of a scale that would obstruct views of scenic areas or degrade the visual character of the area. The only significant impact identified is the potential for lights from the ballpark facility conditionally allowed in Planning District D to impact surrounding residential uses allowed by the Specific Plan. These conditions would remain unchanged with this alternative and no impacts would be avoided or lessened.

Earth Resources

RiverPark Area 'A' has relatively stable soils compared to the varied conditions in RiverPark Area 'B' that have resulted from long-term mining operations. All impacts to development in RiverPark Area 'A' can be mitigated with standard grading procedures. Mitigation of the soils conditions in RiverPark Area 'B' to support development would not be required with this alternative. Impacts associated with development of RiverPark Area 'B' would, therefore, be avoided.

Biological Resources

The remaining undeveloped portion of RiverPark Area 'A' primarily consists of agricultural land. As this portion of the site does not contain the trees located in RiverPark Area 'B', the potential for impacting bird nests during breeding season would likely be avoided. Indirect impacts associated with lighting and the use of non-native plants in landscaping would not be avoided or substantially lessened as development would still occur in RiverPark Area 'A'. The proposed RiverPark Specific Plan includes a proposal to create a native woodland along the western edge of the Specific Plan Area to increase native habitat values along this portion of the Santa Clara River. This additional native habitat would not be provided with this alternative.

Water Resources

Impacts on surface water quality would not be substantially changed with this alternative. The contaminants associated with residential and commercial uses would be treated with the water quality treatment facilities included in RiverPark Area 'A'. As a result, the concentrations of fecal coliform associated with this runoff, a significant surface water quality impact associated with the project, would not be avoided or lessened. As drainage conditions in RiverPark Area 'B' would remain unchanged, the impact of runoff on groundwater quality would also not be changed. The RiverPark project would only route runoff from storms larger than a 10-year event into the pits. As storms of this magnitude are infrequent, the identified impacts related to metals and minerals in the runoff would also occur infrequently. Presently all runoff from areas around the mine pits, including the industrial areas to the east and north of the pits, enters the pits at all times. As metals and minerals are presently contained in this runoff, there would still be some level of impact to groundwater quality.

Agricultural Resources

This alternative would impact the approximately 155 acres of agricultural land in RiverPark Area 'A' impacted by the proposed project. This alternative, therefore, would not lessen or avoid this impact.

Transportation & Circulation

The uses allowed by the proposed RiverPark Specific Plan would generate approximately 94,500 daily trips, of which 78,840 would leave the Specific Plan Area on a daily basis. The remainder of the daily trips would be trips between the allowed residential, commercial and school uses contained within the Specific Plan Area. As discussed in Section 4.7, Transportation and Circulation, these additional trips would significantly impact 8 of the 33 intersections studied. All of these impacts can be mitigated with roadway improvements.

Under this alternative, trip generation would be reduced as the residential and school uses in RiverPark Area 'B' would not be built. Total daily trip generation would be reduced by 21.5 percent to 74,240 daily trips. As both residential and commercial uses would still be built in RiverPark Area 'A', it is likely that some trips associated with these uses would remain within the Specific Plan Area as with the proposed project. This reduction in trips would lessen some of the significant impacts of the project on intersection operations in the area, but would not result in avoidance of all impacts.

Air Quality

The proposed project would result in significant impacts to air quality due to the amount of ROC and NO_X emissions that would be generated. Through the incorporation of mitigation measures, these impacts would be reduced to levels that are less than significant.

The generation of these air quality pollutants is directly proportional to the size and scale of the proposed project. Therefore, as the RiverPark 'A' Only Alternative would reduce the size and scale of the project, ROC and NO_X emissions would also be reduced. Operational emissions for this alternative are estimated at 50 and 108 pounds per day for ROC and NO_X, respectively. Although these values are 36 percent and 32 percent less than the emissions calculated for the proposed project, they still exceed the established thresholds of significance of 25 pounds per day. Through the inclusion of all applicable mitigation measures, operational emissions could be mitigated to a level that is less than significant. Impacts associated with other air quality impact criteria, such as CO levels and AQMP consistency, were not identified as significant with the proposed project and, as such, would not be significant with the RiverPark 'A' Only Alternative. This alternative would lessen, but not avoid, the air quality impacts associated with the project as proposed.

Noise

The proposed project is expected to result in significant noise impacts to existing residential uses during construction. With no development in RiverPark Area 'B', the duration of construction would be lessened. As a result, the duration of construction noise impacts would also be lessened, but not avoided. Construction noise impacts would remain as site development and individual building projects would still occur in RiverPark Area 'A'. With the proposed mitigation measures, these construction related noise impacts would be reduced to less than significant levels. The potential for noise from a ballpark facility in RiverPark Area 'A' to impact the residential uses around it would not be avoided with this alternative. No significant roadway noise impacts were identified for the project and none would occur with this alternative.

Public Services

Public Schools

Assuming full build-out of the allowed residential uses, the proposed RiverPark Specific Plan would generate approximately 1,990 new K-12 students in the Rio Elementary and Oxnard Union High School Districts. Based on the current capacity of the schools in these districts, this would result in a significant impact. The Specific Plan includes sites to 2 new elementary and 1 new intermediate school to house these students. Provision of these sites and school impact fees will mitigate the impacts of the project.

With the RiverPark 'A' Only Alternative, approximately 1,090 students would be generated, a 900-student reduction. As both school districts are currently operating over capacity, this alternative would also result in significant school impacts. As one of the elementary school sites and the intermediate school site, which are proposed in RiverPark Area 'B', would not be provided with this alternative, impacts would not be substantially lessened with this alternative.

Fire Protection

This alternative would result in the development of new uses in an area that cannot be adequately served by existing City fire stations, equipment and manpower. A new City fire station is needed in the northern portion of the City to provide adequate service. Development in RiverPark Area 'A' will also require the relocation of the existing Ventura County Fire Station located in the County's El Rio Maintenance Yard. The proposed Specific Plan includes sites for new City and County Fire Stations in RiverPark Area 'B'. These sites would not be provided with this alternative. Impacts on fire services would not, therefore, be substantially lessened or avoided. As sites for new fire stations would not be provided, significant impacts to fire services would occur with this alternative.

