

Appendix R



Convention and Event Center Project Groundwater Quality Technical Report



**Convention and Event Center Project
Groundwater Quality Technical Report
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1.0 INTRODUCTION

1.1 Project Description

The Convention and Event Center Project (hereafter referred to as the “Proposed Project”) consists of the following three components: (1) expansion and modernization of the Los Angeles Convention Center (hereafter referred to as the “Convention Center”), (2) the construction of a new multi-use entertainment and sports facility (hereafter referred to as the “Event Center”), and (3) related parking and support facilities. The Proposed Project is located within an approximately 68-acre site that includes all of the existing Convention Center property, including the Bond Street Parking Lot and the Cherry Street Parking Garage, STAPLES Center, as well as the air space over Pico Boulevard and LA Live Way (hereafter referred to as the “Project Site”). The Project Site is generally bounded by the following major roadways: the I-110 Harbor Freeway to the west; Chick Hearn Court to the north; Figueroa Street to the east; and Venice Boulevard to the south.

With the implementation of the Proposed Project, the Project Site would function as a unified center for convention, sports and entertainment uses. The Proposed Project is proposed to be implemented through adoption of a new Specific Plan and Community Plan Amendment. Although the Specific Plan encompasses the entire Project Site, its primary focus would be on the regulation of the proposed buildings and related features, including signage, as well as the regulation of transportation and parking. In addition, notable elements of environmental sustainability would be comprehensively integrated into the Proposed Project and would be one of the key elements that would guide the design of the Proposed Project. Total building square footage to be constructed under the Proposed Project would be approximately 1.74 million square feet of net new gross floor area. A brief overview of each of the Proposed Project’s three components is provided below.

The Proposed Project’s first component would involve the demolition and replacement of the Convention Center’s existing West and Petree Halls. The new structure (hereafter referred to as “New Hall”), would bridge over a portion of Pico Boulevard such that it would adjoin the Convention Center’s existing South Hall and would consist of roughly the same amount of square footage as the former West and Petree Halls. While the total square footage would be comparable, the amount of functional space would substantially increase through a more efficient building design that among other benefits results in a substantial increase in contiguous floor space for the Convention Center.

The Proposed Project’s second component is the development of the Event Center, a multi-purpose, entertainment and sports facility with a potentially retractable roof on the site of the former West and Petree Halls. The approximately 1,750,000 square-foot structure would include approximately 72,000 permanent seats with expandable seating capacity to approximately 76,250 seats for major marquee events, such as a Super Bowl. The Event Center would also be available for use as Convention

Center exhibit and meeting room space, when not used for spectator events, providing roughly 245,650 square feet of rentable exhibition and meeting room space.

The Proposed Project's third component would involve the construction of new larger, more efficient parking facilities on the existing Bond Street Parking Lot and Cherry Street Garage sites. As the West Hall would be demolished, the existing 1,625 parking spaces under the West Hall would be removed by the Proposed Project. The existing Cherry Street Garage would be rebuilt and expanded from the existing 858 spaces to approximately 2,950 parking spaces. A new parking garage would be constructed on the existing Bond Street Parking Lot, which would increase parking on that site from approximately 283 to approximately 928 parking spaces. These improvements would result in a net increase of approximately 1,121 parking spaces. Additionally, above-ground pedestrian bridges would provide connectivity between these parking structures and the Event Center and New Hall, as well as to LA Live Way.

In addition to the above improvements, the Proposed Project includes up to approximately 100,000 square feet of renovations to the existing Concourse building. Changes to the Convention Center's existing South Hall would be limited to its interface with the proposed New Hall. Existing parking under the South Hall and in the Convention Center's Venice Garage would not be affected by the Proposed Project. Street vacations involving portions of Pico Boulevard, LA Live Way, Bond Street and 12th Street would also occur under the Proposed Project.

The Proposed Project also includes approximately 4,317 square feet of landscape areas associated with the Event Center Plaza, approximately 69,485 square feet of landscape areas for the Gil Lindsay Plaza, and approximately 40,656 square feet of landscape areas along LA Live Way.

1.2 Scope of Work

This report provides a description of the groundwater quality at the Project Site and an analysis of the Project's potential significance related to impact on groundwater quality.

