Section 4.8:
HYDROLOGY AND WATER QUALITY

4.8 HYDROLOGY AND WATER QUALITY

This section describes regulations related to hydrology and water quality in the Project area, identifies criteria for impacts on hydrology and water quality, and evaluates potential impacts associated with the proposed Project. Information given in this section is based on hydrology and water quality information obtained from available public resources including the Los Angeles County Department of Public Works (LACDPW) *Flood Zone Layers Map* (2015). Information for this section was also obtained from the *Draft Existing Conditions Hydrology Evaluation Report for the Earvin Magic Johnson Park* (July 2014), and the *Draft Geotechnical Evaluation Study* (July 2014).

ENVIRONMENTAL SETTING

The area surrounding Earvin "Magic" Johnson (EMJ) Park is highly urbanized. EMJ Park is located on the coastal plain within the Compton Creek watershed, which drains to Compton Creek and ultimately into the Los Angeles River. Stormwater runoff from this area ultimately empties into the San Pedro Bay. The region has a mean annual rainfall of 13.78 inches. The general topography around EMJ Park slopes from northwest to southeast, generally guiding stormwater in the same direction. The configuration of the site allows for the directing of water along graded swales and valleys to collection devices and/or to one of the two onsite artificial lakes. There are multiple catch basins within EMJ Park in which drainages are conveyed in one of two ways: (1) catch basins convey drainages to offsite County storm drain systems; (2) catch basins convey drainages internally and drainages remain onsite. Remaining sheet flows and drainages that are not conveyed to a catch basin are either conveyed to one of the two artificial lakes and/or absorbed into the ground. Water all around EMJ Park is captured in storm drains owned and operated by the City of Los Angeles and the County of Los Angeles (County). The two onsite artificial lakes are lined with a geomembrane in order to retain water in the lakes. The lakes are supplied by the Golden State Water Company to maintain a consistent level in each lake.

The site contains shallow groundwater at a depth of approximately 40 to 45 feet below the ground surface, and deep ground water was found at approximate depths of 110 to 129 feet, based on the *Site Assessment Report for the Former Athens Tank Farm, Willowbrook, County of Los Angeles* (Kleinfelder, 2010). Based on the information presented in the assessment, localized perched groundwater may exist.

REGULATORY FRAMEWORK

FEDERAL

Clean Water Act (also known as the Water Pollution Control Act)

The Clean Water act of 1972 (CWA) established the basic structure for regulating discharges of pollutants into the waters of the U.S. and regulating quality standards for surface waters. Under the CWA, the U.S. Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industries and surface waters. The CWA gives States the primary responsibility for protection of restoring surface water quality into waters of the United States.

STATE

California Water Code

The California Water Code is the principal State law regulating water quality in California. Other California Codes contain water quality provisions requiring compliance as they relate to specific activities. The California Water Code regulates water and its uses. Division 7 of the California Water Code, also known as the Porter-Cologne Act, establishes a program to protect water quality and beneficial uses of the State water resources and includes both ground and surface waters. The SWRCB and the RWQCB are the principal State agencies responsible for control of water quality. The SWRCB and the RWQCB establish waste discharge requirements, water quality control and monitoring, enforcement of discharge permits, and ground and surface water quality objectives. They also prevent waste and unreasonable use of water and adjudicate water rights.

LOCAL

Municipal Separate Storm Sewer System (MS4) NPDES Permit for Los Angeles County

The Los Angeles Regional Water Quality Control Board (LARWQCB) is one of nine statewide regional boards. The LARWQCB protects ground and surface water quality in the Los Angeles region, including the coastal watersheds of Los Angeles and Ventura Counties, along with very small portions of Kern and Santa Barbara Counties. In order to carry out its mission to preserve and enhance water quality, the LARWQCB conducts the following range of activities to protect ground and surface waters under its jurisdictions:

- Addresses region-wide and specific water quality concerns through updates of the Water Quality Control Plan (Basin Plan) for the Los Angeles region;
- Prepares, monitors compliance with, and enforces Waste Discharge Requirements, including NPDES permits;
- Implements and enforces local stormwater control efforts;
- Regulates the cleanup of contaminated sites, which have already polluted or have the potential to pollute ground or surface water;
- Enforces water quality laws, regulations, and waste discharge requirements;
- Coordinates with other public agencies and groups that are concerned with water quality; and
- Informs and involves the public on water quality issues.