Police Protection

The Oxnard Police Department currently provides patrol service to the existing uses in RiverPark Area 'A'. Service can be provided to this area without significant impacts. The proposed project would add RiverPark Area 'B' to the City. Addition of this area to the existing police patrol beat would significantly impact police services. This alternative would avoid this impact.

Parks & Recreation

The proposed RiverPark Specific Plan would generate an estimated population of 7,220 persons. Based on the City's park planning standards, approximately 11 acres of neighborhood parkland and 11 acres of community parkland would be required. As the proposed project would provide the amount of parkland required, this impact would be less than significant. The proposed Specific Plan would provide one neighborhood park in RiverPark Area 'A' and two in RiverPark Area 'B'. Community park space would be provided in the form of the playfields on the elementary/intermediate school site in RiverPark Area 'B' though a joint use agreement between the City and the Rio Elementary School District.

With the RiverPark 'A' Only Alternative, the total demand for parkland would be reduced from 22 total acres to approximately 10 acres (5 acres of neighborhood and 5 acres of community parks) due to the reduction in residential uses and population. The current land use plan includes a single neighborhood park of sufficient size to serve this population. However, no community parkland would be provided. For this reason, this alternative would result in greater impacts on parks and recreation facilities than the proposed project

Solid Waste Management

Construction waste associated with the proposed project is estimated at approximately 52,000 cubic yards. The allowed uses would generate approximately 15,100 tons per year of solid waste. As the City of Oxnard currently diverts and recycles 66 percent of the solid waste generated in the City, the total amount of solid waste to be disposed of in landfills is estimated at 5,145 tons per year. As the city is currently exceeding the mandated diversion rate for solid waste, solid waste generation impacts are considered less than significant.

As the amount of solid waste is proportional to the amount of land uses proposed within a given project, the reduction of land uses in the RiverPark 'A' Only Alternative would also result in a reduction in the amount of total solid waste generated. With the RiverPark 'A' Only Alternative, construction solid waste would be reduced to an estimated 32,000 cubic yards, while solid waste from the allowed uses would be approximately 3,000 tons per year after diversion. Compared to the proposed project, construction solid waste would be reduced by 38 percent. Waste from operation of the project disposed in landfills would be reduced by 42 percent.

Library Services

Approximately 7,220 new residents would be generated by the 2,805 residential units included in the proposed RiverPark Specific Plan. This increase in residents would result in an increase in the demand for library materials and space. The Specific Plan permits the development of a storefront library facility to serve the residents in the Specific Plan Area, as well as residents throughout the City. As such, no impact related to library facilities would occur.

The allowed library use is located within the project boundaries of the RiverPark Area 'A'. As the number of residents would decrease from 7,220 to 3,250 with this alternative, total additional demand on library services would be reduced. Impacts would remain less than significant.

Public Utilities

Stormwater Drainage

Drainage facilities included in the RiverPark Specific Plan provide for adequate drainage of the area and provide for drainage of offsite areas consistent with the City of Oxnard Drainage Master Plan. Drainage for RiverPark Area 'A' would be collected in two main storm drains that would connect to the existing Stroube Street storm drain in the southwest corner of RiverPark Area 'A'. No significant drainage impacts would occur with the project as proposed and none would occur with this alternative.

Water Supply and Distribution

Based on the calculations for the proposed project, projected potable water demand is approximately 1,835 acre feet per year (AFY). The City would gain 1,580 AFY of groundwater annexation credits as a result of annexation of RiverPark Area 'B' and conversion of existing agricultural uses to urban uses. Individual building projects within the Specific Plan Area would be required to meet standard water conservation requirements with regards to potable water, ensure adequate water flow, and pay for the construction of improvements to the water distribution system as outlined in the City's Water System Master Plan. No significant impacts to the City's water supply would result from the RiverPark Specific Plan.

The amount of potable water needed is directly proportional to the amount and intensity of the proposed land uses. Based on the proposed land uses included in the RiverPark 'A' Only Alternative, a total of 1,455 AFY of potable water would be required to serve the project. This is a reduction of 380

AFY. With this alternative the City would only acquire 426 AFY in groundwater extraction allocations associated with the agricultural use in RiverPark Area ‘A’. For this reason, while demand would be lessened, the impact on the City’s water supplies would be greater. Based on the information in the City’s Urban Water Management Plan, sufficient supplies would be available to meet this demand and no significant impact would result.

Wastewater Service

The proposed project would generate an expected 0.78 million gallons per day (mgd) of wastewater. Currently, the existing wastewater conveyance system would not be able to accommodate the proposed increase in wastewater flow. Construction of the improvements identified in the City’s Wastewater Collection System Master Plan would mitigate this impact. No significant impacts to the City’s wastewater collection or treatment facilities would result.

The amount of wastewater generated is directly proportional to the amount and intensity of the proposed land uses. Based on the proposed land uses allowed by the RiverPark ‘A’ Only Alternative, a total of 0.54 mgd would be generated. This is a 0.24 mgd (31 percent) reduction in the total amount of wastewater generation. With the improvements of the existing wastewater conveyance system, impacts would also be less than significant with this alternative.

Energy

Construction activity is not expected to consume significant amounts of energy or natural gas due to the nature of construction activities and because the construction of residential subdivisions and other allowed uses would occur in phases from 2002 through 2020. The uses allowed by the proposed Specific Plan would consume approximately 59.6 million watts of electricity and approximately 285.5 million cubic feet of natural gas per year once fully developed. The additional electrical and natural gas demand of the project can be accommodated within long-term source and distribution planning. In addition, the project would comply with all current energy conservation standards. For these reasons, no significant impacts on electricity or natural gas supplies will result from the project.