2.0 ENVIRONMENTAL SETTING

2.1 Regional Conditions

The City of Los Angeles overlies eight groundwater basins as identified in the Los Angeles Regional Water Quality Control Plan, adopted by the Los Angeles Regional Water Quality Control Board (LARWQCB), and designated by the California Department of Water Resources (DWR). The Los Angeles Coastal Plain includes the West Coast Basin, the Central Basin, the Santa Monica Basin, and the Hollywood Basin.

Groundwater use for domestic water supply is a major beneficial use of groundwater basins in Los Angeles County. Groundwater is harvested via a large number of wells owned and operated by the Los Angeles Department of Water and Power (LADWP) for use by private agricultural, industrial and domestic users.

The general quality of ground water in the Los Angeles Region has degraded substantially from background levels as a result of urban land uses. In areas with industrial or commercial activities, for example, aboveground storage tanks (“AST”) and underground storage tanks (“UST”) contain vast quantities of hazardous substances. Thousands of these tanks in Los Angeles Coastal Plain have leaked or are leaking, discharging petroleum fuels, solvents, and other hazardous substances into the subsurface. These leaks, as well as other discharges to the subsurface that result from inadequate handling, storage, and disposal practices, can seep into the subsurface and pollute groundwater.

In the lower aquifers of the Central and West Coast Groundwater Basins, historic over-pumping has led to falling groundwater levels resulting in seawater intrusion. This issue has been largely mitigated through the operation of an artificial recharge system consisting of spreading basins and injection wells that form fresh water barriers along the coast. Groundwater quality in the upper aquifers has been impacted by both organic and inorganic pollutants from a variety of sources, such as leaking tanks, leaking sewer lines, and illegal discharges.

2.2 Local Area Conditions

The Project Site is underlain by the Los Angeles Coastal Plain’s Central Subbasin, commonly referred to as the “Central Basin”. The Central Basin covers approximately 277 square miles and is bounded on the north by a surface divide called the La Brea High, and on the northeast and east by the Elysian, Repetto, Merced, and Puente Hills. The southeast boundary between the Central Basin and Orange County Groundwater Basin roughly follows Coyote Creek, which is a regional drainage province boundary. Figure 1 illustrates the southwest boundary, which is formed by the Newport Inglewood fault system and the West Coast Basin.

Historically, groundwater flow in the Central Basin has been from recharge areas in the northeast part of the subbasin, toward the Pacific Ocean on the southwest. However, pumping has lowered the water level in the Central Basin causing water levels in some aquifers on both sides of the Newport-Inglewood uplift to be about

equal. Even with a decrease in outflow, groundwater still flows from the northeast to the southwest toward the West Coast Subbasin.¹

LADWP's Water System provides water to the city's 4.1 million residents and businesses. On average LADWP draws 36% of its water from the Eastern Sierra, and purchases 52% from the Metropolitan Water District of Southern California (MWD). An additional 11% comes from pumped groundwater within the West Coast, and Central Basin. In an effort to conserve resources, Los Angeles uses recycled water for industrial and irrigation purposes, which represents the remaining 1% of total water supply.

There are no groundwater production wells or public wells in the Project vicinity.

2.3 On-site Conditions

Geotechnical investigations in the vicinity of the Proposed Project, as indicated in the report "Report of Geotechnical Investigation for Environmental Impact Report, Proposed Los Angeles Convention Center Modernization and Farmers Field Project" prepared by AMEC E&I, Inc., September 8, 2011, have shown that firm natural soil has been encountered to depths that vary from 2 to 10 feet. Beneath this layer the Project Site is underlain by granular and dense sands. Soil conditions have been shown to be conducive to the infiltration of precipitation based on previous geotechnical investigations in the region.² However, due to the nature of dense urban development, nearly all runoff is directed to public storm drainage infrastructure.

According to the report prepared by AMEC E&I, Inc., the historic high groundwater in the vicinity of the Project Site is estimated to be on the order of 90 feet below ground surface. Prior borings drilled to a depth of 100 feet at the Project Site did not report ground water above that depth except for minor seepage between approximately 17 and 36 feet.

The existing Project Site has been fully developed and is approximately 94% impervious and therefore does not contribute to the groundwater level via percolation of precipitation. Due to the existing depth of over 90 feet to the groundwater level there are currently no dewatering activities within the Project Site, as existing facilities do not consist of more than one level below grade.