The County and the Los Angeles County Flood Control District, along with 84 incorporated cities within the coastal watersheds of Los Angeles County are permittees of the Los Angeles County MS4 NPDES Permit. Permittee requirements related to non-stormwater discharges include:

- Notify the permittee of the planned discharge in advance, consistent with conditions for conditionally exempt non-stormwater discharges or recommendations pursuant of the applicable BMP manual;

- Obtain any local permits required by the MS4 owner(s) and/or operator(s);
- Conducts monitoring of the discharge, if required by the permittee;
- Implement BMPs and/or control measures as specified in conditions for conditionally exempt non-stormwater discharges or in the applicable BMP manual(s) as a condition of the approval to discharge into the Permittee's MS4;
- Maintain records of its discharge to the MS4, consistent with the requirements of conditions for conditionally exempt non-stormwater discharges or recommendations pursuant to the applicable BMP manual. For lake dewatering, Permittees shall require that the following information is maintained by the lake owner; operator: name of the discharger, date and time of notification, method of notification, location of discharge, discharge pathway, receiving water, date of discharge, time of beginning and end of the discharge, duration of the discharge, flow rate or velocity, total number of gallons discharged, type(s) of sediment controls used, pH of discharge, type(s) of volumetric and velocity controls used, and field and laboratory monitoring data. Records shall be made available upon request by the permittee or Regional Water Board;
- Develop and implement procedures that minimize the discharge of landscape irrigation water into the MS4 by promoting conservation programs; and
- Permittees shall coordinate with the local water purveyor(s), where applicable, to promote landscape water use efficiency requirements for existing landscaping, use of drought tolerant, native vegetation, and the use of less toxic options for pest control and landscape management.

The County permittee's administrator of the MS4 permit is the LACDPW which would issue applicable local permits, conditions, and approvals for future phases of development of EMJ Park.

LOS ANGELES COUNTY GENERAL PLAN

Water and Waste Management Element

Objective	To mitigate hazards and avoid adverse impacts in providing water and waste services and to protect the health and safety of all residents.
Objective	To develop improved systems of resource use, recovery, and reuse.
Objective	To provide efficient water and waste management services.
Objective	To maintain the high quality of our coastal, surface, and ground waters.
Policy 4	Encourage compatible, multiple use of water and waste management facilities, including public recreational utilization, where consistent with their original purpose and the maintenance of water quality.
Policy 9	Promote the advancement of technology to reduce the volume of liquid waste.
Policy 13	Program water and sewer service extensions to be consistent with General Plan policies and to mitigate situations that pose immediate health and safety hazards.
Policy 14	Continue to recover off-site costs for capital improvements necessitated by development, including required additional plant capacity, as well as other water and waste management facilities.
Policy 17	Protect public health and prevent pollution of ground water through the use of whatever alternative is necessary.
Policy 18	Provide protection for ground water recharge areas to ensure water quality and quantity.
Policy 19	Avoid or mitigate threats to pollution of the ocean, drainage ways, lakes, and ground water reserves.

Policy 20	Design flood control facilities to minimize alteration of natural stream channels.
Policy 22	Design water and waste management systems which enhance the appearance of the neighborhoods in which they are located and minimize negative environmental impacts.
Policy 25	Encourage development and application of water conservation, including recovery and reuse of storm and waste water.

IMPACT ANALYSIS AND MITIGATION MEASURES

METHODOLOGY

An assessment of hydrology and water quality impacts was prepared by evaluating the existing hydrology and water quality settings and comparing it to hydrology and water quality conditions that would occur with implementation of the proposed Project. An evaluation of the significance of potential impacts on hydrology and water quality must consider both direct effects to the resource, as well as indirect effects in a local or regional context. When considering the significance of an individual impact, the EIR considers the existing Federal, State, and local regulations, laws and policies in effect, including applicable *County of Los Angeles General Plan* (1980) policies. In addition, the impact analysis considers the Project design features that have been incorporated into the Project to avoid, reduce or offset potential impacts. For the purposes of this analysis, the hydrology and water quality study area is confined to the proposed Project study area described in Chapter 3 of this EIR.

