

**South Coast Water District  
PO Box 30205  
Laguna Niguel, CA 92607-0205**

**INITIAL STUDY AND ENVIRONMENTAL  
CHECKLIST  
FOR  
ALISO CREEK URBAN RUNOFF RECOVERY, REUSE,  
AND CONSERVATION PROJECT  
LAGUNA BEACH, CALIFORNIA**

**July 2008**

**Prepared by**



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ATTACHMENTS

- A. Aliso Creek Hydrologic Conditions, Project Plans, and Adaptive Management
- B. Toxicity Analysis for the Wastewater Discharge

## 1.0 INTRODUCTION AND PURPOSE AND NEED

South Coast Water District (SCWD or “District”) proposes to capture and reuse approximately 800,000 gallons per day (gpd) of urban runoff in Aliso Creek in Laguna Beach, California (Figures 1-1 and 1-2). The recovered urban runoff collected by the Aliso Creek urban runoff recovery, reuse and conservation project (“Project”) will be treated and reused by combining the water with recycled water produced at the Advanced Wastewater Treatment (AWT) System at the Coastal Treatment Plant (CTP). There will be an improvement to the water quality of the combined supply, making the AWT recycled water more usable as well as increasing the overall recycled water supply for South Laguna, Dana Point, and Capistrano Beach. Downstream improvements in water quality are expected at Aliso Beach County Park because a portion of the urban runoff will be removed from Aliso Creek and constituents removed from the runoff water will be discharged in the Coastal Treatment Plant outfall, approximately 6,700 feet offshore at a depth of approximately 170 feet. Removal of a portion of the urban runoff will also help to reduce excessive stream flow from urbanized areas and return stream flows in lower Aliso Creek to more natural levels.

### 1.1 BACKGROUND

SCWD is a retail water agency organized and existing as a County Water District under Section 30,000 et seq. of the California Water Code. The SCWD serves approximately 12,500 water accounts with an estimated winter population of 40,000<sup>1</sup> in the South Laguna and Dana Point areas.

The SCWD imports approximately 7,500 acre-feet (6.7 million gallons per day [gpd]) of potable water on a yearly basis. The SCWD maintains approximately 32 million gallons of water storage in 15 area reservoirs (an approximately 4.8-day water supply). The SCWD service area has been identified by the Bureau of Reclamation as an area of “Potential Water Supply Crisis” by 2025.<sup>2</sup> The SCWD’s wholesale water providers, the Municipal Water District of Orange County (MWDOC) and the Metropolitan Water District (MWD), have encouraged the development of alternative local water supply sources within the area served by SCWD.<sup>3</sup>

In 1982, the SCWD obtained State Grant funding to construct the AWT system at the CTP as an additional source of water supply. SCWD contracted operation of the AWT to the South Orange County Wastewater Authority (SOCWA) in 1996.<sup>4</sup> The AWT produces Title 22 recycled water, which is delivered via pipelines south of Pacific Coast Highway to recycled water customers within the SCWD service area. Existing recycled water customers include the Montage Resort, Lang Park, Monarch Links Golf Course at the St. Regis Resort, Niguel Shores Community Association, the Dana Hills High School, the City of Dana Point parks and the California Department of Transportation (CalTrans) highway median areas. These customers use the

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<sup>1</sup> Summer populations in the area vary dramatically due to the presence of beach resorts.

<sup>2</sup> Bureau of Reclamation “Water 2025 Report”.

<sup>3</sup> MWD Integrated Resources Water Management Plan.

<sup>4</sup> SOCWA member agencies include SCWD and 9 other sewer agencies. SOCWA is a Joint Powers Authority (JPA) formed in 2001 to treat wastewater at several regional facilities in south Orange County including the CTP.

recycled water for non-potable applications, primary landscape irrigation. During some portions of the year, demand for recycled water in the service area is approximately 500,000 gpd.

Since 1995, the recycled water produced at the AWT has exhibited elevated Total Dissolved Solids (TDS) content. The TDS content of the recycled water has consistently measured greater than 1,000 milligrams per liter (mg/L), which has made the recycled water supply unattractive to some customers. The use of water containing elevated TDS is particularly difficult for golf courses, since the high salt content from the water is trapped in the soil and kills grass roots. Customers that are not able to utilize the recycled water with the elevated TDS content use the potable water supply for their purposes.

To remedy the elevated TDS at the CTP, the SCWD proposes to capture and use up to approximately 800,000 gallons per day (gpd) of urban runoff from the nearby Aliso Creek. The recovered urban runoff will be treated and reused at the CTP by combining the treated runoff water with recycled water already produced at the CTP.