Based on the California State Water Resources Control Board's (SWRCB) GeoTracker Groundwater Ambient Monitoring & Assessment (GAMA) database there are no production water wells within a one mile radius of the Project Site.³ There are also no existing spreading grounds within a one mile of the Project Site.

¹ California Department of Water Resources (DWR). "California's Groundwater Bulletin 118." 2004.

² According to research and investigation performed by Geotechnologies, Inc. for the Percolation Testing for the Proposed Bond Street Parking Structure located at the southwest corner of the Project Site dated May 16, 2008, the soils encountered on the site are granular in nature and should allow stormwater to percolate in a generally vertical manner.

³ State Water Resources Control Board. State Water Resources Control Board. July 2011
<http://www.swrcb.ca.gov/water_issues/programs/npdes/>.

There is therefore no net contribution or reduction of the groundwater table as a result of existing activity at the Project Site.

The LACC currently has seven USTs in operation containing gasoline or diesel fuel (ranging in capacity from 550-gallons to 6,000-gallons). In addition to the seven USTs, there are also three ASTs containing diesel fuel (ranging in capacity from 120-gallon to 300-gallons), and one AST containing propane. Also reported were three closed in place 280-gallon UST's.⁴

All of the current on site UST and AST operations were noted to be in general compliance with current regulatory requirements (Los Angeles Fire Department, South Coast Air Quality Management District, Certified Unified Program Agency, etc) and no operational concerns were noted. If for any reason the UST's are altered or removed due to renovations/construction, all alterations to the tanks, piping and associated dispensers (or emergency equipment) must be permitted with, and overseen by LAFD. In addition, the closed in place USTs (and any closed in place subsurface piping) will require full removal under LAFD permit if impacted by renovations/construction.⁵

Regarding former on-site USTs that were associated with the Convention Center operations, the regulatory closure of the former 2000-gallon gasoline UST does not include documentation regarding any remediation of reported contamination, therefore, soil sampling in this area and verification of UST closure/remediation status with LACC and LAFD should be conducted prior to any soil disturbance in this area. Based on the 1994 assessment and correspondence between the City of Los Angeles Geotechnical Services and LAFD, the area of this former gasoline UST was impacted with BTEX and TPH in the gasoline range, and the absence of available documents related to remediation of the area represents an environmental concern to the Project Site. Citadel recommends that this former UST be closed to current regulatory standards, in accordance with all LAFD regulations.⁶ The 2000-gallon UST was reportedly located in the small exterior asphaltic parking/storage lot located adjacent to the southwest corner of the West Hall, at the northeast corner of the intersection of Pico Blvd and L A Live Way. The volume of soil estimated to be impacted was 500 cubic yards, extending to approximately 25 feet below ground surface. The removal of the gasoline UST and impacted soil was recommended by Geotechnical Services in their 1994 report.⁷

⁴ Citadel Environmental Services, Inc. ESA. Santa Ana, 2011.
State Water Resources Control Board. Geo Tracker Groundwater Ambient Monitoring & Assessment.
<http://www.waterboards.ca.gov/gama/geotracker_gama.shtml>.

⁵ Citadel Environmental Services, Inc. ESA. Santa Ana, 2011.
State Water Resources Control Board. Geo Tracker Groundwater Ambient Monitoring & Assessment.
<http://www.waterboards.ca.gov/gama/geotracker_gama.shtml>.

⁶ Citadel Environmental Services, Inc. ESA. Santa Ana, 2011.
State Water Resources Control Board. Geo Tracker Groundwater Ambient Monitoring & Assessment.
<http://www.waterboards.ca.gov/gama/geotracker_gama.shtml>.

⁷ Citadel Environmental Services, Inc. ESA. Santa Ana, 2011.
State Water Resources Control Board. Geo Tracker Groundwater Ambient Monitoring & Assessment.
<http://www.waterboards.ca.gov/gama/geotracker_gama.shtml>.

2.4 Regulatory Framework

Clean Water Act

The Clean Water Act (CWA) was first introduced in 1948 as the Water Pollution Control Act. The Clean Water Act authorizes Federal, state, and local entities to cooperatively create comprehensive programs for eliminating or reducing the pollution of state waters and tributaries. The primary goals of the Clean Water Act are to restore and maintain the chemical, physical, and biological integrity of the nation's waters and to make all surface waters fishable and swimmable. As such, the Clean Water Act forms the basic national framework for the management of water quality and the control of pollutant discharges. The Clean Water Act also sets forth a number of objectives in order to achieve the above-mentioned goals. These objectives include regulating pollutant and toxic pollutant discharges; providing for water quality which protects and fosters the propagation of fish, shellfish and wildlife; developing waste treatment management plans; and developing and implementing programs for the control of non-point sources of pollution.

