
IV. ENVIRONMENTAL IMPACT ANALYSIS

F. HYDROLOGY AND WATER QUALITY

The following section summarizes the findings and conclusions presented in the Drainage Concept for Honeywell/Plaza El Segundo Project (Sepulveda/Rosecrans Project – Phase I) prepared by PSOMAS, dated June 22, 2004 and the Hydrology Study for Honeywell Rosecrans/Sepulveda Project Ultimate Condition prepared by PSOMAS, dated June 29, 2004. The background data from these Hydrology Reports are included in Appendix H of this Draft EIR. The hydrology analyses were performed based on the Los Angeles County Department of Public Works Hydrology Manual, using the Rational Method and the Modified Rational Method. The purpose of the studies was to determine if the Sepulveda/Rosecrans Rezoning Site could be designed to provide adequate flood protection for on-site improvements.

Proposed actions on the Sepulveda/Rosecrans Rezoning Site consist of: changing the General Plan land use designation for 70.8 net acres of the Sepulveda/Rosecrans Rezoning Site from Heavy Industrial to Commercial Center; changing the zoning of the 70.8 net acre portion of the site to C-4 (Commercial Center), the full buildout of the C-4 zoned portion of the Sepulveda/Rosecrans Rezoning Site in accordance with the standards established in the proposed C-4 (Commercial Center) zone, and the construction and operation of the proposed Plaza El Segundo Development. The following existing setting section addresses the entire Sepulveda/Rosecrans Rezoning Site, since the underlying hydrology conditions are the same for all areas of the Sepulveda/Rosecrans Rezoning Site including the proposed Plaza El Segundo site.

ENVIRONMENTAL SETTING

The Sepulveda/Rosecrans Rezoning Site consists of an approximately 110-gross acre, irregularly shaped site. Two railroad spurs run through the center of the Sepulveda/Rosecrans Rezoning Site. The northern spur belongs to the Union Pacific Railroad (UPRR) and the southern spur belongs to the Burlington Northern Santa Fe (BNSF) railroad. The Sepulveda/Rosecrans Rezoning Site was developed with a variety of industrial and chemical manufacturing uses. The structures associated with past Honeywell International Inc. and General Chemical activities have been demolished and the areas are in various stages of remediation. Two industrial uses (Air Products and Learned Lumber) are currently active on the Sepulveda/Rosecrans Rezoning Site. The following sections described the existing conditions on the entire Sepulveda/Rosecrans Rezoning Site.

Surface Water Hydrology

The Sepulveda/Rosecrans Rezoning Site is relatively flat, with small hills and depression areas scattered throughout. On the Sepulveda/Rosecrans Rezoning Site, there are 5 unlined natural depressions. Unlined depressions 1, 2 and 3 are located on the Plaza El Segundo portion of the Sepulveda/Rosecrans

Rezoning Site. Unlined depressions 4 and 5 are located on the remaining portion of the Sepulveda/Rosecrans Rezoning Site and are bounded by ascending railroad embankments to the north and south and surrounded by chain link fencing at the base of the embankments on all sides. The railroad tracks are on elevated embankments that descend toward unlined depression areas at a gradient of approximately 2:1 (horizontal to vertical) or flatter. The surface elevations on the Sepulveda/Rosecrans Rezoning Site range from 90 feet to 150 feet above mean sea level (MSL). There are no lakes, rivers, or streams that flow within, through or near the Sepulveda/Rosecrans Rezoning Site. Also, no ephemeral ponds exist on the Sepulveda/Rosecrans Rezoning Site. Runoff on the Sepulveda/Rosecrans Rezoning Site drains to several on-site sumps which serve as retention ponds and infiltration basins which allow the runoff to filter into the soils in the sumps as shown in Figure IV.F-1, Existing Hydrology Map.

According to the El Segundo Public Works Department, the City of El Segundo does not participate in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map program. The entire City is considered to be located in Zone C defined as areas outside the 500-year flood plain. The Sepulveda/Rosecrans Rezoning Site is not located in a 100 or 500 year floodplain. Additionally, there are no waterways or major dams located near the City of El Segundo or the Sepulveda/Rosecrans Rezoning Site.¹

Groundwater

Regionally, the Sepulveda/Rosecrans Rezoning Site is located in the West Coast Groundwater Basin, which is bounded on the north by the Santa Monica Mountains, on the east by the Newport-Inglewood Uplift, on the southwest by the Palos Verdes Hills, and on the west by the Pacific Ocean. The Newport-Inglewood fault zone acts as a partial barrier to the groundwater flow between the West Coast Basin and the Central Basin to the east.

The significant Aquifers and Aquitards underlying the Sepulveda/Rosecrans Rezoning Site include the Recent and Pleistocene-age Older Dune Sand (ODS), Bellflower Aquiclude, Gage Aquifer, El Segundo Aquitard, and the Silverado Aquifer.²

¹ *El Segundo General Plan, 1992, Public Safety Element*

www.elsegundo.org/cityservices/development/planning/general_plan/10pbsfty.htm, May 20, 2004.

² *Semiannual Groundwater Monitoring Report First and Second Quarters 2003 for Honeywell El Segundo Site, Parsons, July 14, 2003.*

Figure IV.F-1, Existing Hydrology Map

ODS Aquifer

The ODS Aquifer generally consists of three horizons: a deeply weathered surface, an underlying horizon of clean sand, and a basal zone of beach sand and gravel that is in transitional contact with the underlying Bellflower Aquitard. The ODS Aquifer beneath the site consists primarily of very well sorted, fine-grained, dense sand with local lenses of silty sand. The groundwater gradient in the ODS typically ranges from 0.002 to 0.004 feet per foot and the prevailing flow direction is from the east to southeast.