THRESHOLDS OF SIGNIFICANCE

The following thresholds of significance are based, in part, on CEQA Guidelines Appendix G. For purposes of this EIR, implementation of the proposed Plan may have a significant adverse impact on hydrology and water quality if it would do any of the following:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a new deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially 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 offsite;
- 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 offsite;
- 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;
- Otherwise substantially degrade water quality;
- 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;
- 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;
- Inundation by seiche, tsunami, or mudflow.

PROJECT IMPACTS AND MITIGATION

Threshold:	*Would the Project violate any water quality standards or waste discharge requirements?*

Impact 4.8-1 **Implementation of the Project would not violate any water quality standards or waste discharge requirements. This impact would be *less than significant.***

CONSTRUCTION

The Project would result in a comprehensive renovation and minor expansion of the existing EMJ Park. EMJ Park would be larger and have more amenities, which would likely result in the increased usage of EMJ Park. The Project would include the removal of the existing two artificial lakes, and would replace them with a new single artificial lake in the approximate same location of the current northeastern lake. The southwestern lake's footprint would be replaced with a splash pad area with shooting fountain-like features for children to play in. The water in the lake, boat pond, and filtration gardens would be separated from the splash pad area.

The existing artificial lakes would need to be drained prior to the implementation of the new lake and splash pad area. If the lake water to be discharged to the storm drain system all requirements and conditions of the Los Angeles County MS4 permit would need to be met and approval obtained from LACDPW. A General National Pollutant Discharge Elimination System (NPDES) Permit would be obtained from the LARWQCB if the water from the lake would be discharged to a surface water. The permit requires that the water being discharged does not exceed the effluent limitations specifically outlined in the permit. With compliance with all NPDES permit conditions and treatment of the lake water to appropriate water quality standards prior to discharge, lake dewatering would not violate water quality standards. If the water from the lakes does not meet the effluent limitations or cannot be treated to meet the effluent limitations, the water may be discharged to the Sanitation Districts of the County sewer system and be treated at the Districts wastewater treatment facilities utilizing the District's Liquid Waste Disposal Program. The closest liquid waste disposal station is the Joint Water Pollution Control

Plan in the City of Carson. Use of this facility requires pre-registration and preparation of the Uniform Sewage Manifest Form.

Construction of the proposed improvements would be required to comply with the Construction Storm Water Permit. The LARWQCB administers the NPDES permit program regulating stormwater from construction activities for projects greater than one acre in size. The main compliance requirement of the NPDES permits is the development of a Stormwater Pollution Prevention Plan (SWPPP). A SWPPP must identify potential onsite pollutants, and identify and implement appropriate stormwater pollution prevention measures to reduce or eliminate discharge of pollutants to surface water from stormwater and non-stormwater discharges. Stormwater Best Management Practices (BMPs) to be implemented during construction and grading would be outlined in the SWPPP prepared for this Project; examples include: use of silt fencing, sandbags or straw bales to control runoff, and identification of emergency procedures in case of hazardous materials spill. Compliance with the Construction Storm Water Permit and implementation of the SWPPP would ensure that the Project would not violate any water quality standards or waste discharge requirements.

OPERATIONS AND MAINTENANCE

As outlined in Section 3.0, *Project Description*, the South Agency Headquarters (SAH) would house the operation and maintenance team, equipment and supplies for ongoing maintenance of EMJ Park and park facilities. Maintenance activities would include regular cleanup of animal waste (from horses and dogs) on the grounds and trails that are not removed by pet owners. The site improvements would include signage, waste bags, and waste receptacles throughout EMJ Park, providing supplies intended to promote pet owners to clean up after their own pets.