The amount of electricity and natural gas is directly proportional to the amount and intensity of the proposed land uses. Based on the proposed land uses allowed by the RiverPark ‘A’ Only Alternative, a total of 41.2 million watts and 170.1 million cubic feet of natural gas per year would be consumed. This is a reduction of 30 percent in electricity demand and 40 percent in natural gas demand. As the proposed project would not result in a significant impact, no impact would be avoided or lessened.

Cultural Resources

Reclamation and development of RiverPark Area 'B' will result in the demolition of the remaining structures associated with the mining and materials processing activities that have historically occurred on this portion of the Specific Plan Area. Of the 10 remaining structures on the mine site, 5 are considered to have local historical significance for their association with mining in Ventura County, an industry that has made a significant contribution to the physical development of Ventura County through the construction of roads, bases, airfields and buildings. This local historical significance is not related to the architectural character of these remaining structures. Appropriate mitigation, in the form of historical documentation, is proposed for this impact. Permanent removal of these structures is, however, considered an unavoidable significant impact of the project. This alternative would avoid this impact as development of Area 'B' would not occur. However, it should be noted that these structures would be removed under the existing reclamation plan approved for the mine site.

Hazards

The only impacts related to hazardous substances on the site identified for the project are related to existing abandoned oil wells within RiverPark Area 'B' and the possibility of the existing buildings containing building materials with asbestos and lead paints. Compliance with existing regulations would mitigate these impacts to a level that is less than significant. As the existing abandoned oil wells are located in RiverPark Area 'B', this alternative would avoid potential impacts associated with development of this area.

Reduced Density Alternative

Description

The Reduced Density Alternative considers development of the entire 701-acre Specific Plan Area under the proposed Specific Plan at approximately 75 percent of the density proposed for residential and commercial uses. The arrangement of the proposed land uses, the circulation system and other infrastructure components would remain the same as with the proposed project.

Residential uses would include 400 low/medium density residential units, 705 medium density residential units and approximately 1,000 high density units. The amount of commercial uses allowed would include 442,000 square feet of office space, 1.0 million square feet of regional commercial uses, and a 382,000 square-foot hotel/conference center that would be built on the remainder of the site.

Environmental Analysis

Land Use Planning, Programs & Policies

As proposed, the RiverPark Specific Plan is consistent with applicable local and regional land use plans and policies. As the mix of uses, arrangement of uses and character of development would be the same with this alternative, this consistency would be maintained.

Aesthetics

The RiverPark Specific Plan would not result in development of a scale that would obstruct views of scenic areas or degrade the visual character of the area. The only significant impact identified is the potential for lights from the ballpark facility conditionally allowed in Planning District D to impact surrounding residential uses allowed by the Specific Plan. This use would still be allowed with this alternative. While the overall density of development would be reduced, the visual character of the community would be largely unchanged. No impacts would be avoided or lessened with this alternative.

Earth Resources

RiverPark Area ‘A’ has relatively stable soils compared to the varied conditions in RiverPark Area ‘B’ that have resulted from long-term mining operations. The proposed Mine Reclamation Plan includes detailed remedial grading plans to stabilize the slopes of the existing mine pits and correct existing soils conditions on this part of the Specific Plan Area. All potential impacts to development in RiverPark Area ‘A’ can be mitigated with standard grading procedures. As the area to be developed would be the same with this alternative, no significant impacts would be avoided or lessened with this alternative.

Biological Resources

As proposed, development of the RiverPark Specific Plan Area will result in minimal impacts to biological resources. These impacts include a potential to impact active bird nests in trees on the site during breeding season. Potential indirect impacts associated with lighting and the use of non-native plants in landscaping have also been identified. The proposed RiverPark Specific Plan includes a proposal to create a native woodland along the western edge of the Specific Plan Area to increase native habitat values along this portion of the Santa Clara River. There would be no changes in the overall land use characteristics of the project or the potential impacts with this alternative.

Water Resources

The basic arrangement of the proposed land uses and the drainage and water quality treatment systems would remain the same with this alternative. Impacts, therefore, would be similar and none of the impacts of the project on surface and groundwater would be avoided or substantially lessened.

Agricultural Resources

This alternative would impact the approximately 155 acres of agricultural land in RiverPark Area ‘A’ impacted by the proposed project. This alternative, therefore, would not lessen or avoid this impact.

Transportation and Circulation

The entire RiverPark roadway network would be built with this alternative, but the intensity of the allowed land uses would be reduced. With this alternative, trip generation would be reduced in that 25 percent of the project would not be built. Under this alternative, total daily trip generation would be reduced by 26.5 percent to approximately 69,455 daily trips. As discussed in Section 4.7, Transportation and Circulation, these additional trips would significantly impact 8 of the 33 intersections studied. All of these impacts can be mitigated with roadway improvements. The reduction in trips associated with this alternative would lessen some of the significant impacts of the project on intersection operations in the area, but would not result in avoidance of all impacts.

Air Quality

The proposed project is expected to generate significant operational and cumulative air quality impacts with regards to ROC and NO_X emissions. Through the incorporation of mitigation measures these impacts would be reduced to levels that are less than significant.

The generation of these air quality pollutants is directly proportional to the size and scale of the proposed project. Therefore, the Reduced Density Alternative would reduce ROC and NO_X emissions. Operational emissions generated by this alternative would be approximately 57 and 114 pounds per day for ROC and NO_X, respectively. Although these values are 27 percent and 28 percent less than the emissions calculated for the proposed project, they still exceed the established thresholds of significance of 25 pounds per day. Through the inclusion of all applicable mitigation measures, operational emissions would be less than significant. Impacts associated with other air quality impact criteria, such as CO levels and AQMP consistency, were not identified as significant for the proposed project and as such, would not be significant with the Reduced Density Alternative.

Noise

The proposed project is expected to result in significant noise impacts to existing residential uses during construction. With no development in RiverPark Area 'B', the duration of construction would be lessened. As a result, the duration of construction noise impacts would also be lessened, but not avoided. Construction noise impacts would remain as site development and individual building projects would still occur in RiverPark Area 'A'. With the proposed mitigation measures, these construction related noise impacts would be reduced to less than significant levels. The potential for noise from a ballpark facility in RiverPark Area 'A' to impact the residential uses around it would not be avoided with this alternative. No significant roadway noise impacts were identified for the project and none would occur with this alternative.