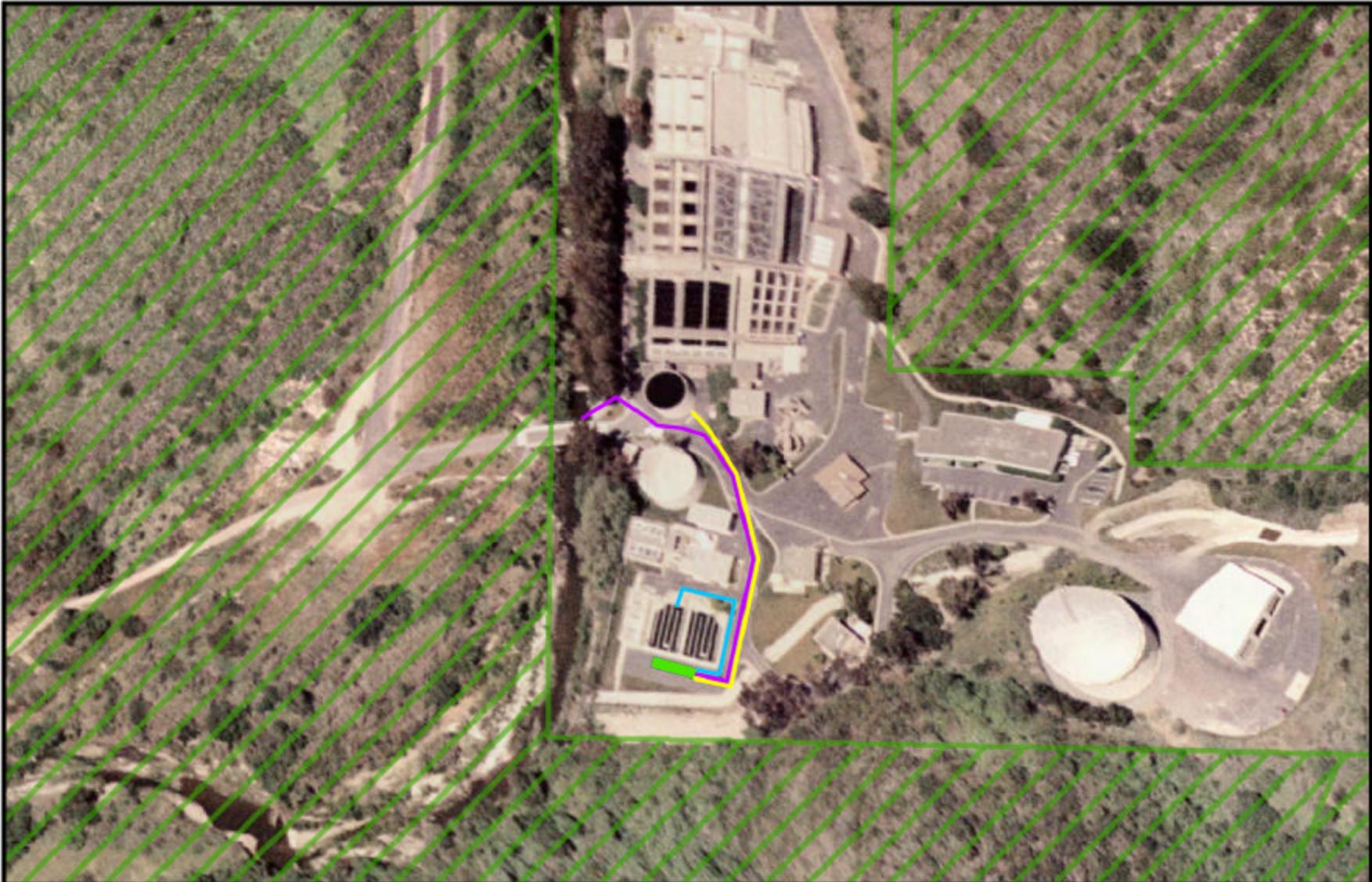
Since the proposed project involves the removal of water from the nearby Aliso Creek, the attached Aliso Creek Hydrologic Conditions, Project Plans, and Adaptive Management report (Hydrologic Report) (Attachment A) was prepared. This Hydrologic Report was also prepared to provide information needed by the California Department of Fish and Game (CDFG) to complete their review of the project.

The project is described in greater detail in Section 2.0 of this document.

## **1.2 INITIAL STUDY DOCUMENT PURPOSE**

Because the project has the potential for environmental impacts, this action would constitute a project under the California Environmental Quality Act (CEQA) and require environmental review by SCWD. In accordance with CEQA (Public Resources Code Sections 21000-21177) and pursuant to Section 15063 of the California Code of Regulations (CCR), the SCWD, acting in the capacity of Lead Agency, has prepared this Initial Study to determine whether the proposed project would have a significant environmental impact. It has been determined that the project is discretionary in nature and is not otherwise exempt from the requirements of CEQA. This Initial Study has been prepared pursuant to the State Guidelines for implementing CEQA.





**LEGEND**

-  Brine Wastewater Line
-  Water Collection Line
-  RO Water Product Line
-  Water Treatment Equipment
-  Aliso Woods Park

0 150 300  
Feet

0 0.025 0.05  
Miles



**Aliso Creek Initial Study**  
South Coast Water District

**Figure 1-2**  
Aerial View of Project Location and Site Arrangement

## 2.0 PROJECT DESCRIPTION

This section presents additional detail regarding the project implementation and expected project benefits.

### 2.1 PROJECT SETTING

As described in Section 1.0, the project area is within the Aliso Creek Watershed downstream of the Aliso and Wood Canyons Wilderness Park and is approximately 1.5 miles from the confluence of the creek into the Pacific Ocean at Aliso Beach County Park, a popular beach destination and water sport location. The Aliso Creek Inn and Golf Course is located adjacent to Aliso Creek between Pacific Coast Highway and AWT system at the CTP.

### 2.2 RUNOFF WATER RECOVERY, TREATMENT, AND REUSE

The following sections detail the proposed water system design and construction methods:

#### 2.2.1 Water Recovery

This project proposes to recover abandoned urban runoff water from Aliso Creek. The water intake equipment will be located near the bridge that provides access to the CTP (Figure 2-1). Urban runoff water will be recovered from Aliso Creek using a self-priming centrifugal pump with a self-cleaning intake screen mounted next to an existing concrete apron. The stream banks at this location are protected from erosion by concrete and rip-rap. The water intake pump will be secured by bolts to the existing concrete apron and will not require alteration of the streambed.