Bellflower Aquiclude

The Bellflower Aquiclude consists of relatively low permeability, non-marine silt and clay deposits that underlie the ODS Aquifer. Its thickness ranges from 2 to 15 feet with the thickest portion evident in the north part of the site and the thinnest section evident in the south and east parts of the site. The Bellflower Aquiclude was not observed in the southeast part of the facility where the ODS Aquifer directly overlies the Gage Aquifer.

Gage Aquifer

The Gage Aquifer, also called the 200-Foot Sand, consists of non-marine, medium-to coarse-grained sand with minor amounts of fine-to coarse-grained gravel, sandy silt, and discontinuous clay lenses. The Gage Aquifer varies in thickness from 30 to 40 feet beneath the site. The groundwater gradient ranges from 0.001 to 0.005 feet per foot and the flow direction is from the south to the southeast.

El Segundo Aquitard

The El Segundo Aquitard underlies the Gage Aquifer and generally consists of silt and clay that range in thickness from 15 to 35 feet.

Silverado Aquifer

The Silverado Aquifer underlies the El Segundo Aquitard and consists of relatively high porosity and permeability marine sand and gravel.

Groundwater Levels

The Sepulveda/Rosecrans Rezoning Site contains eighteen groundwater monitoring wells. Twelve of the wells are completed in the ODS Aquifer and six are completed in the Gage Aquifer. The ODS Aquifer and the Gage Aquifer water level elevations continue to gradually decrease.³ The groundwater flow direction for the ODS Aquifer remains consistent, flowing to the east-southeast at a gradient of

³ *Ibid.*

approximately 0.003 feet per foot. Furthermore, a continuing decreasing trend in groundwater elevations at the site was observed with the exception of three monitoring wells. The exception is likely attributable to increased local recharge of the Aquifer due to the winter and spring storm events.

No groundwater was identified beneath the northwest portion of the Sepulveda/Rosecrans Rezoning Site during the investigation by Albus-Keefe & Associates, Inc.⁴ However, numerous environmental investigations have been conducted on the Sepulveda/Rosecrans Rezoning Site during which groundwater wells were installed. Groundwater was encountered during previous environmental investigations conducted at the Sepulveda/Rosecrans Rezoning Site at depths ranging from approximately 71 to 77 feet below the existing ground surface.

The presence of several chemicals of potential concern has been found in the groundwater beneath the Sepulveda/Rosecrans Rezoning Site through the regular testing of the groundwater monitoring wells. Further discussion of these chemicals of potential concern is found in Section IV.G Hazards and Hazardous Materials.

Water Quality

The 1987 amendments to the Federal Water Pollution Control Act, commonly referred to as the Clean Water Act, added Section 402(p) which establishes a framework for regulating municipal and industrial storm water discharges under the National Pollutant Discharge Elimination System (NPDES) program. Subsequently, the EPA published final regulations that established requirements for applications for storm water permits for specified categories of industries and construction activities of 5 acres or more and between 1 and 5 acres.

In 2003, the California State Water Resources Control Board (SWRCB) adopted the General Construction Activity Storm Water Permit (GCASP) which is "...required for all storm water discharges associated with construction activity where clearing, grading, and excavation results in a land disturbance of one or more acres." Projects that meet these criteria must obtain a Permit from the SWRCB prior to start of construction. In order to be covered under the General Permit, the project applicant must submit a Notice of Intent (NOI) to the SWRCB.

The General Permit requires all owners (dischargers) of land where construction activities occur to:

- Eliminate or reduce non-storm water discharges to storm sewer systems and other waters of the nation;
- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP); and

⁴ *Geotechnical Feasibility Investigation for the Proposed Commercial Development, Roadways and Railroad Alignment in Area "A", Honeywell Property, 850 South Sepulveda Boulevard, El Segundo, California, prepared by Albus-Keefe & Associates, Inc. dated May 20, 2003.*

- Perform inspections of storm water pollution prevention measures (control practices).

The General Permit authorizes the discharge of storm water associated with construction activity from construction sites. However, it prohibits the discharge of materials other than storm water and all discharges which contain hazardous substances in excess of reportable quantities established at 40 Code of Federal Regulations 117.3 or CFR 302.4 unless a separate NPDES permit has been issued to regulate those discharges.

The General Permit requires development and implementation of a SWPPP, emphasizing Best Management Practices (BMP), which are defined as “ - schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States”. The SWPPP has two major objectives:

- To help identify the sources of sediment and other pollutants that affect the quality of storm water discharges; and
- To describe and ensure the implementation of practices to reduce sediment and other pollutants in storm water discharges, both during and after construction.

In addition, dischargers are required to conduct inspections before and after storm events and to annually certify that they are in compliance with the General Permit.

Phase II of the NPDES storm water program covers small construction activities disturbing between 1 and 5 acres. Phase II became final and published in the Federal Register on December 8, 1999 with small construction permit applications due by March 10, 2003. The Phase II Final Rule also expanded the existing NPDES regulations (Phase I) to address storm water discharges from municipal separate storm sewer systems (MS4s) serving populations less than 100,000 persons.