The central portion of the proposed lake would be used for model boating. The larger northern part of the lake includes a fishing dock and would be used for fishing as well as more active use such as paddle and kayak boating. These recreational uses involve proximity to the lake water whereby if a person fell into the lake ingestion of water is possible. However, use of the lake for swimming is not proposed which involves body

contact and a much greater potential for ingestion of water. The water quality of the lake would be preserved through design of an aeration system that would be monitored by the SAH operation and maintenance team. The operation and maintenance team would also conduct regular sampling of the lake water for ongoing monitoring of the water quality, and would apply treatments as necessary (for example chlorine to manage bacterial content and diquat for aquatic weed control) as appropriate for the proposed recreational uses. It is anticipated that the water quality of the new lake will be greatly improved as compared to the existing lake such that a catch and release program would no longer be needed.

The two existing onsite artificial lakes each contain an island that is heavily utilized by birds, primarily ducks, for nesting. There is currently no human access (i.e. bridge) to the islands so the islands are not regularly disturbed by human presence and activities. The islands would be removed as part of the proposed Project. With removal of the islands that are used for nesting and with the anticipated increase in use of EMJ Park by people, it is anticipated that the resident bird population that is currently leaving their excrement or droppings in the lake and along the shoreline would be greatly reduced or eliminated. As this source of pollution to the lake would be minimized, the water quality conditions of the future lake would be improved as compared to the current condition.

Other water features such as the reflecting pool and splash pad, as well as the Aquatic Center pools, would be maintained and treated regularly (i.e. using chlorine application) to ensure proper water quality.

As the County permittee's administrator of the MS4 permit the LACDPW would review and approve final design plans and issue applicable local permits and conditions for all future phases of development of EMJ Park. All future phases of development of EMJ Park would be required to comply with the Planning and Land Development Program of the MS4 permit. The purpose of the Planning and Land Development Program is to:

- Lessen the water quality impacts of development by using smart growth practices such as compact development, directing development towards existing

communities via infill or redevelopment, and safeguarding of environmentally sensitive areas;

- Minimize the adverse impacts from storm water runoff on the biological integrity of Natural Drainage Systems and the beneficial uses of water bodies in accordance with requirements under CEQA;
- Minimize the percentage of impervious surfaces on land developments by minimizing soil compaction during construction, designing projects to minimize the impervious area footprint, and employing Low Impact Development (LID) design principals to mimic predevelopment hydrology through infiltration, evapotranspiration and rainfall harvest and use;
- Maintain existing riparian buffers and enhance riparian buffers when possible;
- Minimize pollutant loadings from impervious surfaces such as roof tops, parking lots, and roadways through the use of properly designed technically appropriate BMPs (including Source Control BMPs such as good housekeeping practices), LID Strategies, and Treatment Control BMPs;
- Properly select, design and maintain LID and Hydromodification Control BMPs to address pollutants that are likely to be generated, reduce changes to pre-development hydrology, assure long-term function, and avoid the breeding of vectors;
- Prioritize the selection of BMPs to remove storm water pollutants, reduce storm water runoff volume, and beneficially use storm water to support an integrated approach to protecting water quality and managing water resources in the following order of preference: (1) on-site infiltration, bioretention and/or rainfall harvest and use, (2) on-site biofiltration, off-site ground water replenishment, and/or off-site retrofit.

The MS4 permit Integrated Water Quality/Flow Reduction/ Resources Management Criteria is as follows:

- Each permittee shall require all New Development and Redevelopment projects to control pollutants, pollutant loads, and runoff volume emanating from the

project site by: (1) minimizing the impervious surface area and (2) controlling runoff from impervious surfaces through infiltration, bioretention and/or rainfall harvest and use.

- Except as provided in Technically Infeasiblility or Opportunity for Regional Ground Water Replenishment, Local Ordinance Equivalence, or Hydromodification sections of the permit, each permittee shall require the project to retain on-site the Stormwater Quality Design Volume (SWQDv) defined as the runoff from: (a) the 0.75-inch, 24-hour rain event, or (b) the 85th percentile, 24-hour rain event, as determined from the Los Angeles County 85th percentile precipitation isohyetal map, whichever is greater.
- Bioretention and biofiltration systems shall meet the design specifications unless otherwise approved by the Regional Water Board Executive Officer.
- When evaluating the potential for on-site retention, each permittee shall consider the maximum potential for evapotranspiration from green roofs and rainfall harvest use.