A 7.5-horsepower float controlled pump will deliver water to the treatment facility via a 40-inch diameter PVC pipeline. The pump will be placed inside an approximately two-foot by 1-foot pump suction screen (Figure 2-2), which will prevent unwanted material from passing into the pump to protect the dual media filtration system.

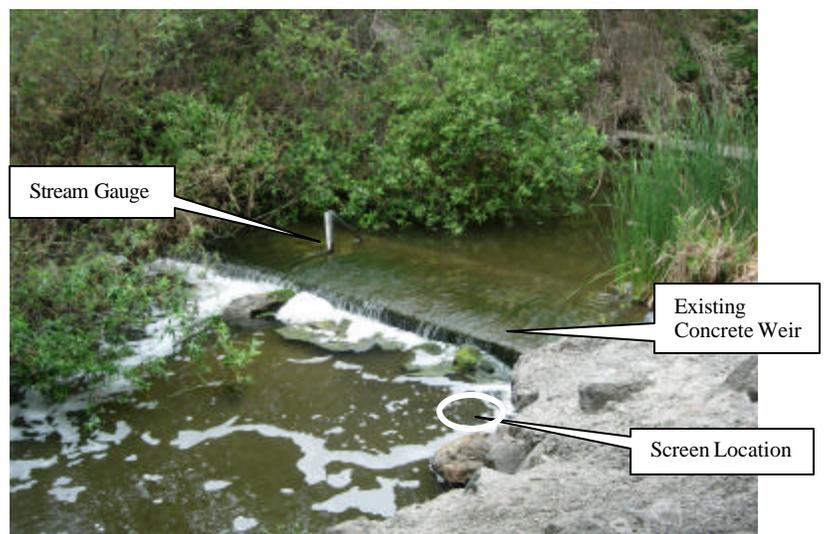


Figure 2-1. Location of Pump Screen in Aliso Creek

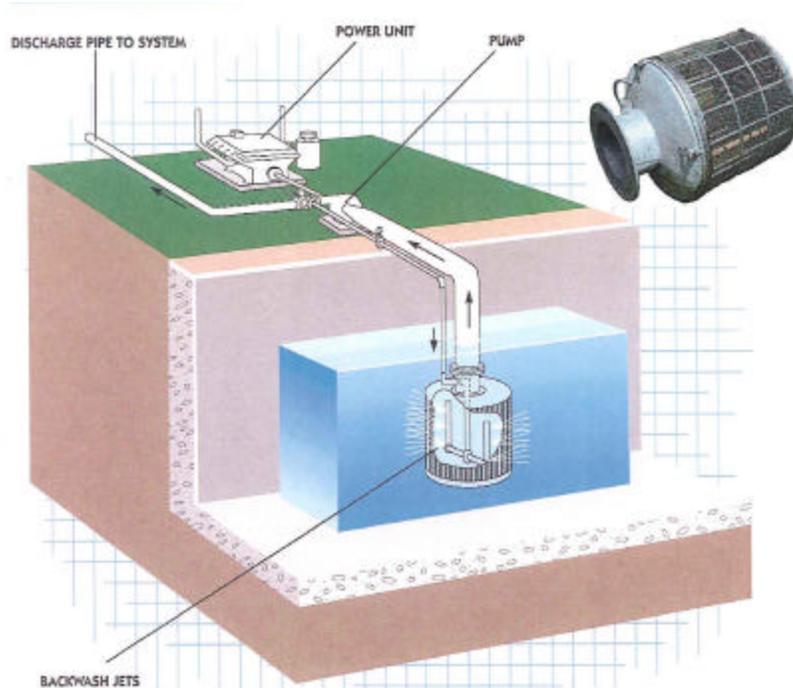


Figure 2-2. Self-Cleaning Pump Suction Screen (actual size: 2 feet by 1 foot)

During storm events or at very low volume, water will likely be of poor quality with high turbidity. Additionally, rainfall will reduce the demand for use of recycled water for irrigation. Therefore, water will not be recovered from Aliso Creek during high flows or during very low flows. The water intake system will include controls and sensors to monitor not only system operations but also external operating parameters. Level sensors will shut down the system if the creek level is too high or too low and the system will also be programmed to shut off if the influent turbidity reaches a programmable set point. These system controls will be tied into the internet-based control system.

#### Recovered Water Treatment Process

The water will be treated with a reverse osmosis (RO) and a filtration package system to provide recycled water with a lower TDS content than is currently available to recycled water customers. Water treatment equipment will be located on an existing asphalt pad adjacent to the AWT disinfection system illustrated in Figure 2-3.



*Figure 2-3. Existing Asphalt Area for Equipment Placement*

The treatment equipment will consist of a package treatment plant installation (Clear Creek System, or equivalent), including:

- Multi-media filters - approximately four tanks 48-inch diameter and 60-inch high – containing filter material
- Two tanks for organoclay filters (approximately 48-inch diameter, 72-inch height)
- RO treatment system
- Control panels.

A diagram indicating the water collection, treatment and use cycle is shown in Figure 2-4. Figure 2-5 is a photograph of a similar system.