Public Services

Public Schools

Assuming full build-out of the allowed residential uses, the proposed RiverPark Specific Plan would generate approximately 1,990 new K-12 students in the Rio Elementary and Oxnard Union School Districts. Based on the current capacity of the schools in these districts, this would result in a significant impact. The Specific Plan includes sites for two new elementary and one new intermediate school to house these students. Provision of these sites and school impact fees will mitigate the impacts of the project.

With the Reduced Density Alternative, a total of approximately 1,560 students would be added to the two school districts, a 430 student reduction. As both school districts are operating at full capacity, the impact of this alternative would be significant. The schools sites would still be provided with this alternative as would school impact fees.

Fire Protection

This alternative, like the proposed project, would provide sites for new City and County Fire Stations in RiverPark Area ‘B’ along Vineyard Avenue. Impacts to fire services would be mitigated by the provision of these sites. As less development would occur within the Specific Plan Area, a reduction in the number of calls for service would result. As the impact of the proposed project on fire services is not significant, no impact would be avoided with this alternative.

Police Protection

The proposed project and this alternative would add RiverPark Area ‘B’ to the City. Addition of this area to the existing City of Oxnard police patrol beat for the northern part of the City would significantly impact police services. The police department has proposed establishment of a new storefront police station within the Specific Plan Area to mitigate this impact. This impact and the applicable mitigation would not be changed with this alternative. Impacts on police services would be lessened somewhat as fewer calls for service would be generated by the smaller amount of development in this alternative.

Parks & Recreation

The proposed RiverPark Specific Plan would allow for a maximum estimated residential population of approximately 7,220 persons. Based on the City’s park planning standards, approximately 11 acres of neighborhood parkland and 11 acres of community parkland would be required. The Specific Plan provides this amount of parkland in three neighborhood parks and in the form of playfields on the elementary/intermediate school site along the eastern edge of RiverPark Area ‘B’.

With the Reduced Density Alternative, the total demand for parkland would be reduced from 22 acres to 16 acres. Sufficient parkland would also be provided with this alternative.

Solid Waste Management

Construction waste associated with the proposed project is estimated at approximately 52,000 cubic yards. The allowed uses would generate approximately 15,100 tons per year of solid waste. As the City of Oxnard currently diverts and recycles 66 percent of the solid waste generated in the City, the total amount of solid waste to be disposed of in landfills is estimated at 5,145 tons per year. As the City is currently exceeding the mandated diversion rate for solid waste, solid waste generation impacts are considered less than significant.

With the Reduced Density Alternative, construction solid waste is estimated at 40,500 cubic yards assuming no waste diversion. Compared to the proposed project, construction solid waste would be reduced by 22 percent. The amount of solid waste generated annually by the uses included in this alternative would be about 8,865 tons per year with only 3,015 tons per year expected to be disposed of in landfills. This is a 41 percent reduction in the expected solid waste anticipated for disposal in landfills. Impacts would be less than significant as long as the City maintains its existing solid waste diversion rate.

Library Services

The increase in residents associated with the proposed uses would result in an increase in the demand for library materials and space. The Specific Plan permits the development of a storefront library facility to serve the residents in the Specific Plan Area, as well as residents throughout the City. As such, no impact related to library facilities would occur.

As the total number of allowed residents would decrease from 7,220 to 5,440 with the reduced residential development in this alternative, a 25 percent reduction, the total additional demand on library services, both to the City and to the allowed library within the Specific Plan Area, would be less than the proposed project. Impacts would remain less than significant as a storefront library would be allowed to be developed in the Specific Plan Area.

Public Utilities

Stormwater Drainage

With this alternative, the same drainage facilities planned for the proposed project would be built. These facilities would have sufficient capacity to serve the Specific Plan Area and accept runoff from adjacent areas consistent with the City's Master Plan of Drainage.

Water Supply and Distribution

Projected potable water demand for the project is approximately 1,835 acre feet per year (AFY). The City would gain 1,580 AFY of groundwater annexation credits as a result of annexation of RiverPark

Area 'B' and conversion of existing agricultural uses to urban uses. Individual building projects within the Specific Plan Area would be required to meet standard water conservation requirements with regards to potable water, ensure adequate water flow, and pay for the construction of improvements to the water distribution system as outlined in the City's Water System Master Plan. No significant impacts to the City's water supply would result from the RiverPark Specific Plan.

Potable water demand would be reduced somewhat by this alternative as the amount of residential units and commercial space built would be 25 percent less. As the City's water consumption factors are per acre of land use and the amount of acres devoted to residential and commercial uses would not change with this alternative, the amount of the reduction in water demand cannot be accurately estimated. Assuming water use is directly proportional to the intensity of use, the amount of total water demand could be reduced by as much as 25 percent (approximately 460 AFY).

Wastewater Service

The proposed project would generate an expected 0.78 million gallons per day (mgd) of wastewater. Currently, the existing wastewater conveyance system would not be able to accommodate the proposed increase in wastewater flow. However, as a result of the project, existing infrastructure would be upgraded to accommodate the expected flows. No significant impacts would occur. A similar amount of wastewater would be generated with this alternative.

Energy

The proposed project would consume approximately 59.6 million watts of electricity and approximately 285.5 million cubic feet of natural gas on an annual basis once fully built out. The additional electrical and natural gas demand of the project can be accommodated within long-term source and distribution planning. In addition, the project would comply with regulations against the wasteful use of energy. For these reasons, no significant impacts on electrical supply or natural gas will result from the project.

The amount of electricity and natural gas is directly proportional to the amount and intensity of the proposed land uses. Based on the proposed land uses included in the Reduced Density Alternative, a total of 46.7 million watts and 225 million cubic feet of natural gas per year would be consumed. This is a reduction of approximately 22 percent. As the project would comply with regulations against the wasteful use of energy, no significant impacts on electrical supply or natural gas will result from this alternative.