As part of the final design, which would include the grading plans, BMPs for the treatment of stormwater runoff would be developed that would treat the water prior to discharge into the new lake. It is anticipated that a detention basin would be designed to capture stormwater runoff from EMJ Park and potentially off-site areas as well. The stormwater that would potentially be captured would supplement the water source for the lake, which would help reduce reliability on potable water used for the lake and may be used for irrigation of other landscaped areas of EMJ Park. Prior to discharge to the lake, the stormwater runoff would be treated. Treatment options could include bioswales, filtration systems, and or ultraviolet (UV). Final design of the drainage plan for each phase and operation and maintenance of all water features will comply with all requirements of the mosquito abatement program. The potable water system for future phases of development will be designed to avoid stagnant ends of the waters supply to prevent the potential for Legionella growth in the water supply line.

Common pollutants associated with equestrian facilities include nutrients, sediment, bacteria, and chemicals used for grooming and cleaning. The facility will be required to comply with LID requirements as required by the County for development and redevelopment projects within the unincorporated County area. Basic source controls shall be required, and shall include cleanup and appropriate disposal of horse manure, restrictions on grooming locations to areas draining to vegetation or sanitary sewer, restrictions on use of cleaning and grooming products where they may run off into storm drains or receiving waters. Site design and treatment control BMPs and LID standards shall be included as required by the regulations in place at the time of design. At a minimum, site design BMPs shall include: directing roof runoff away from high use or paved areas, directing surface water runoff away from areas containing manure, bedding, or feed debris, incorporating vegetated buffers, strips and swales, and maintaining vegetation for erosion management.

At this time, the LARWQCB has not adopted a Confined Animal Feeding Operation (CAFO) permit that would apply to the EMJ Park equestrian facility. The LARWQCB has the authority to designate any size operation as a CAFO, although the general guidelines are: Large CAFO, at least 500 horses; Medium CAFO, at least 150 horses. If a CAFO permit is adopted, the facility may be required to develop a nutrient management plan, submit annual reports to the LARWQCB, and maintain records of nutrient management plan implementation.

Design guidelines for SAH aboveground storage tanks (ASTs) shall include a Spill Prevention Control and Countermeasure (SPCC) plan in the event that the capacity of the AST exceeds 1,320 gallons, as required by Section 112.1(b) of the Clean Water Act (40 CFR part 112). The purpose of the SPCC plan is to form a comprehensive oil spill prevention program that minimizes the potential for discharges.

As LACDPW would review and approve final design plans for all future phases of development of EMJ Park ensure compliance with the Planning and Land Development Program of the MS4 permit and with implementation of the following, the Project would not violate any water quality standards or waste discharge requirements:

- SWPPP during construction, ongoing monitoring of the lake through sampling;
- regular maintenance including pet waste removal;
- implementation of site design BMPs; and
- design guidelines for SAH for ASTs.

Potential impacts are less than significant.

Threshold:	*Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a new 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)?*

Impact 4.8-2 **Implementation of the Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a new deficit in aquifer volume or a lowering of the local groundwater table level. This impact would be *less than significant.***

The proposed Project includes a comprehensive renovation and minor expansion of the park boundary. Implementation of the Project is not anticipated to result in a substantial change in the amount of water used at the site; therefore, the Project is not anticipated to substantially deplete groundwater supplies. The site is largely landscaped with grasses, shrubs and trees. The proposed improvements would include a comprehensive renovation of the landscaping, which would include a higher efficiency irrigation system and drought-tolerant plants; therefore, less water would be required to irrigate EMJ Park. In addition, the landscaped area would be less extensive with implementation of the

Project, because areas that are currently landscaped would be improved with various amenities that do not require irrigation (i.e. trails, paved areas, skate park).

The proposed Project improvements include construction of additional amenities such as the SAH, the Community Event Center, and Equestrian Center, that would increase the portion of the site that is impervious to stormwater infiltration. The site currently is estimated to have 21 acres of impervious surfaces, which makes up about 17.5% of the 120 acre site. Due to the underlying compacted soils of the site and the lining of the lakes (so that they will hold water), the site currently does not provide an area of substantial groundwater recharge. With implementation of the proposed improvements it is estimated that 40 acres of the site would have impervious surfaces, which makes up approximately 33% of the 120 acre site. Although the proposed improvements would increase the overall impervious surfaces of the site, the improved site would still have large areas that are landscaped and pervious and would continue to provide infiltration of stormwater during rain events. Therefore, the Project is not anticipated to substantially interfere with groundwater recharge. Impacts would be less than significant.