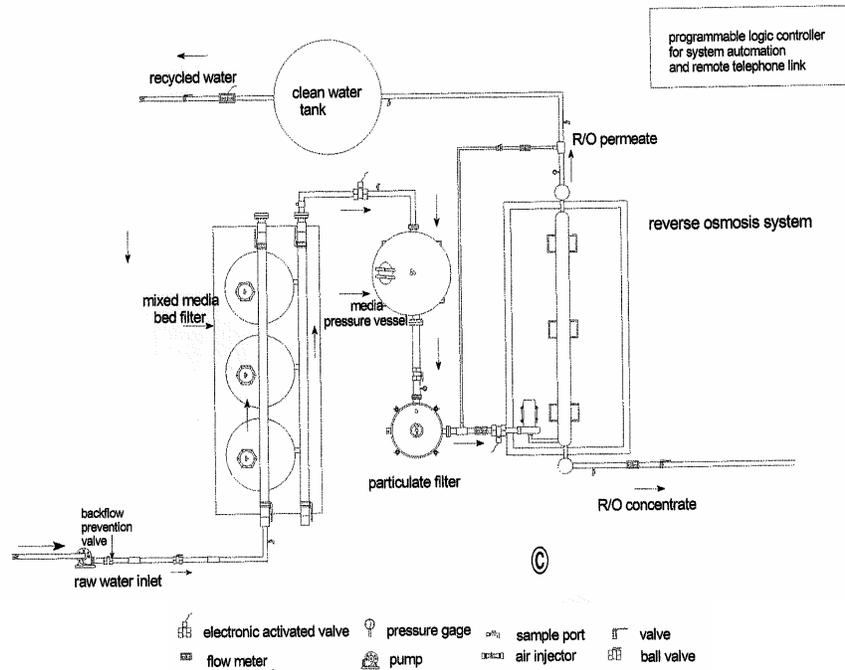


Figure 2.4. Typical Water Collection and Treatment Cycle, Urban Run-off Water Recycling System



Figure 2-5. Depiction of Similar Package Treatment Installation

The water will be filtered through four 48-inch diameter dual media (sand and anthracite) pressure filters, operating in parallel. In this filtration method, water enters the top of each filter vessel and flows, under pressure, through media where solid particulate and suspended organic and inorganic solids are removed. The filters operate at 11 gallons per minute per square foot for a designed rate of 600 gpm. Filters are backwashed periodically to remove trapped materials,

using water from the potable water system. The backwash is discharged to the backwash waste tank where the water is conveyed to the headworks of the CTP. The filtered water will then flow through a reverse osmosis unit using two banks of low-energy reverse osmosis membranes to optimize energy efficiency. The recovered water is anticipated to have approximately 200 mg/l of dissolved solids and a 60 to 75 percent recovery rate, depending on water quality.

The water exits the treatment system and is delivered by pipeline to the adjacent AWT disinfection system where it is blended with the secondary treated effluent entering the AWT from the CTP. The end product water will be stored for use in the recycled water system and delivered in accordance with all requirements of the AWT's existing permits for the delivery and use of recycled water.

### **2.2.2 Waste Water Discharge**

The CPT has utilized an ocean outfall since 1979. The outfall extends 7,900 feet offshore southwest from the mouth of Aliso Creek. The inshore end of the diffuser is located approximately 6,700 feet offshore at a depth of approximately 170 feet. The diffuser, which is collinear with the rest of the outfall, is approximately 1,200 feet long and extends to a maximum depth of 195 feet. The design capacity of the ocean outfall is 50 million gallons per day (MGD).

Concentrated effluent (brine) from the RO system and backwash from the filtration package is the expected by-product of the packaged treatment system and will be directed to the ocean via the existing outfall. Clear Creek Systems, Inc., processed creek water using a portable test system on May 14, 2008. Effluent from the RO and filter process was analyzed using the same procedures as SOCWA's regular NPDES permit requirements for monthly toxicity monitoring. The results of the constituent analysis and toxicity testing are provided in Attachment B. There was no observed toxicity in the chronic kelp germination and growth test. However, there was a toxic effect observed in the 100% effluent concentration for the acute mysid survival test. This resulted in an acute toxicity unit value of 1.30, which is within the CTP and AWT permit effluent limits.

A maximum of 100 acre-feet of brine (approximately 300,000 gpd) will be discharged annually via the existing outfall. This volume represents approximately 0.5 to 0.8 percent of the total flow volume in the outfall. Based on the testing conducted the brine will be of similar quality as the water entering the outfall from the CTP secondary treatment process. Because constituents in the water diverted from the creek will be discharged to the ocean via the outfall, no increase in nutrient loads to the ocean are expected from this project.

## **2.3 EXPECTED PROJECT BENEFITS**

As detailed below, the project has three major expected benefits:

- **Increasing and improving recycled water supply** – The proposed project would increase and improve an alternative water supply (recycled, tertiary treated water) by lowering the TDS in the total recycled water supply and improving the quantity and quality of recycled water delivered by SCWD to recycled water customers. The SCWD's

wholesale water providers, MWDOC and MWD, have encouraged the development of alternative local water supply sources within the area served by SCWD. The project would allow the SCWD to serve more recycled water to available customers. The project is also consistent with public policy as determined by the California Legislature, which declares that the use of potable domestic water for non-potable uses is a waste where a recycled water supply is available.