Standard Urban Storm Water Mitigation Plan

The Standard Urban Storm Water Mitigation Plan (SUSMP), approved by the California Regional Water Quality Control Board for the Los Angeles Region March 8, 2000, was developed as part of the municipal storm water program to address storm water pollution from new development and redevelopment by the private sector. The SUSMP contains a list of the minimum required Best Management Practices (BMPs) that must be used for a designated project. Additional BMPs may be required by ordinance or code adopted by the Permittee and applied generally or on a case by case basis. Developers must incorporate appropriate SUSMP requirements into their project plans. As the Permittee, the City of El Segundo will review the plan for proposed development within the Sepulveda/Rosecrans Rezoning Site as part of the development plan approval process and prior to issuance of building and grading permits.

The Standard Urban Storm Water Mitigation Plan is designed to eliminate 85 percent of the pollutants in storm runoff from new developments via requirements for implementation of a “first flush” cleansing program. The requirements of the program are such that the first 0.75 inch of rainfall runoff from a 24-hour storm is to be intercepted from drainage areas where new development is occurring and be cleansed, filtered or retained until pollutants are removed.⁵

ENVIRONMENTAL IMPACTS

Threshold of Significance

In accordance with guidance provided in Appendix G of the State CEQA Guidelines, the proposed Sepulveda/Rosecrans Site Rezoning and Plaza El Segundo Development could have a potentially significant impact if it were to result in one or more of the following:

- a. Violate any water quality standards or waste discharge requirements.
- b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
- d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
- e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- f. Otherwise substantially degrade water quality.
- g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- h. Place within a 100-year flood hazard area structures which would impede or re-direct flood flows.

⁵ *Standard Urban Storm Water Mitigation Plan for Los Angeles County and Cities in Los Angeles County, March 8, 2000, page 10.*

- i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
- j. Inundation by seiche, tsunami, or mudflow.

Project Impacts

Sepulveda/Rosecrans Site Rezoning

Surface Water Hydrology

The Proposed Circulation Element Update EIR provides guidance for analysis of potential impacts related to drainage and storm drain systems for later projects that would implement the proposed Circulation Element Update. The proposed connection of Park Place between Sepulveda Boulevard and Nash Street and connection of Park Place to Hughes Way via Allied Way through the Sepulveda/Rosecrans Rezoning Site would constitute a project that implements the Circulation Element Update policies. Although these improvements are part of the proposed Sepulveda/Rosecrans Rezoning and the analysis in this EIR is a stand-alone analysis, the analysis provided below includes the master drainage plan and storm drain and detainment system design in accordance with the guidance presented in the Proposed Circulation Element Update EIR. Based upon the analysis provided below, construction of this component of the proposed Circulation Element Update would not result in new effects related to drainage that were not examined in the Program EIR for the proposed Circulation Element Update.

The Sepulveda Rosecrans Site Rezoning would rezone the Sepulveda/Rosecrans Rezoning Site to the Commercial Center (C-4) Zone and would allow for the development of up to 850,000 square feet of commercial uses.⁶ Each specific project on the Sepulveda/Rosecrans Rezoning Site will require hydrology studies to determine the drainage of surface water and the specific impacts on surface water. Furthermore, each specific project would be required to analyze its own runoff issues within the boundaries of its Sepulveda/Rosecrans Rezoning Site so that the runoff from one area would not flow onto another area without the owners consent.

The majority of the Sepulveda/Rosecrans Rezoning Site currently drains to several on-site sumps, which serve as retention ponds/infiltration basins. The 8.4-acre area in the southeastern corner of the site (currently Air Products) drains into an existing storm drain that discharges into the public storm drain in Nash Street. The proposed detention basin for the portion of the site south of the railroad

⁶ For purposes of this analysis, "development" of the proposed Sepulveda/Rosecrans Rezoning Site would encompass construction and operation of any use permitted under the proposed C-4 zone, including commercial and related uses, industrial gas facilities and RV storage, as well as roadway construction and railroad relocation. Continuation of the existing lumber distribution facility in its current location would not entail new construction and would not have any impacts within the scope of this analysis.

tracks is proposed to be located on the southern portion of the site. The new retention basin will be drained through a combination of percolation and a pump station that will discharge into an existing public storm drain system east of the site, in a manner consistent with applicable NPDES storm water permits. The proposed hydrology map for the Sepulveda/Rosecrans Rezoning Site is provided in Appendix H.

The methodology described in the Los Angeles County Department of Public Works (LACDPW) Hydrology Manual was used to compute storm water run-off rates from the Sepulveda/Rosecrans Rezoning Site tributary to the proposed detention pond. Proposed storm drain flow rates and detention volume are calculated based on a 50-year storm frequency. The standard methods used are the "Rational Method" and the "Modified Rational Method."

The hydrology calculations demonstrate that the entire Sepulveda/Rosecrans Rezoning Site can be protected from flooding through the use of on-site storm drains in conjunction with an on-site retention basin without increasing discharge rates from the Sepulveda/Rosecrans Rezoning Site. At full buildout the total 50-year flow discharging into the retention basin is 117 cubic feet per second (cfs) with a total retention volume of 4 acre-feet or 175,000 cubic feet.⁷

The drainage system described above would be designed to City of El Segundo and County of Los Angeles standards. The City of El Segundo, as well as the Los Angeles County Department of Public Works, will review and approve the proposed drainage system to ensure that runoff is properly conveyed through the property and discharged to avoid flooding. With the construction of the retention basin and the mitigation measures below, the development of the Sepulveda/Rosecrans Rezoning Site at full buildout would not result in significant impacts related to hydrology.