Since its introduction, major amendments to the Clean Water Act have been enacted (e.g., 1961, 1966, 1970, 1972, 1977, and 1987). Amendments enacted in 1970 created the USEPA, while amendments enacted in 1972 deemed the discharge of pollutants into waters of the United States from any point source unlawful unless authorized by a USEPA National Pollutant Discharge Elimination System (NPDES) permit. Amendments enacted in 1977 mandated development of a "Best Management Practices" Program at the state level and provided the Water Pollution Control Act with the common name of "Clean Water Act," which is universally used today. Amendments enacted in 1987 required the USEPA to create specific requirements for discharges.

In response to the 1987 amendments to the Clean Water Act and as part of Phase I of its NPDES permit program, the USEPA began requiring NPDES permits for: (1) municipal separate storm sewer systems (MS4) generally serving, or located in, incorporated cities with 100,000 or more people (referred to as municipal permits); (2) 11 specific categories of industrial activity (including landfills); and (3) construction activity that disturbs five acres or more of land. Phase II of the USEPA's NPDES permit program, which went into effect in early 2003, extended the requirements for NPDES permits to: (1) numerous small municipal separate storm sewer systems, (2) construction sites of one to five acres, and (3) industrial facilities owned or operated by small municipal separate storm sewer systems. The NPDES permit program is typically administered by individual authorized states.

In 2008, USEPA published draft Effluent Limitation Guidelines (ELGs) for the construction and development industry. On December 1, 2009 the EPA finalized its 2008 Effluent Guidelines Program Plan.

In California, the NPDES stormwater permitting program is administered by the State Water Resources Control Board (SWRCB). The SWRCB was created by the Legislature in 1967. The joint authority of water distribution and water quality protection allows the Board to provide protection for the State's waters, through its

nine Regional Water Quality Control Boards (RWQCBs). The RWQCBs develop and enforce water quality objectives and implement plans that will best protect California's waters, acknowledging areas of different climate, topography, geology, and hydrology. Regional Boards develop "basin plans" for their hydrologic areas, issue waste discharge requirements, enforce action against stormwater discharge violators, and monitor the water quality.

California Porter-Cologne Act

The Porter-Cologne Water Quality Control Act established the legal and regulatory framework for California's water quality control. The California Water Code authorizes the SWRCB to implement the provisions of the CWA, including the authority to regulate waste disposal and require cleanup of discharges of hazardous materials and other pollutants.

As discussed above, under the California Water Code (CWC), the State of California is divided into nine RWQCBs, governing the implementation and enforcement of the CWC and CWA. The Project Site is located within Region 4, also known as the Los Angeles Region. Each RWQCB is required to formulate and adopt a Basin Plan for its region. This Plan must adhere to the policies set forth in the CWC and established by the SWRCB. The RWQCB is also given authority to include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Board Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties

As required by the California Water Code, the LARWQCB has adopted a plan entitled "Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties" (Basin Plan). Specifically, the Basin Plan designates beneficial uses for surface and groundwaters, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's antidegradation policy, and describes implementation programs to protect all waters in the Los Angeles Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the Basin Plan.

The Basin Plan is a resource for the Regional Board and others who use water and/or discharge wastewater in the Los Angeles Region. Other agencies and organizations involved in environmental permitting and resource management activities also use the Basin Plan. Finally, the Basin Plan provides valuable information to the public about local water quality issues.

Safe Drinking Water Act (SDWA)

The Federal Safe Drinking Act, established in 1974, sets drinking water standards throughout the country and is administered by the USEPA. The drinking water standards established in the SDWA, as set forth in the Code of Federal Regulations (CFR), are referred to as the National Primary Drinking Water Regulations (Primary

Standards, Title 40, CFR Part 141) and the National Secondary Drinking Water Regulations (Second Standards, 40 CFR Part 143). California passed its own Safe Drinking Water Act in 1986 that authorizes the State's Department of Health Services (DHS) to protect the public from contaminants in drinking water by establishing maximum contaminants levels (MCLs), as set forth in the CCR, Title 22, Division 4, Chapter 15, that are at least as stringent as those developed by the USEPA, as required by the federal Safe Drinking Water Act.