- **Improving Aliso Creek Beach and Recreation Areas** - The proposed project would improve Aliso Creek beach and recreation areas in the surrounding ocean environment by reducing the polluting impact of abandoned urban runoff in these areas. Up to 800,000 gpd (approximately 1.23 cubic feet per second (cfs)) of dry season flows will be intercepted and removed from Aliso Creek. By removing this warm, nutrient-rich and bacteria-laden runoff currently flowing into the tidal zone in the vicinity of Aliso Creek, beach conditions and the near-shore ocean water quality will be improved.
- **Help to Restore Aliso Creek to Natural Conditions** - The proposed project would reduce the average flow of Aliso Creek to bring it closer to historic levels that existed before urbanization in upstream areas caused an increase in flows. Historically, the creek had much lower flows during the rainy seasons and little or no flow during summer months (discussed further in Section 5.2.8, below). The historic conditions allowed the formation of beach sand barriers and formation of pooled areas, where the endangered tidewater goby was found. It is believed that the extensive and costly erosion of the lower reach of Aliso Watershed is the direct result of development-induced elevated flow rates from upstream areas. The current increased flow rates are also responsible for transporting bacteria and other contaminants to the ocean receiving waters and destruction of the favorable former wetland/tide pool habitat of the tidewater goby.

## 2.4 DESCRIPTION OF PROJECT TIMELINE

Construction activities are expected to last approximately 2 to 4 weeks. The Project will operate over a ten year period.

### 3.0 PERMITS AND APPROVALS NEEDED

The following environmental documentation, permits and approvals may be required for implementation of the proposed project:

- California Fish and Game Streambed Alteration Agreement.
- California Coastal Commission, Coastal Development Permit
- CRWQCB Ocean Discharge Permit (Addendum)
- CRWQCB Recycled Water Permit (Amendment)
- State Water Resources Control Board Application to Appropriate Water
- County of Orange Encroachment Permit

### 4.0 DETERMINATION

#### 4.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below (X) have been determined to be potentially affected by this project.

<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Hazards & Hazardous Materials	<input type="checkbox"/> Public Services
<input type="checkbox"/> Agriculture Resources	<input type="checkbox"/> Hydrology/Water Quality	<input type="checkbox"/> Recreation
<input type="checkbox"/> Air Quality	<input type="checkbox"/> Land Use/Planning	<input type="checkbox"/> Transportation/Traffic
<input checked="" type="checkbox"/> Biological Resources	<input type="checkbox"/> Mineral Resources	<input type="checkbox"/> Utilities/Service Systems
<input type="checkbox"/> Cultural Resources	<input type="checkbox"/> Noise	<input type="checkbox"/> Other
<input type="checkbox"/> Geology/Soils	<input type="checkbox"/> Population/Housing	<input checked="" type="checkbox"/> Mandatory Findings of Significance

At least one impact that is a “Significant Impact” or “Less than Significant with Mitigation Incorporated,” has been identified, as detailed in the CEQA checklist portion of this document (Section 5.0).

#### 4.2 DETERMINATION

On the basis of this initial evaluation:

- I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project, described in this document, have been made or agreed to by the project proponent. **A MITIGATED NEGATIVE DECLARATION** will be prepared.
- I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Mike Dunbar  
\_\_\_\_\_  
Printed Name

General Manager, South Coast Water District  
\_\_\_\_\_  
Agency

## 5.0 CEQA CHECKLIST AND EVALUATION OF POTENTIAL ENVIRONMENTAL IMPACTS

This section provides a discussion of potential environmental impacts associated with approval of the proposed project. CEQA provides the following guidance for the evaluation of impacts:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information shows that the impact does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site and on-site impacts, cumulative and project-level impacts, indirect and direct impacts, and construction and operational impacts.
- 3) "Potentially Significant Impact" determination is appropriate if there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
- 5) Earlier analysis may be used where, pursuant to the tiered, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c)(3)(d).
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

## 5.1 INITIAL STUDY CHECKLIST

The following table (Table 5-1) presents the Initial Study checklist. Each item is discussed in further detail in Section 5.2.

**TABLE 5-1  
INITIAL STUDY CHECKLIST**

ITEM	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>AESTHETICS</b>				
a) Would the project have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>AGRICULTURAL RESOURCES</b>				
a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Would the project involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland to nonagricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>AIR QUALITY</b>				
a) Would the project conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Would the project expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Would the project create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**TABLE 5-1  
INITIAL STUDY CHECKLIST**

ITEM	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>BIOLOGICAL RESOURCES</b>				
a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, and/or coastal waters) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Would the proposal interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Would the proposal conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>CULTURAL RESOURCES</b>				
a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Would the project disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**TABLE 5-1  
INITIAL STUDY CHECKLIST**

ITEM	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>GEOLOGY AND SOILS</b>				
a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Would the project result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>HAZARDS AND HAZARDOUS MATERIALS</b>				
a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**TABLE 5-1  
INITIAL STUDY CHECKLIST**

ITEM	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>HYDROLOGY AND WATER QUALITY</b>				
a) Would the project violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Would the project otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Would the project cause inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>LAND USE AND PLANNING</b>				
a) Would the project physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**TABLE 5-1  
INITIAL STUDY CHECKLIST**

ITEM	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>MINERAL RESOURCES</b>				
a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>NOISE</b>				
a) Would the project cause exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project cause exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Would the project cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Would the project cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or where such a plan has not been adopted within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>POPULATION AND HOUSING</b>				
a) Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**TABLE 5-1  
INITIAL STUDY CHECKLIST**

ITEM	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>PUBLIC SERVICES</b>				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection? Police protection? Schools? Parks? Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>RECREATION</b>				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>TRANSPORTATION/TRAFFIC</b>				
a) Would the project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Would the project result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Would the project result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>UTILITIES AND SERVICES SYSTEMS</b>				
a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**TABLE 5-1  
INITIAL STUDY CHECKLIST**

ITEM	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Does the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Will the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>MANDATORY FINDINGS OF SIGNIFICANCE</b>				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## 5.2 DISCUSSION OF ENVIRONMENTAL IMPACTS

The evaluated environmental impacts are discussed further in this section.