Cultural Resources

This alternative would involve the development of RiverPark Area 'B'. As result, this alternative, like the proposed project, would result in the demolition of the remaining buildings on the existing mine site, including 5 identified as being of local historical significance. This alternative, therefore, would not avoid or lessen this impact of the project.

Hazards

As this alternative would involve development of the entire Specific Plan Area, potential impacts related to the presence of hazardous building materials in existing buildings and existing closed oil wells would be the same. These impacts can be mitigated through compliance with existing regulations.

Water Quality Treatment Alternative No. 1

Description

This alternative considers an alternative method of treatment for stormwater flows to avoid the impacts associated with stormwater discharges to the mine pits. Based on the analysis presented in Section 4.5, Water Resources, of this EIR, runoff from storms with a frequency over that of a 10-year event conveyed to the reclaimed mine pits would contain concentrations of iron, manganese and nickel calculated to remain above the thresholds of significance being used for these constituents in the water quality analysis.

To prevent discharges to the pits, this alternative examines the effect of building larger detention basins than those included in the water quality treatment system. This could be accomplished by constructing very large detention basins to capture and detain stormflows from the existing drainage areas. For this project alternative, additional project area in the vicinities of the North, South and East Detention Basins would be included in the project water quality treatment system. In order to accommodate runoff from a 25-year event, the cumulative storage capacity of the detention basins would need to increase by approximately 25 percent. If treatment for a 100-year event was provided, the detention basins would need to be 80 percent larger.

With the proposed stormwater treatment system design for the project, the bottom of the basins will be only 2 to 4 feet above the elevation of historic high water levels. For this reason, the treatment basins cannot be deepened and the basins would need to expanded. The North Detention Basin would need to expand from 10 acres to between 11 and 15 acres to accommodate the 25- or 100-year events; the South Detention Basin would need to expand from 4.5 to between 5.4 and 7.7 acres; and the East Detention Basin will need to expand from 12 to between 15 and 21 acres.

Environmental Analysis

This alternative design for the water quality treatment system provided for the project is being considered to determine if surface water quality impacts could be lessened or avoided. This alternative design concept would involve changes to the storm drain and water quality treatment systems. The amount of development allowed within the Specific Plan Area would not be altered with this alternative, and impacts related to the type and intensity of land uses allowed on the site would not change. For this reason, comparative analysis is only provided for those topics where impacts would be different.

Water Resources

The proposed water quality treatment system would detain and treat all storms with runoff up to a 10-year storm event. Runoff from storms less frequent than a 10-year event storm will be conveyed to the reclaimed mine pits. Concentrations of iron, manganese and nickel in this runoff are calculated to remain above the thresholds of significance being used for these constituents in the water quality analysis. Given the low frequency of these large storm events, this impact would not occur often. Based on the historical rainfall data from 1979 to 1999, no runoff would have reached pits during this 20-year period if the proposed stormwater treatment system had been in place. As runoff from storms with a frequency less than a 10-year event would not enter the pits, overall mass loading of these and other pollutant constituents would be reduced. Iron concentration in discharges to the Water Storage/Recharge basins would be greater than ambient groundwater concentrations, but would be lower than the Secondary Maximum Contaminant Levels (SMCL) set by the State Department of Health Services for drinking water and the existing discharge concentration. Manganese concentration in discharges to the Water Storage/Recharge basins would be greater than ambient groundwater concentrations, but would be less than the existing discharge concentration and matches the SMCL. Nickel concentration in discharges to the Water Storage/Recharge basin would be greater than the ambient groundwater concentrations, but would be lower than the Primary Maximum Contaminant Levels set by the State Department of Health Services for drinking water.

This alternative would further reduce the occurrence of discharges to the pits by increasing the capacity of this system to treat larger storms. Technical evaluations have not yet been conducted in the scientific community to understand the changes in stormwater quality that occur with increasing storm size, such as between the 10-, 25- and 100-year events. For this reason, this alternative would not avoid the impact on groundwater quantity

Public Utilities

Stormwater Drainage

This alternative would require expansion or duplication of the existing Stroube Drain system to accommodate greater detention basin effluent flowrates, or the basins would need to be increased further in size to increase the ability to control outflow rates to match the capacity of the existing storm drain system. Provided these additional improvements are made, no additional significant impacts would result.

Water Quality Treatment Alternative No. 2

Description

This alternative analyzes a different water quality treatment system designed to further improve the quality of runoff discharged to the Santa Clara River. Based on the analysis presented in Section 4.5, Water Resources, of this EIR, stormwater discharges to the Santa Clara River would contain concentrations of fecal coliform greater than the numerical threshold of significance selected for this analysis. Discharges to the Santa Clara River are anticipated to have a fecal coliform concentration of 2,027 MPN/100 mL based on analogous runoff data. The threshold of significance being used in this analysis is 200 MPN/100 mL based on Basin Plan standards. The fecal coliform threshold is based on a Basin Plan Objective that is lower than what has been observed historically in the Ventura River during rainfall events that would be expected to generate such runoff. The anticipated runoff concentration is substantially less than the maximum observed ambient river concentration of 5,000 MPN/100 mL. As the estimated concentrations exceed the significance threshold being used, this impact is identified as significant.

This alternative considers replacing the lined detention basins included in the proposed stormwater treatment system with infiltration basins in order to allow for treatment by infiltration through the vadose zone. These basins would capture and infiltrate flow rates and flow volumes up to the 10-year event. Flows from storms larger than the 10-year event would be allowed to overflow into the mine pits. These basins would be unlined to allow rapid infiltration, and their depths would be limited to approximately 5 to 9 feet to ensure that a minimum vadose zone thickness of 5 feet is maintained, relative to historic high groundwater level. To allow for storage of the entire 10-year runoff volume, the acreage of these basins would need to increase to provide equivalent storage volume capacity given the 9 to 10 foot depth of these basins. The North Detention Basin would need to expand its footprint from 10 acres to 16 acres; the South Detention Basin from 4.5 to 5.2 acres; and the East Detention Basin from 12 to 13 acres. Pretreatment sedimentation basins/forebays and/or entry energy dissipation structures would also be required to allow sediment loads to settle out prior to entering the infiltration basins. For this project alternative, additional land would be required around the North, East and South Detention Basins. Loss of development acreage would result from the increase in infiltration basin capacity. In RiverPark Area 'A', within Drainage Area 1, a new detention basin requiring between 9 and 12 acres would also be required to treat runoff from Area 'A'. In addition, periodic basin bottom maintenance would be required to sustain optimal infiltration rates in the basins.