California Water Plan

The California Water Plan (The Plan) provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The Plan, which is updated every five years, presents basic data and information on California's water resources including water supply evaluations and assessments of agricultural, urban, and environmental water uses to quantify the gap between water supplies and uses. The Plan also identifies and evaluates existing and proposed statewide demand management and water supply augmentation programs and projects to address the State's water needs.

The goal for the California Water Plan Update is to meet Water Code requirements, receive broad support among those participating in California's water planning, and be a useful document for the public, water planners throughout the state, legislators and other decision-makers.

Recent legislation relating to The Plan includes; SB 1341(Burton), SB672 (Machado), SB1062 (Poochigian), AB2587 (Mathews), Porter-Cologne Water Quality Control Act.

SB 1341(Burton) was enacted following the California Water Plan Update in 1998. The Legislature asked DWR to make public all assumptions and estimates that were to be used in the next update. It requires a report about the Update's assumptions and estimates (A&E Report). It requires that at a minimum the A&E Report will include information on all water categories specified by the California Water Code, in the Burton Bill.

SB 672 (Machado) requires that a report on the development of regional and local water projects, within each region, be included in California Water Plan. Projects that use technologies such as desalinization, reclamation, and recycling will be included in the report.

SB1062 (Poochigian) requires the DWR to include various strategies for meeting the state's water supply needs in its updates to the California Water Plan. It also establishes an advisory committee to help DWR update the plan. SB 1062 describes California's need for reliable water supplies, estimates of expected population growth, and the integral role of water conservation. SB1062 also requires DWR to establish an advisory committee, comprised of representatives of agricultural and urban water suppliers, local government, business, production agriculture,

environmental interests, and other interested parties, to assist in the updating of Bulletin 160.

AB 2587 (Mathews) requires the California Department of Water Resources to consider scenarios in the California Water Plan Update that are consistent with substantial continued agricultural production in California.

Low Impact Development (LID)

The LID Ordinance was passed by the Los Angeles City Council in September, 2011. Upon signature by the Mayor, the Project will be required to comply with the LID Ordinance as set forth below.

LID is a stormwater management strategy with goals to mitigate the impacts of increased runoff and stormwater pollution as close to its source as possible. LID promotes the use of natural infiltration systems, evapotranspiration, and use of stormwater. The goal of these LID practices is to remove nutrients, bacteria, and metals from stormwater while also reducing the quantity and intensity of stormwater flows. Through the use of various infiltration strategies, LID is aimed at minimizing impervious surface area. Where infiltration is not feasible, the use of bioretention, rain gardens, green roofs, and rain barrels that will store, evaporate, detain, and/or treat runoff may be used.⁸

The intent of the City of Los Angeles LID standards is to:

- Require the use of LID practices in future developments and redevelopments to encourage the beneficial use of rainwater and urban runoff;
- Reduce stormwater/urban runoff while improving water quality;
- Promote rainwater harvesting;
- Reduce offsite runoff and provide increased groundwater recharge;
- Reduce erosion and hydrologic impacts downstream; and
- Enhance the recreational and aesthetic values in our communities.

The City of Los Angeles Bureau of Sanitation, Watershed Protection Division would adopt the Low Impact Development (LID) standards as issued by the LARWQCB and the City of Los Angeles Department of Public Works. The LID Ordinance will conform to the regulations outlined in the NPDES Permit and SUSMP.

⁸ City of Los Angeles. "Low Impact Development Best Management Practices Handbook." June, 2011

3.0 SIGNIFICANCE THRESHOLDS

According to the City of Los Angeles CEQA Thresholds Guide a project would normally have a significant impact on groundwater quality if it would:

- Affect the rate or change the direction of movement of existing contaminants;
- Expand the area affected by contaminants;
- Result in an increased level of groundwater contamination (including that from direct percolation, injection or salt water intrusion); or
- Cause regulatory water quality standards at an existing production well to be violated, as defined in the California Code of Regulations (CCR), Title 22, Division 4, and Chapter 15 and in the Safe Drinking Water Act.