### 5.2.1 Aesthetics

The Laguna Beach area near the project site is shaped by a variety of distinctive landscape features including ridgelines, canyons, steep slopes, coastal vegetation, and the ocean as well as the City of

Laguna Beach and PCH. PCH is designated as a scenic highway in the Master Plan Scenic Highways Component of the Orange County Transportation Element.

The equipment needed for the urban runoff recovery project will be located within the CPT facility, which is approximately 1.5 mile from PCH. The equipment will consist of a self-priming centrifugal pump, buried pipes for pipes conveying water and wastewater, and a package treatment system located (Figure 1-2). The package treatment system will be similar to other equipment within the CTP and the addition of this equipment would not add to the visual impact of the facility.

The project impacts are presented as follows:

a) *Would the project have a substantial adverse effect on a scenic vista?*

**No Impact.** All the project equipment will be within and near the existing CTP area and the addition of the proposed project equipment would not have a substantial adverse effect on any scenic vista.

b) *Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?*

**No Impact.** All the project equipment will be within and near the existing CTP area and the addition of the proposed project equipment would not have a substantial adverse effect on any scenic resources. The project will not require removal of any trees or impact natural rock outcroppings and there are no historic buildings with a view of the project site.

c) *Would the project substantially degrade the existing visual character or quality of the site and its surroundings?*

**No Impact.** All the equipment will be within the CTP and the addition of this equipment would not have a substantial adverse effect on any scenic vista.

d) *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

**No Impact.** No new sources of light or glare would result from the project that would adversely affect day or nighttime views in the area. The package treatment system will not require any additional lighting to be added to the existing CTP facility.

### 5.2.2 Agricultural Resources

There are no agricultural resources on the project site or the surrounding area. The project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. As a result, the project will have no impact on agricultural resources.

The project impacts are presented as follows:

a) *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

**No Impact.** The project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, the proposed project would not convert such farmland to non-agricultural use.

- b) *Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

**No Impact.** The project site is not zoned for agricultural use and is not under a Williamson Act contract. Therefore, the project would not result in a conflict with either an agricultural or Williamson Act contract zoning obligation.

- c) *Would the project involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland, to nonagricultural use?*

**No Impact.** There would be no changes to the existing environment that would result in the conversion of farmland to non-agricultural use.

### 5.2.3 Air Quality

Air quality within the area is dependent on regional wind directions, regional air quality, and local pollutant emission sources. Regional air quality is determined largely by the quantity of released pollutants discharged throughout the local air basin, which are mainly the result of mobile pollutant emissions.

Construction activities can generate dust and combustion exhaust emissions that will be emitted into the atmosphere from construction equipment. The proposed site for the package treatment equipment is already paved and will not require grading; therefore, dust related to construction activities will not have a significant impact. The water treatment package consists of preassembled units which will be brought to the project site; therefore, on-site construction is generally minimized. Air pollutants can also be emitted from construction worker commutes; however, because of the limited duration (2 to 4 weeks), small scale of construction, and few vehicles needed for construction, the proposed project is not likely to result in construction-related emissions that will exceed impact significance thresholds for any of the regionally significant pollutants.

The project impacts are presented as follows:

- a) *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

**No Impact.** The proposed project would not require a General Plan Amendment, a Specific Plan, or be a “significant project.” According to the South Coast Air Quality Management District’s (SCAQMD) Air Quality Handbook, only projects of those types require review for Air Quality Management Plan consistency.

- b) *Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

**No Impact.** Operation of the proposed project will not result in any emissions that could affect air quality. The project will not violate any air quality standard or contribute substantially to an existing or projected air-quality violation.

- c) *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

**No Impact.** A number of minor construction projects are always underway within the City of Laguna Beach. Since only approximately 2 to 3 vehicles will be used during a very short construction period of approximately 2 to 4 weeks, the construction activities will not have a significant cumulative impact on air-quality. Operation of the installed project will not result in additional facility air emissions and no impacts are expected.

- d) *Would the project expose sensitive receptors to substantial pollutant concentrations?*

**No Impact.** There are no sensitive receptors such as schools, daycare, or hospital facilities near the project site. The short construction period and small number of vehicles will not have a significant impact on air-quality. Operation of the project will not result in any air emissions. Therefore, there will be no impacts to sensitive receptors and impacts are expected to be less than significant.

- e) *Would the project create objectionable odors affecting a substantial number of people?*

**No Impact.** Operation of the project does not result in any air emissions or odors. The project site is not located near any homes or other areas where there are a substantial number of people; therefore, no impacts are expected.

#### 5.2.4 Biological Resources

Biological resources include natural habitats, state- and federally- endangered or threatened species, species of special concern, marine parks and preserves, and other areas of critical biological concern. Special status species are plant and animal groups with regulatory protection under either the federal Endangered Species Act or the endangered species program of the California Department of Fish and Game (CDFG). Near the project area, biological resources include state- and federally-listed endangered or threatened species, species of special concern, wetlands and riparian habitat, and aquatic habitats within Aliso Creek.