Environmental Analysis

This alternative design for the water quality treatment system provided for the project is being considered to determine if surface water quality impacts could be lessened or avoided. This alternative design concept would involve changes to the storm drain and water quality treatment systems. The amount of development allowed within the Specific Plan Area would not be altered with this alternative, and impacts related to the type and intensity of land uses allowed on the site would not change. For this reason, comparative analysis is only provided for those topics where impacts would be different.

Water Resources

Because of existing and proposed project grades, it is not possible to maintain a minimum 10-foot vadose zone thickness (relative to historic high groundwater level) beneath each proposed infiltration basin. A minimum vadose zone thickness of 10 feet is required beneath urban infiltration basins according to the design criteria specified in Attachment A to the Ventura County NPDES permit. The impacts to the Santa Clara River would also remain for storms greater than the 10-year event since excess flows from Drainage Area 1 would still be diverted to the River, and would still contain fecal coliform concentrations exceeding Basin Plan Objectives despite the increased magnitude of dilution. For these reasons, this alternative design would lessen, but not avoid the identified impact of fecal coliform concentrations.

Historic Preservation Alternative

Description

This alternative would involve the preservation of the 5 existing buildings and structures associated with the mine site in RiverPark Area 'B' identified as having local historical significance. Of the ten buildings and structures on the mine site, five are not eligible as historic resources under CEQA because they are not 50 or more years of age. These five buildings and structures are an office/residence, the Administrative Building, the Asphalt Plant, the Concrete Plant, and the Rock Plant.

The remaining 5 buildings and structures, which are an office building (circa 1920), a residence/ lab/garage (circa 1942), and three metal storage buildings, (circa 1942) are of sufficient age to be potential historic resources. In this case, these 5 buildings and structures are associated with an industry that has made a significant contribution to the physical development of Ventura County through the construction of roads, bases, airfields and buildings. As a result of this association these buildings are considered to be of local historical significance.

Environmental Analysis

This alternative is being considered to examine the potential to lessen or avoid the impact to the historic resources present on the site. The amount of development allowed within the Specific Plan Area would not be altered with this alternative, and impacts related to the type and intensity of land uses allowed on the site would not change. For this reason, comparative analysis is only provided for those topics where impacts would be different.

Earth Resources

The existing buildings are currently located about 10 feet higher than the grades planned for the surrounding areas. Unless these structures are taken off their foundations and lowered onto new foundations at the planned grade for this area, these structures would remain on an elevated island of land. Different grading techniques would be required to leave this island of land and implement the required slope remediation and proposed grading plans.

These structures are located within about 150 feet of the existing northwestern slope of the Brigham pit and within about 100 feet of the Vickers pit. Leaving these structures in place would interfere with the laying back of the existing native slopes at a 20 percent gradient prior to placing the fill into the pits proposed to create the development area planned. Consequently, structures left within those areas would preclude overexcavation of the mine site plant area within at least 50 feet of their footprint and would preclude the full implementation of the slope remediation plan. Not fully implementing the slope reclamation plan would increase the potential for differential settlement in the fills placed along the development edge and west of the development area to create the dry swale planned for the treatment of stormwater and the adjacent maintenance road.

Historic Resources

As this alternative would preserve the existing structures, and the impact to these historic resources would be avoided.

Alternative Locations

No suitable alternative locations exist for the proposed RiverPark Specific Plan that could feasibly meet the basic objectives of the project. As identified in the introduction to this section, two of the basic objectives of the project are:

- Provide for development of a balanced community with a diverse mix of land uses within the City's City Urban Restriction Boundary (CURB);
- Promote the redevelopment of the RiverPark Area 'A' consistent with the goals of the Oxnard Community Development Commission's (CDC) Historic Enhancement and Revitalization of Oxnard (HERO) Redevelopment Project;

No other sites of a suitable size exist within the City's HERO Redevelopment Program Area to accommodate even part of the proposed project. RiverPark Area 'A' is the largest sub-area within this redevelopment project area. The proposed project site is also the only area available within the City's CURB of a size that could accommodate a mixed residential/commercial community of the size proposed. The City's CURB, when adopted, was largely consistent with the existing LAFCO Sphere of Influence line for the City of Oxnard, which was reflected in the Land Use Element of the City's 2020 *General Plan*. As shown in Figure V-1 of the Land Use Element of the *General Plan*, only two major areas remain in the City's CURB of over 400 acres that are not fully planned at this time. The first is the 430-acre Sakioka Farms property located immediately south of the Ventura Freeway between Rice Avenue and the Revolon Slough, which is the edge of the City's Planning Area. This site is designated for Light Industrial and Business and Research and Research Park Uses on the 2020 General Plan Land Use Map. This site is called out as a future specific plan area in the Land Use Element and the owner of the site is currently preparing a specific plan for the site. This site is, therefore, not suitable or available. The only other large area that is currently still being planned is the Ormond Beach Specific Plan Area, located on the southern edge of the City. The majority of this approximately 1,300-acre area is located south of Hueneme Road with the remainder located immediately north of Hueneme Road. Planning and environmental review studies of this area have been ongoing for approximately 15 years. Numerous environmental constraints exist that need to be reflected in the planning of this area. The current owners of property within this Specific Plan Area are participating in this planning effort. This site is also not suitable or available.