4.0 PROJECT DESIGN FEATURES

The Project will be designed to comply with all local and State regulations regarding the control of pollutants of concern that may affect the quality of groundwater underlying the Project Site. Compliance with both the Construction General Permit and Los Angeles County SUSMP will require the implementation of both construction related and post-construction Best Management Practices (BMPs) for the safe handling and disposal of contaminants and pollutants of concern.

As discussed in detail in the hazards technical report for the Project prepared by Citadel, compliance with all applicable federal, state and local requirements regarding handling, storage, and disposal of hazardous materials would address the potential for construction of the Project to release contaminants into groundwater. As discussed in detail in the hazards technical report, these regulations would specifically address uncovering of contaminated soils that may potentially occur during construction activities

Proper Handling and Disposal of Materials

The proper disposal, storage or use of hazardous materials such as cleaners, agents, solvents, or other construction or operations related activities would occur in accordance with regulatory requirements. Any non-stormwater discharge would be controlled and properly disposed of through either approved connections to the sanitary sewer system or transported to an approved processing facility to prevent the contamination of site soils or groundwater. In addition, loading docks and storage areas would be designed to provide spill containment and prevent contaminants from reaching the groundwater.

Proper Design of New Storage Tanks

New fuel storage tanks for the operation of a range of mechanical equipment such as emergency generators would be designed in accordance with regulatory requirements to prevent leaking of contaminants into the surrounding soils.

Measures would include dual containment consistent with current codes and standards.

Pre-Treatment and Infiltration of Storm Water

Infiltration of stormwater as a means of stormwater treatment and management is a top tier priority for the Watershed Protection Division of the City of Los Angeles and would be considered along with other treatment options during the design phase of the Project. The pre-treatment of the stormwater via mechanical filters and treatment devices would also be required to remove a majority of contaminants from the stormwater prior to disposal in the sub-soils. Infiltration systems would be designed in areas where the risk of spreading existing contaminants is negligible.

No Injection or Supply Wells

The Proposed Project does not include the installation of injection or supply wells which would impact groundwater quality.

No Temporary or Permanent Dewatering

Temporary or permanent dewatering operations would also have the potential for impacting groundwater quality, however due to the deep level of existing groundwater at the Project Site dewatering will not be required as part of this project.

No Interruption of Existing Wells or Spreading Grounds

Interrupting an existing injection or supply well or designated spreading ground could potentially have an impact on the groundwater quality. However, there are no existing wells or spreading grounds within a mile of the Project Site, and therefore the Project will not impact an existing well or spreading ground.

5.0 PROJECT IMPACTS

5.1 Construction

Excavations required for the construction of the Event Center would range from an average depth of 1 foot for the New Hall to a maximum depth of approximately 50 feet for the Event Center. The Project would also result in a net export of existing soil material. In accordance with regulatory requirements, any contaminated soils within the Project Site would be captured within that volume of excavated material, removed from the site, and remediated at an approved disposal facility. The Project may include infiltration systems, and dual containment storage tanks, which are addressed under Section 4 above.

During on-site grading and building construction, hazardous material, such as fuels, paints, solvents, concrete additives and the like, could be used and therefore would require proper management and, in some cases, disposal. The management of any resultant hazardous wastes could increase the opportunity for hazardous materials releases into groundwater. As described in Section 4 above, compliance with all applicable federal, state, and local requirements concerning the handling, storage and disposal of hazardous waste, would effectively reduce the potential for the

construction of the Project to release contaminants into groundwater that could affect existing contaminants, expand the area or increase the level of groundwater contamination or cause the violation of regulatory water quality standards at an existing production well as defined in the California Code Regulations, Title 22, Division 4, Chapter 15 and the Safe Drinking Water Act. In addition, as there are no groundwater production wells or public water supply wells within one mile of the Project Site, no construction impacts are anticipated to existing wells. Therefore no significant impact is anticipated

5.2 Operation

The Project would not require direct discharge to or extraction from the groundwater supply due to average excavations that would range up to a maximum depth of approximately 50 feet below existing grades and depth of the water table at more than 90 feet below the existing grade.

In accordance with NPDES requirements, the Project may utilize infiltration as a means of treatment and disposal of the “first flush” or $\frac{3}{4}$ ” of rainfall of any rain event. Incidental percolation of irrigation water and precipitation from landscaped areas may also contribute marginal volumes of runoff to groundwater. The majority of pollutants of concern for stormwater runoff are captured and filtered out by soils, with the exception of nitrates often used in landscaping fertilizers. Although landscaped areas account for roughly 6% of the existing Project Site and approximately 7% of the Proposed Project Site, nitrates would be controlled through the selection of native plants and minimal use on nitrogen based fertilizers in on-going landscape maintenance.