The CDFG Natural Diversity Data Base (CNDDDB 2007) was searched for occurrences of rare, threatened, endangered, and/or sensitive animals, plants, and natural communities. The search was conducted for the site and surrounding area within the United States Geological Survey (USGS) 7.5-minute Laguna Beach quadrangle. The CNDDDB search resulted in eighteen special status botanical species and fourteen animal species, which primarily occur in the coastal sage scrub habitats of the Laguna Beach area but are unlikely to occur in Aliso Creek, in adjacent riparian habitats, at the Aliso Creek outlet to the ocean, or in the ocean near the ocean outfall. The species or habitats that are most likely to occur at these locations include the federally endangered western snowy plover (*Charadrius alexandrinus nivosus*, “plover”) and critical habitat for the tidewater goby (*Eucyclogobius newberryi*, “goby”).

Although western snowy plovers have not recently been reported in the vicinity of Aliso Creek outlet, wintering plovers are regularly documented on beaches to the north (*i.e.*, Crystal Cove) and to the south

(i.e., Salt Creek) (USFWS 2006). The proposed project does not include any alterations to habitat or activities at these beaches; therefore, no adverse impacts to this species are anticipated.

The goby was last collected in Aliso Creek in 1978 (USFWS 2005); however, critical habitat was designated in Aliso Creek because “the eight fluctuating populations where gobies exist today [on Marine Corps Base Camp Pendleton] are insufficient in number and quality to remove gobies in this part of the range [southern California] from a high risk of extinction” (65 FR 69693). Thus, it was determined that “unoccupied habitats which can support gobies in the future [including Aliso Creek] play an essential role in the conservation of the goby” (65 FR 69693).

Aliso Creek is included in the South Coast Recovery Unit (SC) of the recovery plan for the goby (USFWS 2005). Gobies within this unit are morphologically (Ahnelt *et al.* 2004) and genetically (Dawson *et al.* 2001) distinct from populations north of the Los Angeles River. As such, persistence of gobies within the SC is essential to recovery of the species (USFWS 2005). Reintroduction of gobies to unoccupied habitat is one of four primary tasks recommended for recovery of the goby in the SC (USFWS 2005). Aliso Creek is considered by the USFWS to be one of the most promising locations for reintroduction of a goby population in southern California (outside of Marine Corps Base Camp Pendleton). However, the current lagoon breaching practices [resulting from excess urban runoff] likely preclude successful reintroduction of the goby into Aliso Creek, since regular lagoon breaching during the dry season lowers the water level in the lagoon, potentially stranding gobies and leaving breeding burrows above the water level (USFWS 2005).

As discussed in Section 2.3, the proposed project is expected to reduce the average flow of Aliso Creek and bring the low flows closer to historic levels, which allowed the formation of beach sand barriers and pooled areas, where the endangered goby was previously found. Therefore, it is expected that the project will assist in creating improved habitat conditions for the possible future reintroduction of the goby to the Aliso Creek area.

The project impacts are presented as follows:

- a) *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

**Less Than Significant Impact with Mitigation.** As discussed in Section 2.3 and the attached report entitled “Aliso Creek Hydrologic Conditions, Project Plans, and Adaptive Management” (Attachment A), the proposed project is expected to reduce urban run off and bring the average flow of Aliso Creek closer to historic levels which allowed the formation of beach sand barriers and pooled areas where the endangered tidewater goby was previously found. Very low flows, however, could have an impact on the downstream riparian habitats or result in pooling or other adverse conditions. MITIGATION MEASURES BIO-1, BIO-2, and BIO-3 are proposed so that the project would not have an adverse affect on sensitive species and would contribute to improved habitat conditions for possible reintroduction of a sensitive species.

**MITIGATION MEASURE BIO-1.** Stream flow monitoring. The project shall incorporate the following:

- Development of a rating curve to calibrate stream stage with stream flow at the location of the diversion pump.
- Continuous monitoring of stream stage (with float valve or similar device) to allow interruption of diversions if stream flow is not within operating standards.

**MITIGATION MEASURE BIO-2.** Diversion control. The project shall incorporate the following:

- Program the control system for low-flow cutoff of 6 cfs stream flow at the point of diversion to allow minimum downstream flow of 4.77 cfs. (See Section 5.2.8 for discussion of historic stream flows).

**MITIGATION MEASURE BIO-3.** In-stream monitoring. The project shall incorporate the following:

- Conduct in-stream inspection at low flow conditions to determine if minimum downstream flows of 4.77 cfs lead to formation of ponds or development of isolated pools. Modify operating standards if operation of the diversion results in formation of ponds or development of isolated pools.
- Conduct annual in-stream measurements at established transect stations to determine if stream conditions have changed as a result of flood flows. Operating standards will be modified if operation of the diversion results in formation of ponds or development of isolated pools.

- b) *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?*

**Less Than Significant Impact with Mitigation.** As discussed in Section 2.3, the proposed project is expected to reduce the average flow of Aliso Creek closer to historic levels which allowed the formation of beach sand barriers and pooled areas, where the endangered goby was previously found. Very low flows, however, could have an impact on the downstream riparian. MITIGATION MEASURE BIO-3 is proposed so that the project would not have an adverse affect on riparian habitat or other sensitive habitat.