CONCLUSIONS

No Project /Existing Conditions Alternative

This alternative would avoid the significant impacts identified for the RiverPark Project, including the unavoidable significant impacts of the project related to the loss of agricultural and mineral resources and the loss of the 5 buildings located on the existing mine site that have local historical significance. Several of the beneficial impacts of the RiverPark Project would not be realized, however, including increases in the quantity and quality of natural habitat on the site and a net increase in groundwater recharge quantities. In addition, the RiverPark Project would reduce water quality impacts to the existing mine pits by preventing runoff from storms smaller than a 10-year event from entering the pits. Currently, runoff from the adjacent industrial areas discharges into the pit.

No Project/Existing Approvals Alternative

With the existing approved plans for RiverPark Areas ‘A’ and ‘B’, the Oxnard Town Center Specific Plan would be built out and the mine site would be reclaimed in conformance with the existing reclamation plan. As RiverPark Area ‘A’ would still be developed, the unavoidable impact of the project on agricultural land and the underlying mineral resources located in this portion of the site would not be avoided. As no residential uses would be built with the existing approvals, impacts on school and park facilities would be lessened as would water demand and wastewater generation. Traffic and aesthetic impacts would be greater due to the intensity of commercial development allowed by the Oxnard Town Center Specific Plan. As with the No Project/Existing Conditions Alternative, several of the beneficial impacts of the RiverPark Project associated with reclamation of the mine site under the proposed reclamation plan and specific plan would not be realized, including increases in groundwater quantity, improvement in groundwater quality and increases in natural habitat. In addition, sites would not be provided for public facilities including schools, parks and sites for new City and County fire stations.

RiverPark 'A' Only Alternative

This alternative would not avoid the impact of the project on the agricultural land and the underlying mineral resources located in RiverPark Area 'A'. As with the No Project Alternative, certain benefits of the RiverPark Project associated with the proposed reclamation and development plans for RiverPark Area 'B' would not result. The reduction in residential development would reduce traffic and air quality impacts as well as impacts on public services. Water quality impacts would not be substantially lessened due to the similarities in runoff characteristics.

Reduced Density Alternative

The Reduced Density Alternative would also involve development of the entire Specific Plan Area. For this reason, the unavoidable significant impacts of the project on agricultural, mineral and historic resources would not be avoided. With similar uses and design of the drainage and stormwater treatment system, the impacts of the project on surface and groundwater quality would also not be avoided. All of the beneficial amenities of the RiverPark Project would be provided with reduced traffic impacts, air quality impacts and impacts on public service and utilities.

Water Quality Treatment Alternative No. 1

This alternative would lessen water quality impacts to groundwater by reducing the frequency of storm discharges to the pits. No difference in the quality of runoff from larger storm events has been documented, however. This alternative would be significantly more expensive than the RiverPark Project plan because of the substantial additional excavation, construction and maintenance costs of the larger treatment basins. The extra costs associated with this alternative plan would provide only limited benefit to the groundwater quality impacts since only stormflows less frequent than the 10-year event would be affected.

Water Quality Treatment Alternative No. 2

This treatment alternative would not avoid the surface water quality impacts associated with the project.

Historic Preservation Alternative

This alternative would avoid impacting the 5 existing buildings identified as local historic resources. Preservation of these buildings may not be feasible given the grading required to implement both the existing reclamation plan and the RiverPark Project.

Alternative Locations

This alternative looks at the availability and suitability of other sites for the proposed project within the City's Planning Area. No site of a sufficient size to support development of a balanced community of this size or smaller is available within the City's CURB.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Section 15126.6 (e) (2) requires an EIR to identify an environmentally superior alternative. Of the eight alternatives considered in this section, the Reduced Density Alternative is environmentally superior to the other alternatives and the project as proposed. The basic objectives of the project would also be met with this alternative. This alternative would not be financially feasible as the amount of revenue would be reduced substantially while site development costs would remain the same as with the proposed project. Financial analysis of this alternative, presented in Appendix 5.0, demonstrates that this alternative is not feasible. Of the other alternatives considered, the RiverPark 'A' Only alternative would also be environmentally superior to the project as proposed. This alternative would also partially meet the project objectives. Financial analysis of this alternative demonstrates the reduction in the size of the project would also result in revenues not being sufficient to cover the costs of the project.

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6.0 GROWTH INDUCING IMPACT ANALYSIS

INTRODUCTION

Section 15126.2(d) of the CEQA Guidelines *requires the discussion of the ways in which a project could foster economic or population growth, the construction of additional housing, either directly or indirectly, in the surrounding environment. The CEQA* Guidelines *also state that growth in an area should not be considered beneficial, detrimental or of little significance. The purpose of this discussion is to evaluate the growth-inducing potential and impact of the RiverPark Project.*

GROWTH INDUCING POTENTIAL

In general terms, a project may foster spatial, economic or population growth in a geographic area if it meets any one of the criteria that are identified below.

- The project removes an impediment to growth (e.g., the establishment of an essential public service, or the provision of new access to an area).
- The project results in the urbanization of land in a remote location (Leap-Frog Development).
- Economic expansion or growth occurs in an area in response to the project (e.g., changes in revenue base, employment expansion, etc.).
- The project establishes a precedent setting action (e.g., a change in zoning or general plan amendment approval).

Should a project meet any one of these criteria, it may be considered growth-inducing. An evaluation of the Proposed project in relation to these growth-inducing criteria is provided in this section.

Removal of an Impediment to Growth

Growth in an area may result from the removal of physical impediments or restrictions to growth. In this context, physical growth impediments may include nonexistent or inadequate access to an area or the lack of essential public services such as water and sewer service. The following discussion evaluates the effects of the proposed project with respect to this criterion.

The RiverPark Specific Plan Area is located adjacent to the Ventura Freeway and developed portions of the City of Oxnard. The majority of RiverPark Area ‘A’ is located with a redevelopment project area and an existing specific plan area. The existing Oxnard Town Center Specific Plan allows development of up to 4.4 million square feet of commercial space on this portion of the project site and includes infrastructure master plans to support this intensity of development. The City of Oxnard water, sewer, and storm drain master plans include planned improvements to support development in this portion of the City. Major improvements to the adjacent segment of the Ventura Freeway are scheduled for construction by the California Department of Transportation and the City of Oxnard. In addition to widening of the freeway and construction of a new bridge across the Santa Clara River, a new interchange between Oxnard Boulevard and the freeway will be built.