The Proposed Project would result in increased activity at the Project Site, which would result in an increase in the usage of fuels, lubricants and other potential pollutants. Surface spills from the handling of hazardous materials most often involve small quantities and are cleaned up in a timely manner thereby resulting in little threat to groundwater below the Project Site. As described in Section 4, compliance with all applicable existing regulations and plans at the Project Site would prevent the Project from affecting, or expanding any potential areas affected by contamination, increasing the level of contamination, or causing regulatory water quality standards at an existing production well to be violated. In addition, as referenced in Section 2.3, based on the California State Water Resources Control Board’s (SWRCB) GeoTracker Groundwater Ambient Monitoring & Assessment (GAMA) database there are no production water wells within a one mile radius of the Project Site, and no operational impacts are anticipated to existing wells. Therefore no significant impact is anticipated.

5.3 Cumulative Impacts

Although development of related projects could include groundwater remediation, development associated with the Project is not expected to include activities that would require groundwater remediation that could affect groundwater hydrology; therefore, no cumulative groundwater impacts are anticipated.

Additionally, related-projects are unlikely to cause or increase groundwater contamination because existing statutes prohibit contamination of groundwater by existing and future land uses and also require remediation of existing contamination.

In light of existing statutes that apply to the Project and other projects, cumulative impacts to groundwater quality would be less than significant. In addition the Proposed Project's contribution to groundwater quality impacts is not cumulatively considerable and, therefore, less than significant, as the Proposed Project is not anticipated to affect the rate or direction of movement of existing contaminants; expand the areas affected by contaminants; increase the level of groundwater contamination (including that from direct percolation, injection or saltwater intrusion); or cause regulatory water quality standards of existing production wells to be violated as defined in the California Code of Regulations, Title 22, Division 4, Chapter 15 and Safe Drinking Water Act.

6.0 LEVEL OF SIGNIFICANCE

Based on the analysis contained in this report, no significant impacts to groundwater quality have been identified for the Proposed Project.

REFERENCES

Los Angeles County Department of Public Works. A Manual for the Standard Urban Storm Water Mitigation Plan (SUSMP). Los Angeles Region, September 2002.

City of Los Angeles Department of Public Works. Development Best Management Practices Handbook. Los Angeles: City of Los Angeles Department of Public Works, 2011.

Los Angeles County Department of Public Works. "Development Planning for Storm Water Management." 2002.

FEMA. FEMA Map Service Center - FEMA Flood Zone Designations. 13 July 2011
<<http://www.msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=1&content=floodZones&title=FEMA%20Flood%20Zone%20Designation>>.

California Department of Water Resources (DWR). "California's Groundwater Bulletin 118." 2004.

City of Los Angeles. "Low Impact Development Best Management Practices Handbook." June, 2011.

Los Angeles County Department of Public Works. Los Angeles County Hydrology Manual. Alhambra: Los Angeles County Department of Public Works, 2006.

State Water Resources Control Board. State Water Resources Control Board. July 2011
<http://www.swrcb.ca.gov/water_issues/programs/npdes/>.

California Stormwater Quality Association (CASQA). Stormwater Best Management Practice Handbook: Construction. Fresno: California Stormwater Quality Association (CASQA), 2009.

USEPA. U.S. Environmental Protection Agency - Clean Water Act. July 2011
<<http://www.epa.gov/lawsregs/laws/cwa.html>>.

California Department of Water Resources (DWR). "California's Groundwater Bulletin 118." 2004.

Citadel Environmental Services, Inc. ESA. Santa Ana, 2011.
State Water Resources Control Board. Geo Tracker Groundwater Ambient Monitoring & Assessment. <http://www.waterboards.ca.gov/gama/geotracker_gama.shtml>.

Water Replenishment District of Southern California. An Introduction to the Central and West Coast Groundwater Basins. <<http://www.wrd.org/engineering/introduction-groundwater-basins-los-angeles.php>>.

Figure 1

**Los Angeles Regional Water Quality Control Board
Map of Los Angeles Coastal Groundwater Basins**