Threshold:	*Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or offsite?*

Impact 4.8-3 **Implementation of the Project would not 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 onsite or offsite. This impact would be *less than significant.***

As outlined in more detail in Section 4.11, *Public Services and Utilities*, the Project site is relatively flat but the topography overall generally slopes from northwest to southeast. The Project is located on the coastal plain within the Compton Creek watershed, which drains to Compton Creek and ultimately into the Los Angeles River. Stormwater runoff from this area ultimately empties into the San Pedro Bay. Outside of EMJ Park's

boundaries, all water is captured in storm drains owned and operated by the City of Los Angeles and the County. The existing park drainage currently consists of a combination of onsite containment and offsite conveyance into the County's storm drain system. There are a number of catch basins throughout EMJ Park that are connected to the County's storm drains, such as the drainage flows in the southeast portion of EMJ Park. Other catch basins are internal to EMJ Park and keep drainage onsite.

As the Project site does not contain naturally occurring drainage features, such as a stream or river, implementation of the Project would not alter the course of a stream or river. The Project site is relatively flat and provides large areas of pervious surfaces (grassy and earthen areas) that provide infiltration of stormwater during rain events. The Project site does not contain significant slopes or impervious surfaces, such that large amounts of stormwater runoff are generated and discharged offsite. Therefore, the Project site does not warrant or contain substantial storm drain channels and improvements.

Project implementation is anticipated to result in minor modifications to the site topography and drainage; however, these modifications would largely replicate the existing condition where some stormwater runoff is conveyed to the existing storm drain system and some would be retained onsite. The proposed Project improvements would be designed so that the stormwater discharged to the existing stormwater drainage system does not exceed the stormwater discharged in the current condition. In addition, it is anticipated that a detention basin would be designed to capture stormwater runoff from EMJ Park and potentially off-site areas as well. The stormwater that would potentially be captured would supplement the water source for the lake, which would help reduce reliability on potable water used for the lake, and may be used for irrigation of other landscaped areas of EMJ Park. Implementation of the detention basin to capture stormwater runoff would also help ensure that the Project would not result in an increase of stormwater runoff that would be discharged to the existing stormwater drainage system. Since the Project site would be improved with landscaping and hardscaping, the site would be largely stabilized and would not result in substantial erosion or siltation offsite. Therefore, impacts would be less than significant.

Threshold:	*Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would* result *in flooding onsite or offsite?*

Impact 4.8-4 **Implementation of the Project would not 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 onsite or offsite. This impact would be *less than significant.***

See the response to Impact 4.8-3, above. As outlined in the response above, the Project site does not contain naturally occurring drainage features, such as a stream or river, and implementation of the Project would not alter the course of a stream or river. The Project site's large areas of pervious surfaces provide stormwater infiltration during rain events. The Project site does not contain a substantial amount of impervious surfaces that generate large amounts of stormwater runoff, and the site does not warrant or contain substantial storm drain channels and improvements.

Project implementation is anticipated to result in minor modifications to the site topography and drainage; however, these modifications would replicate the existing condition where some stormwater runoff is conveyed to the existing storm drain system and some would be retained onsite. The proposed Project improvements would be designed so that onsite stormwater is retained, and stormwater discharged to the existing stormwater drainage system would not exceed the stormwater discharged in the current condition. In addition, it is anticipated that a detention basin would be designed to capture stormwater runoff from EMJ Park and potentially off-site areas as well. Implementation of the detention basin to potentially capture stormwater runoff would also help ensure the Project would not result in an increase of stormwater runoff that is discharged to the existing stormwater drainage system. Therefore, implementation of the

Project would not result in a substantial increase in stormwater runoff that would result in flooding. Less than significant impacts would occur.