The Sepulveda/Rosecrans Rezoning Site is not located in a 100 or 500 year floodplain. Additionally, there are no waterways or major dams located near the City of El Segundo or the Sepulveda/Rosecrans Rezoning Site.⁸ Therefore, the future development of the Sepulveda/Rosecrans Rezoning Site would not result in or expose people or property to significant impacts related to flooding.

Groundwater

The Sepulveda/Rosecrans Rezoning Site contains several groundwater monitoring wells which are completed in the ODS Aquifer and the Gage Aquifer. According to the Semiannual Groundwater Monitoring Report prepared by Parsons, the ODS Aquifer and the Gage Aquifer water level elevations

⁷ *Hydrology Study for Honeywell Rosecrans/Sepulveda Project Ultimate Condition, Psomas, June 29, 2004.*

⁸ *El Segundo General Plan, 1992, Public Safety Element*

www.elsegundo.org/cityservices/development/planning/general_plan/10pbsfty.htm, October 23, 2003.

continue to gradually decrease.⁹ No groundwater was identified beneath the northwest portion of the Sepulveda/Rosecrans Rezoning Site during the investigation by Albus-Keefe & Associates, Inc.¹⁰ However, groundwater was encountered during previous environmental investigations conducted on the Sepulveda/Rosecrans Rezoning Site at depths ranging from approximately 71 to 77 feet below the existing ground surface. Furthermore, groundwater conditions in the future may vary substantially as a result of seasonal variations of rainfall and future site development. The development of the Sepulveda/Rosecrans Rezoning Site does not involve deep excavations that have the potential to intercept existing Aquifers, nor would it involve additions (with the exception of normal water percolation from rainfall/landscape irrigation) or withdrawals of groundwater. Therefore, the proposed Sepulveda/Rosecrans Site Rezoning would not result in significant impacts related to groundwater.

Water Quality

Construction-Related Impacts. Three general sources of short-term construction-related storm water pollution associated with the proposed Sepulveda/Rosecrans Site Rezoning are: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) earth moving activities which, when not controlled, may generate soil erosion and transportation, via storm runoff or mechanical equipment; and 3) the maintenance and operation of construction equipment.

Construction Materials. The project construction site will contain a variety of construction materials that are potential sources of storm water pollution. Categories of such materials include: adhesives; cleaning agents; landscaping, plumbing, painting, heating/cooling, and masonry materials; floor and wall coverings; and construction debris. Construction material spills can be a source of storm water pollution and/or soil contamination, which would generate a potentially significant impact to water quality.

Since the proposed Sepulveda/Rosecrans Site Rezoning involves clearing, grading, and the excavation of 5 or more acres, a General Construction Activity Storm Water Permit must be obtained from the SWRCB prior to the start of construction. The NPDES requires that a NOI be filed with the SWRCB. By filing an NOI, the developer agrees to the conditions outlined in the General Permit. One of the conditions of the General Permit is the development and the implementation of a SWPPP. The SWPPP identifies which structural and nonstructural BMPs will be implemented, such as sandbag barriers, temporary desilting basins near inlets, gravel driveways, dust controls, employee training, and general good housekeeping practices.

⁹ *Semiannual Groundwater Monitoring Report First and Second Quarters 2003 for Honeywell El Segundo Site, Parsons, July 14, 2003.*

¹⁰ *Geotechnical Feasibility Investigation for the Proposed Commercial Development, Roadways and Railroad Alignment in Area "A", Honeywell Property, 850 South Sepulveda Boulevard, El Segundo, California, prepared by Albus-Keefe & Associates, Inc. dated May 20, 2003.*

Specifically, the following SWPPP BMPs are required to prevent construction debris from entering the storm drainage system.

- During construction and operation, all waste shall be disposed of in accordance with all applicable laws and regulations. Properly labeled recycling bins shall be utilized for recyclable construction materials including solvents, water-based paints, vehicle fluids, broken asphalt and concrete, wood, and vegetation. Non-recyclable materials and wastes must be taken to an appropriate landfill. Toxic wastes must be discarded at a licensed, regulated disposal site by a licensed waste hauler.
- All leaks, drips and spills occurring during construction shall be cleaned up promptly and in compliance with all applicable laws and regulations to prevent contaminated soil on paved surfaces that can be washed away into the storm drains.
- If materials spills occur, they should not be hosed down. Dry cleaning methods shall be employed whenever possible.
- Construction dumpsters shall be covered with tarps or plastic sheeting if left uncovered for extended periods. All dumpsters shall be well maintained.
- The project applicant/developer shall conduct street sweeping and truck wheel cleaning to prevent dirt in storm water.
- The project owner/developer shall provide regular sweeping of private streets and parking lots within the Sepulveda/Rosecrans Rezoning Site with equipment designed for removal of hydrocarbon compounds.

With the implementation of the required BMPs and the mitigation measures listed below, short-term impacts on water quality from construction materials would be less than significant.

Site Grading. Soil erosion is the process by which soil particles are removed from the land surface by wind, water and/or gravity. Soil particles removed by storm water runoff are considered pollutants that if discharged to the storm drainage system eventually reach the Pacific Ocean and can have negative impacts on aquatic habitat. Grading activities can greatly increase erosion processes which would generate a potentially significant impact to water quality.

However, the following SWPPP BMPs are required to prevent construction silt from entering the storm drainage system.