The proposed RiverPark Specific Plan is consistent with utility and service master plans for the area and will not extend services to areas that are not currently planned for service.

Urbanization of Land in Remote Locations (Leap-Frog Development)

Development can be considered growth-inducing when it is not contiguous to existing urban development and "leaps" over open space areas. The proposed project site is located in an existing urbanized area. The site is partially developed and located within the City Urban Restriction Boundary (CURB) established by the Oxnard *2020 General Plan*. The CURB protects agricultural and open space land within the City's Planning Area by limiting the provision of urban services and urbanized land uses to areas located within the CURB until 2020. The CURB promotes a more compact development pattern for the City and preserves agricultural land. While the RiverPark Project would extend the existing pattern of development north, it will not "leap-frog" over any undeveloped areas or introduce development into an area which has not been developed.

Economic Growth

Development of the proposed project site will increase the population of the area over the present conditions. As a result, the proposed project can be expected to generate increased demand for goods and services. The RiverPark Project includes a mix of residential, neighborhood and regional commercial uses. The Specific Plan Area is also within close proximity to existing developed commercial areas in the northern portion of the City that provide a wide range of good and services. Therefore, it is not anticipated that the proposed project would induce growth in commercial, industrial, and office development on presently undeveloped property in the City.

Precedent Setting Action

Approval of the RiverPark Project would be consistent with local land use plans and policies. The site is partially developed and located within an existing redevelopment project area. Approval of the project would not set a precedent for approval of urban uses on any other land in the area.

CONCLUSION

It is not anticipated that the proposed RiverPark Project will induce additional growth in the area.

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7.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE CAUSED BY THE PROPOSED PROJECT SHOULD IT BE IMPLEMENTED

PURPOSE

Uses of nonrenewable resources during the initial and continued phases of a proposed project may be irreversible if a large commitment of these resources makes their removal or non-use thereafter unlikely. According to Section 15126(f) of the CEQA Guidelines, *the irretrievable commitment of such resources are to be evaluated to assure that their current consumption by a proposed project is justified. In addition, this section must also identify any irreversible damage that can result from environmental accidents associated with the project.*

IRREVERSIBLE COMMITMENT OF NON-RENEWABLE RESOURCES

Approval of the proposed RiverPark Specific Plan Project commit some presently undeveloped lands, to urban uses. The substantial investment required to reclaim the mine site would represent a long-term commitment of the site to a planned, residential community. The commitment of undeveloped land to urbanized uses is, essentially, an irreversible environmental change.

In addition, construction of the proposed land uses would contribute to the incremental depletion of resources, including renewable as well as slowly- or non-renewable resources. Resources, such as lumber and other forest products, as well as water, are generally considered renewable resources. Such resources would be replenished over the anticipated 12 to 15 years it is anticipated to build-out the uses allowed by the proposed Specific Plan. For example, lumber supplies are increased as seedlings mature into trees, while water supplies are replenished as water is redistributed through the action of the hydrologic cycle. Given this, the development of the project would not result in the irreversible commitment of renewable resources, although there would be an incremental increase in the demand for them over its lifetime.

Slowly- and non-renewable resources, such as natural gas, petroleum products, asphalt, petrochemical construction materials, steel, copper and other metals, and sand and gravel are considered to be commodities which are in limited supply. The actions or processes which created these products occur over a long period of time and cannot replace those supplies consumed in the development and habitation of the project site within its lifespan. To varying degrees the aforementioned materials are all readily available and some materials, such as asphalt or sand and gravel, are abundant. Other commodities, such as metals, natural gas, and petroleum products, are also readily available, but are finite in supply given the length of time required by the natural process to create them.

The demand for all such resources is expected to increase whether or not the proposed project is developed. The Department of Finance indicates that the population of southern California will increase 62 percent over the thirty year period between 1990 and the year 2020. The resources consumed by the proposed project would be used to provide housing, recreation, jobs, services, and utilities to meet anticipated demand created by the projected demographic growth. These resources would likely be committed to other projects in the region intended to meet this demand if the proposed project was not developed. Further, the investment of resources in the proposed project would be typical of the level of investment normally required for a community of this scale. Provided that all standard building codes, including energy conservation standards, are followed, no wasteful use of energy or construction resources is anticipated.

IRREVERSIBLE ENVIRONMENTAL CHANGES

Irreversible long-term environmental changes associated with the proposed project would include a change in the visual character of the site as a result of the conversion of undeveloped land to a mixed-use community. Additional irreversible environmental changes would include the increase in local and regional vehicular traffic, and the resultant increase in air pollutants and noise emissions generated by this traffic, among other impacts. As discussed above, the restoration of the site to pre-developed conditions after site development would not be feasible given the level of capital investment and degree of disturbance needed to develop the property. However, design features have been incorporated into the development proposal and mitigation measures are proposed in this EIR that would minimize or avoid the significant effects of the environmental changes associated with the development of the project to the maximum degree feasible.

POTENTIAL ENVIRONMENTAL DAMAGE FROM ACCIDENTS

The CEQA *Guidelines* also require a discussion of the potential for environmental damage caused by an accident associated with the project. The following discussion identifies the characteristics of the project site and proposed future uses which could be sources of potential accidents.

The site is located within a seismically active region and would be exposed to ground shaking in the event of a seismic event. Conformance with the regulatory provisions of the City of Oxnard and the *Uniform Building Code* pertaining to construction standards would minimize, to the extent feasible, damage and injuries in the event of such an occurrence.

Uses proposed by the project may use and store chemicals and/or substances which are typically found in such urban residential settings. Given the multitude of Federal, State, and local regulations governing the use of such substances, the proposed project is not expected to involve activities that would damage the environment or pose a risk to public health.

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