Threshold:	*Would the Project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

Impact 4.8-5 **Implementation of the Project would not 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. This impact would be *less than significant.***

See the response to Impact 4.8-3, above. As outlined above, Project implementation is anticipated to result in minor modifications to the site topography and drainage however it would replicate the existing condition where some stormwater runoff is conveyed to the existing storm drain system and some would be retained onsite. The proposed Project improvements would be designed so that onsite stormwater is retained, and stormwater discharged to the existing stormwater drainage system does not exceed the amount of stormwater discharged in the current condition. In addition, it is anticipated that a detention basin would be designed to capture stormwater runoff from EMJ Park and potentially off-site areas as well. Implementation of the detention basin to potentially capture stormwater runoff would also help ensure that the Project would not result in an increase of stormwater runoff that would be discharged to the existing stormwater drainage system. Therefore, implementation of the Project would not result in a substantial increase in stormwater runoff that would exceed the capacity of the existing stormwater drainage system. Prior to discharge to the lake, the stormwater runoff would be treated. Treatment options could include bioswales, filtration systems, and or ultraviolet (UV). Implementation of the Project would not provide a substantial additional source of polluted runoff. Impacts would be less than significant.

Threshold:	*Would the Project otherwise substantially degrade water quality?*

Impact 4.8-6 **Implementation of the Project would not otherwise substantially degrade water quality. This impact would be *less than significant.***

See the response to Impact 4.8-1, above. Impacts would be less than significant.

Threshold:	*Would the Project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

Impact 4.8-7 **Implementation of the Project would not place housing within a 100-year flood hazard area as mapped on the County's FEMA Flood Zone Map. This impact would be *less than significant.***

The Project site is not located within a 100-year flood hazard area, nor are any adjacent areas located within a 100-year flood hazard area. Additionally, the Project does not propose any new residential uses. Therefore, no housing would be placed within a 100-year flood hazard area with Project implementation. Impacts would be less than significant.

Threshold:	*Would the Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*

Impact 4.8-8 **Implementation of the Project would not 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. This impact would be *less than significant.***

The Project site is not located near, or adjacent to, a drainage feature (such as a river) that is retained with a levee, or a dam or reservoir that is retained by a dam. The Project site is located approximately 1,500 feet west of Compton Creek and 4.5 miles west of the Los Angeles River. As mentioned in the response to Impact 4.8-7, above, the Project site is not

located within a 100-year flood hazard area. Therefore, the Project site would not be subject to flooding, and consequently, would not expose people or structures to significant risks from flooding. In addition, the improved onsite lake and water features (filtration gardens, model boat pond, and reflecting pool) are not impounded by a levee or dam. The water in these features would be retained by topography as a result of site grading and contouring; therefore, the potential of a release of onsite lake water as a result of levee or dam failure would not exist. Impacts would be less than significant.

Threshold:	*Would the Project result in inundation by seiche, tsunami, or mudflow?*

Impact 4.8-9 **Implementation of the Project would not result in inundation by seiche, tsunami, or mudflow. This impact would be *less than significant.***

The Project site has no potential for significant inundation by seiche, tsunami, or mudflow. A seiche or tsunami can be described as a wave that is generated by an earthquake. The Project site is relatively flat and would include one relatively small lake once improvements have been completed. A large earthquake could produce waves in the lake, however, these waves would not be large enough to result in flooding of EMJ Park or adjacent areas. Additionally, the Project is located within a highly developed, relatively flat area, which would not be subject to considerable mudflows. Impacts would be less than significant.

CUMULATIVE IMPACTS

Implementation of the proposed Project would improve the water quality of the lake, as well as stormwater runoff that is retained onsite and stormwater runoff that is conveyed offsite to the existing stormwater drainage system. As discussed throughout this section, the Project does not have a significant and unavoidable impact on hydrology and water quality. In addition, the Project and other cumulative projects in the County would be required to comply with the above mentioned regulations pertinent to hydrology and water quality. Each future development project must comply with all applicable state laws, and each development project must address site-specific hydrology and water

quality issues to County standards through implementation of recommendations outlined in site-specific hydrologic and water quality evaluations. Therefore, the proposed Project, in combination with cumulative projects, would have a less than significant cumulative impact on hydrology and water quality.

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