- The amount of exposed soil shall be limited and erosion control procedures implemented for those areas that must be exposed.

- Grading activities shall be phased so that graded areas are landscaped or otherwise covered, as quickly as possible after completion of activities.
- Appropriate dust suppression techniques, such as watering or tarping, shall be used in areas that must be exposed.
- The area shall be secured to control off-site migration of pollutants.
- Construction entrances shall be designed to facilitate removal of debris from vehicles exiting the site, by passive means such as paved/graveled roadbeds, and/or by active means such as truck washing facilities.
- Truck loads shall be tarped.
- Roadways shall be swept or washed down to prevent generation of fugitive dust by local vehicular traffic.
- Simple sediment filters shall be constructed at or near the entrances to the storm drainage system wherever feasible.

With the implementation of the required BMPs, and the mitigation measures listed below short-term impacts on water quality from site grading would be less than significant.

Equipment Maintenance. Poorly maintained vehicles and heavy equipment that leak fuel, oil, antifreeze or other fluids on the construction site are also common sources of storm water pollution and soil contamination which would generate a potentially significant impact to water quality.

However, the following SWPPP BMPs are required to prevent construction silt from entering the storm drainage system.

- All leaks, drips and spills occurring during construction shall be cleaned up promptly and in compliance with all applicable laws and regulations to prevent contaminated soil on paved surfaces that can be washed away into the storm drains.
- If materials spills occur, they should not be hosed down. Dry cleaning methods shall be employed whenever possible.
- The project applicant/developer shall conduct truck wheel cleaning and truck washing to prevent dirt in storm water.
- The project applicant/developer shall keep vehicles in good working order.

With the implementation of the required BMPs, short-term impacts on water quality from equipment maintenance would be less than significant.

Long-Term Operational Impacts

If not properly designed and constructed, the proposed development could increase the rate of urban pollutant introduction into storm water system. In order to prevent these potential impacts, the project will be designed in compliance with 1) Section 402 (p) of the Federal Water Pollution Control Act, or Clean Water Act (CWA); 2) Order No. 01-182 of the Regional Water Quality Control Board, Los Angeles Region, which regulates the issuance of waste discharge requirements to Los Angeles County; 3) the County of Los Angeles Standard Urban Storm Water Mitigation Plan, and 4) the El Segundo Municipal Code (ESMC).

In compliance with the SUSMP requirements, the proposed development will provide for the treatment/filtration of on-site storm water runoff before it enters the public storm water conveyance system, in order to minimize the introduction of pollutants of concern. Storm water flow discharging from the Sepulveda/Rosecrans Rezoning Site will be treated using an inline treatment device such as Continuous Deflective Separation (CDS) unit or an equivalent unit, which will be designed to treat 6 cfs, which represents the first $\frac{3}{4}$ " of rainfall as calculated by the Los Angeles County SUSMP guidelines. The CDS Unit will clarify storm waters before they are discharged into the public storm drainage system. As required by the SUSMP, this system must remove 85 percent of such "first flush" storm water pollutants such as hydrocarbon compounds (i.e., automotive oils, lubricants and other fluids) deposited, as a matter of course, along the project's streets and driveways. Applicable BMPs will also be selected from those approved sources identified in the Standard Urban Storm Water Mitigation Plan for Los Angeles County and Cities in Los Angeles County. Additionally, a preventive maintenance program, including regular street and parking lot sweeping with equipment designed for removal of such compounds, shall be provided by the project owner/developer to reduce the potential water quality impact to a less-than-significant level. Other aspects of the SUSMP with which the proposed Sepulveda/Rosecrans Site Rezoning and Plaza El Segundo Development must comply include provisions for the proper design of outdoor material and trash storage areas.

As noted above, the Sepulveda/Rosecrans Rezoning Site will provide structural or treatment control BMPs designed to control storm water runoff contamination. While some infiltration through landscape areas will occur, the Sepulveda/Rosecrans Rezoning Site will primarily rely on the implementation of Treatment Control BMPs to control storm water runoff contamination. As required by the SUSMP, detailed plans for the Sepulveda/Rosecrans Rezoning Site's compliance with the SUSMP will be submitted to the City as part of the development plan approval process prior to issuance of building and grading permits. With compliance with the SUSMP requirements, the project's operational impacts on storm water quality will be less than significant.

Plaza El Segundo

Surface Water Hydrology

Runoff from the Plaza El Segundo site would drain across the Plaza El Segundo Site to the proposed retention basin located in the eastern portion of the Plaza El Segundo site. The proposed retention basin will be drained through a combination of percolation and a pump station that will discharge into an existing public storm drain system east of the Sepulveda/Rosecrans Rezoning Site in a manner consistent with applicable NPDES storm water permits. A copy of the Conceptual Hydrology Map for the Plaza El Segundo is provided in Appendix H.

The methodology described in the Los Angeles County Department of Public Works Hydrology Manual was used to compute storm water run-off rates from the Sepulveda/Rosecrans Rezoning Site tributary to the proposed detention pond. Proposed storm drain flow rates and detention volume are calculated based on a 50-year storm frequency. The standard methods used are the "Rational Method" (for subarea time of concentration computation) and the "Modified Rational Method" (for flow routing through the drainage watershed and run-off computation using subarea times of concentration computed by the Rational Method).

The hydrology calculations demonstrate that the Plaza El Segundo site can be protected from flooding through the use of on-site storm drains in conjunction with an on-site retention basin. The total 50-year flow discharging into the retention basin from the portion of the Plaza El Segundo site located north of the railroad tracks is anticipated to be 57 cubic feet per second (cfs)¹¹. The total volume of the retention basin is 8.09 acre-feet or 352,000 cubic feet for the Plaza El Segundo site. The total 50-year flow discharging from the portion of the Plaza El Segundo site located south of the railroad tracks is 11 cfs. Since this does not represent an increase in runoff from the existing condition, no detention is required for this area.

The drainage system described above would be designed to City of El Segundo and County of Los Angeles standards. The City of El Segundo, as well as the Los Angeles County Department of Public Works, will review and approve the proposed drainage system to ensure that runoff is properly conveyed through the property and discharged to avoid flooding. With the construction of the retention basin and the mitigation measures below, development of Plaza El Segundo would not result in significant impacts related to hydrology.

Plaza El Segundo is not located in a 100 or 500 year floodplain. Additionally, there are no waterways or major dams located near the City of El Segundo or the Plaza El Segundo site.¹² Therefore, the

¹¹ *Cubic feet per second refers to the amount of water flowing across the project site, while acre-feet refers to the total capacity of the retention basin.*

¹² *El Segundo General Plan, 1992, Public Safety Element*

proposed Plaza El Segundo Development would not result in or expose people or property to significant impacts related to flooding.

Groundwater

Plaza El Segundo contains several groundwater monitoring wells which are completed in the ODS Aquifer and the Gage Aquifer. According to the Semiannual Groundwater Monitoring Report prepared by Parsons, the ODS Aquifer and the Gage Aquifer water level elevations continue to gradually decrease.¹³ No groundwater was identified beneath the Plaza El Segundo site during the investigation by Albus-Keefe & Associates, Inc.¹⁴ However, groundwater was encountered during previous environmental investigations conducted at the Sepulveda/Rosecrans Rezoning Site at depths ranging from approximately 71 to 77 feet below the existing ground surface. Furthermore, groundwater conditions in the future may vary substantially from those within the site as a result of seasonal variations of rainfall and future site development. The development of the Plaza El Segundo site does not involve deep excavations that have the potential to intercept existing Aquifers, nor would it involve direct additions or withdrawals of groundwater. Therefore, the proposed Plaza El Segundo Development would not result in significant impacts related to groundwater.

Water Quality

Construction-Related Impacts. Three general sources of short-term construction-related storm water pollution associated with the proposed Plaza El Segundo Development are: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) earth moving activities which, when not controlled, may generate soil erosion and transportation, via storm runoff or mechanical equipment; and 3) the maintenance and operation of construction equipment.

Construction Materials. The project construction site will contain a variety of construction materials that are potential sources of storm water pollution. Categories of such materials include: adhesives; cleaning agents; landscaping, plumbing, painting, heating/cooling, and masonry materials; floor and wall coverings; and construction debris. Construction material spills can be a source of storm water pollution and/or soil contamination, which would generate a potentially significant impact to water quality.

www.elsegundo.org/cityservices/development/planning/general_plan/10pbsfty.htm, May 20, 2004.

¹³ *Semiannual Groundwater Monitoring Report First and Second Quarters 2003 for Honeywell El Segundo Site, Parsons, July 14, 2003.*

¹⁴ *Geotechnical Feasibility Investigation for the Proposed Commercial Development, Roadways and Railroad Alignment in Area "A", Honeywell Property, 850 South Sepulveda Boulevard, El Segundo, California, prepared by Albus-Keefe & Associates, Inc. dated May 20, 2003.*

Since the proposed Plaza El Segundo Development involves clearing, grading, and the excavation of 5 or more acres, a General Construction Activity Storm Water Permit must be obtained from the SWRCB prior to the start of construction. The NPDES requires that a NOI be filed with the SWRCB. By filing an NOI, the developer agrees to the conditions outlined in the General Permit. One of the conditions of the General Permit is the development and the implementation of a SWPPP. The SWPPP identifies which structural and nonstructural BMPs will be implemented, such as sandbag barriers, temporary desilting basins near inlets, gravel driveways, dust controls, employee training, and general good housekeeping practices.

Specifically, the following SWPPP BMPs are required to prevent construction debris from entering the storm drainage system.

- During construction and operation, all waste shall be disposed of in accordance with all applicable laws and regulations. Properly labeled recycling bins shall be utilized for recyclable construction materials including solvents, water-based paints, vehicle fluids, broken asphalt and concrete, wood, and vegetation. Non-recyclable materials and wastes must be taken to an appropriate landfill. Toxic wastes must be discarded at a licensed, regulated disposal site by a licensed waste hauler.
- All leaks, drips and spills occurring during construction shall be cleaned up promptly and in compliance with all applicable laws and regulations to prevent contaminated soil on paved surfaces that can be washed away into the storm drains.
- If materials spills occur, they should not be hosed down. Dry cleaning methods shall be employed whenever possible.
- Construction dumpsters shall be covered with tarps or plastic sheeting if left uncovered for extended periods. All dumpsters shall be well maintained.
- The project applicant/developer shall conduct street sweeping and truck wheel cleaning to prevent dirt in storm water.
- The project owner/developer shall provide regular sweeping of private streets and parking lots within the Sepulveda/Rosecrans Rezoning Site with equipment designed for removal of hydrocarbon compounds.

With the implementation of the required BMPs, and the mitigation measures listed below short-term impacts on water quality from construction materials would be less than significant.

Site Grading. Soil erosion is the process by which soil particles are removed from the land surface by wind, water and/or gravity. Soil particles removed by storm water runoff are considered pollutants that if discharged to the storm drainage system eventually reach the Pacific Ocean and can have negative

impacts on aquatic habitat. Grading activities can greatly increase erosion processes. Grading activities can greatly increase erosion processes which would generate a potentially significant impact to water quality.

However, the following SWPPP BMPs are required to prevent construction silt from entering the storm drainage system.

- The amount of exposed soil shall be limited and erosion control procedures implemented for those areas that must be exposed.
- Grading activities shall be phased so that graded areas are landscaped or otherwise covered, as quickly as possible after completion of activities.
- Appropriate dust suppression techniques, such as watering or tarping, shall be used in areas that must be exposed.
- The area shall be secured to control off-site migration of pollutants.
- Construction entrances shall be designed to facilitate removal of debris from vehicles exiting the site, by passive means such as paved/graveled roadbeds, and/or by active means such as truck washing facilities.
- Truck loads shall be tarped.
- Roadways shall be swept or washed down to prevent generation of fugitive dust by local vehicular traffic.
- Simple sediment filters shall be constructed at or near the entrances to the storm drainage system wherever feasible.

With the implementation of the required BMPs, and the mitigation measures listed below short-term impacts on water quality from site grading would be less than significant.

Equipment Maintenance. Poorly maintained vehicles and heavy equipment that leak fuel, oil, antifreeze or other fluids on the construction site are also common sources of storm water pollution and soil contamination which would generate a potentially significant impact to water quality. However, the following SWPPP BMPs are required to prevent construction silt from entering the storm drainage system.

- All leaks, drips and spills occurring during construction shall be cleaned up promptly and in compliance with all applicable laws and regulations to prevent contaminated soil on paved surfaces that can be washed away into the storm drains.

- If materials spills occur, they should not be hosed down. Dry cleaning methods shall be employed whenever possible.
- The project applicant/developer shall conduct truck wheel cleaning and truck washing to prevent dirt in storm water.
- The project applicant/developer shall keep vehicles in good working order.

With the implementation of the required BMPs, short-term impacts on water quality from equipment maintenance would be less than significant.

Long-Term Operational Impacts

If not properly designed and constructed, the proposed development on Plaza El Segundo could increase the rate of urban pollutant introduction into storm water system. In order to prevent these potential impacts, the project will be designed in compliance with 1) Section 402 (p) of the Federal Water Pollution Control Act, or Clean Water Act (CWA); 2) Order No. 01-182 of the Regional Water Quality Control Board, Los Angeles Region, which regulates the issuance of waste discharge requirements to Los Angeles County; 3) the County of Los Angeles Standard Urban Storm Water Mitigation Plan, and 4) the El Segundo Municipal Code (ESMC).

In compliance with the SUSMP requirements, the proposed development on Plaza El Segundo will provide for the treatment/filtration of on-site storm water runoff before it enters the public storm water conveyance system, in order to minimize the introduction of pollutants of concern. Storm water flow discharging from the Plaza El Segundo site will be treated using an inline treatment device such as Continuous Deflective Separation (CDS) unit or an equivalent unit, which will be designed to treat 6 csf, which represents the first $\frac{3}{4}$ " of rainfall as calculated by the Los Angeles County SUSMP guidelines. The CDS Unit¹⁵ will clarify storm waters before they are discharged into the public storm drainage system. As required by the SUSMP, this system must remove 85 percent of such "first flush" storm water pollutants such as hydrocarbon compounds (i.e., automotive oils, lubricants and other fluids) deposited, as a matter of course, along the project's streets and driveways. Applicable BMPs will also be selected from those approved sources identified in the Standard Urban Storm Water Mitigation Plan for Los Angeles County and Cities in Los Angeles County. Additionally, a preventive maintenance program, including regular street and parking lot sweeping with equipment designed for removal of such compounds, should be provided to reduce the potential water quality impact to a less-than-significant level. Other aspects of the SUSMP with which the proposed Plaza El Segundo project must comply include provisions for the proper design of outdoor material and trash storage areas.

¹⁵ "CDS Technologies" makes stand-alone storm water pollution control devices. The "CDS device" is a trap in the storm drain system that separates out floating trash, sands and silts, and oils and grease while allowing clear water to pass downstream. It uses an absorbent filtering material that requires maintenance - old filter material must be periodically removed for disposal while new material is reinstalled.

As noted above, the Plaza El Segundo site will provide structural or treatment control BMPs designed to control storm water runoff. While some infiltration through landscape areas will occur, Plaza El Segundo will primarily rely on the implementation of Treatment Control BMPs. As required by the SUSMP, detailed plans for Plaza El Segundo's compliance with the SUSMP will be submitted to the City as part of the development plan approval process prior to issuance of building and grading permits. With compliance with the SUSMP requirements, the project's operational impacts on storm water quality will be less than significant.

CUMULATIVE IMPACTS

Sepulveda Rosecrans Site Rezoning (2012)

Development of the proposed Sepulveda/Rosecrans Site Rezoning project in conjunction with the related projects listed in Section III.B would have an impact on storm drainage and water quality. The proposed Sepulveda/Rosecrans Site Rezoning is located in an urbanized area where most of the surrounding properties are already developed. The proposed storm drainage system serving this area has been designed to accommodate runoff from this built-out environment. When new construction occurs here, it generally does not lead to substantial additional runoff, since new developments would also be required to control the amount of stormwater runoff coming from their respective sites. In this context, it should be noted that the proposed Sepulveda/Rosecrans Site Rezoning project would be designed to limit its drainage so as to not exceed the capacity of the local storm drainage system by implementing an on-site retention system. Thus, the proposed Sepulveda/Rosecrans Site Rezoning project would not contribute to a significant cumulative impact in the event that any off-site areas served by local storm drains were to increase peak flows to the system. No significant cumulative impacts would occur.

Plaza El Segundo Development

Development of the proposed Plaza El Segundo Development in conjunction with the related projects listed in Section III.B would have an impact on storm drainage and water quality. The proposed Plaza El Segundo Development is located in an urbanized area where most of the surrounding properties are already developed. The proposed storm drainage system serving this area has been designed to accommodate runoff from this built-out environment. When new construction occurs here, it generally does not lead to substantial additional runoff, since new developments would also be required to control the amount of stormwater runoff coming from their respective sites. In this context, it should be noted that the proposed Plaza El Segundo Development would be designed to limit its drainage so as to not exceed the capacity of the local storm drainage system by implementing an on-site retention system. Thus, the proposed Plaza El Segundo Development will mitigate its incremental contribution to the local storm drainage system and, therefore, would not contribute to a significant cumulative impact in the event that any off-site areas served by local storm drains were to increase peak flows to the system. No significant cumulative impacts would occur.

SUBSEQUENT ENVIRONMENTAL DOCUMENTATION

Sepulveda/Rosecrans Site Rezoning

No subsequent environmental documentation is required.

Plaza El Segundo

No subsequent environmental documentation is required.

MITIGATION MEASURES

Sepulveda/Rosecrans Site Rezoning

The following mitigation measures apply to any future development on the Sepulveda/Rosecrans Rezoning Site.

Hydrology-Construction

- F-1** The applicant must prepare hydrology studies for each specific development on the Sepulveda/Rosecrans Rezoning Site. Such studies must be reviewed and approved by the City of El Segundo and any other applicable agency.
- F-2** The applicant must prepare runoff studies for each specific development on the Sepulveda/Rosecrans Rezoning Site so that the runoff from one specific project area would not flow onto another specific project area without the owners consent. Such studies must be reviewed and approved by the City of El Segundo and any other applicable agency.
- F-3** The applicant must prepare a master drainage plan for each specific development on the Sepulveda/Rosecrans Rezoning Site. This plan must include detailed hydrology/hydraulic calculations and drainage improvements, showing quantitatively how the project will eliminate the potential for downstream flooding due to increased storm water runoff. These plans will also identify the proposed BMPs to be implemented in compliance with the requirements of the Standard Urban Storm Water Mitigation Plan and the ESMC. Such plans must be reviewed and approved by the City of El Segundo and the Los Angeles County Department of Public Works.
- F-4** The applicant must design, for each specific development on the Sepulveda/Rosecrans Rezoning Site, a conveyance and detainment system to meet the Los Angeles County Department of Public Works limits on the storm drains that would convey the Sepulveda/Rosecrans Rezoning Site's discharge.

Water Quality-Construction

- F-5** The proposed Sepulveda/Rosecrans Site Rezoning and Plaza El Segundo Development must comply with City of El Segundo Ordinance No. 1347 and No. 1348, which establishes storm water and urban pollution controls.

Water Quality-Operation

- F-6** The project owner/developer of a specific development (e.g., Plaza El Segundo) on the Sepulveda/Rosecrans site must maintain all structural or treatment control BMPs for the life of the project.

Plaza El Segundo

The following mitigation measures have been identified as pertaining specifically to the Plaza El Segundo Development.

Hydrology-Construction

- F-7** The applicant must prepare a hydrology study for the Plaza El Segundo Site. The study must be reviewed and approved by the City of El Segundo and any other applicable agencies.
- F-8** The applicant must prepare a runoff study for the Plaza El Segundo Site so that the runoff does not flow onto another area without the owners consent. The study must be reviewed and approved by the City of El Segundo and the any other applicable agencies.
- F-9** The applicant must prepare a master drainage plan for the Plaza El Segundo Site. This plan must include detailed hydrology/hydraulic calculations and drainage improvements, showing quantitatively how the project will eliminate the potential for downstream flooding due to increased storm water runoff. These plans will also identify the proposed BMPs to be implemented in compliance with the requirements of the Standard Urban Storm Water Mitigation Plan and the ESMC. Such plans must be reviewed and approved by the City of El Segundo and the Los Angeles County Department of Public Works.
- F-10** The applicant must design a conveyance and detainment system to meet the City of El Segundo's and Los Angeles County Department of Public Works limits on the storm drains that would convey the Plaza El Segundo Site's discharge.

Water Quality-Construction

- F-11** The proposed Plaza El Segundo Development must comply with City of El Segundo Ordinance No. 1347 and No. 1348, which establishes storm water and urban pollution controls.

Water Quality-Operation

- F-12** The project owner/developer must maintain all structural or treatment control BMPs for the life of the Plaza El Segundo Development.

LEVEL OF IMPACT AFTER MITIGATION

Sepulveda/Rosecrans Site Rezoning

The Sepulveda/Rosecrans Site Rezoning Project's impacts related to hydrology and water quality would be less than significant with implementation of the mitigation measures described above.

Plaza El Segundo

Impacts from the proposed Plaza El Segundo Development related to hydrology and water quality would be less than significant with implementation of the mitigation measures described above.