- c) *Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?*

**Less Than Significant Impact with Mitigation.** As discussed in Section 2.3, the proposed project is expected to reduce the average flow of Aliso Creek to bring it closer to historic levels which allowed the formation of beach sand barriers and pooled areas, where the endangered goby was previously found. Very low flows, however, could have an impact on the downstream riparian habitats or result in pooling or other adverse conditions. MITIGATION MEASURES BIO-1, BIO-2, AND BIO-3 are proposed so that the project would not adversely affect protected wetlands and would contribute to improved conditions for Aliso Creek and the downstream habitat.

- d) *Would the proposal interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

**Less than Significant Impact with Mitigation.** Operation of the diversion pump could interfere with the movement of small or juvenile fish at the location of the diversion. MEASURE BIO-4 is proposed so that the project would not have an adverse affect on any native resident or migratory fish in the stream.

**MITIGATION MEASURE BIO-4.** Project Design. The project shall incorporate the following:

- o The pump intake screen shall be designed to meet the approach velocity, depth and dimensions, mesh size, location criteria, and other design criteria as specified by the Marine Fisheries Service (Southwest Region. 1996. Juvenile Fish Screen Criteria for Pump Intakes. [<http://swr.nmfs.noaa.gov/hcd/pumpcrit.pdf>] )

- e) *Would the proposal conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

**No Impact.** The proposed project does not conflict with any local policies or ordinances protecting biological resources. Additionally, as was indicated in Sections 1 and 2, the project reduces urban runoff, provides an alternative water source in the project area, and will assist in restoring Aliso Creek to historic flows, which would be beneficial to the possible reintroduction of the tidewater goby downstream of the project site.

- f) *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

**No Impact.** The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

## 5.2.5 Cultural Resources

Defined here, cultural resources are sites, structures, landscapes, and objects of some importance to a culture or community for scientific, traditional, religious, or other reasons. Cultural resources contribute to a diversified environment and enrich the unique character of the region.

For this project, the equipment needed for the urban runoff recovery project will be located within the existing CTP facility. The equipment will consist of a self-priming centrifugal pump, buried pipes for conveying water and wastewater, and a package treatment system (Figure 1-2). The package treatment equipment would be located on an existing asphalt pad at the CTP and will not have any impact on cultural resources. The short buried pipelines will all be located in soil previously disturbed during construction of the CTP facility. Therefore, the proposed project will not have any impact on cultural resources.

The project impacts are presented as follows:

- a) *Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?*

**No Impact.** Equipment needed for the runoff recovery project will be located within the CTP facility and will not cause a substantial adverse change in the significance of any historical resource.

- b) *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

**No Impact.** The package treatment equipment is proposed to be located on an asphalt pad and will not have any impact on cultural resources. The short buried pipeline will be located in soil previously disturbed during construction of the CTP facility; therefore, the proposed project will not have any impact on archaeological resources.

- c) *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

**No Impact.** The proposed short buried pipelines will be located in soil previously disturbed during construction of the CTP facility and will not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

- d) *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

**No Impact.** The package treatment equipment would be located on an asphalt pad and will not have any impact on cultural resources. The short buried pipelines will be located in soil previously disturbed during construction of the CTP facility and will not have any impact or disturb any human remains, including those interred outside of formal cemeteries.

## 5.2.6 Geology and Soils

The project is located on the southwestern flank of the San Joaquin Hills, which are among several mountain ranges located in the Peninsular Range geologic province of Southern California. The San Joaquin Hills contain bedrock of Tertiary sedimentary units, which were deposited approximately 65 million to 1.8 million years ago in a shallow to moderately deep marine environment and were terraced over time by tectonic activity. Recent deposition of colluvium and topsoils are present locally. The San Onofre Breccia, Pleistocene terrace materials, colluvium, and topsoil are the primary components of rocks and soils within the project area. As with most areas in Southern California, the site is located within a seismically active area. Nearby faults include the Newport-Inglewood, Whittier, Norwalk, and San Andreas fault zones.

The project impacts are presented as follows:

- a) *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology*

*Special Publication 42; (ii) Strong seismic ground shaking?(iii) Seismic-related ground failure, including liquefaction? (iv) Landslides?*

**Less Than Significant Impact.** There are no identified fault lines or evidence of ground rupture within the project area. Although the project site is not located on a known fault, seismic ground shaking, seismic-related ground failure, and landslides near the project could occur during large earthquakes in the region. A major earthquake on any of these faults could affect the existing ATP facility, depending on the nature, size, and location of a particular event. The design of the proposed additional equipment incorporates applicable seismic construction standards. Impacts are expected to be less than significant.

b) *Would the project result in substantial soil erosion or the loss of topsoil?*

**Less Than Significant Impact.** During construction, minimal excavation of soil will be required for construction of the short pipeline between the diversion pump and the treatment facility. All this construction will be within the CTP and potential impacts to soil erosion would be less than significant.

c) *Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

**No Impact.** The proposed project is located within the existing ATF facility and the proposed project is not expected to alter the subsurface in a manner which would result in landslides, subsidence, liquefaction or collapse.

d) *Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?*

**No Impact.** The proposed project is not located within an area of expansive soils.

e) *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?*

**No Impact.** The project does not include any use of septic tanks for alternative waste water disposal system.

### 5.2.7 Hazards and Hazardous Materials

Hazardous materials used during construction will include vehicle fuels and automotive fluids associated with heavy construction equipment. There is only minimal potential for environmental impacts from hazardous material incidents during maintenance; the most likely incidents involving these hazardous materials would be associated with minor spills or drips. Small volumes of hazardous materials (i.e., paints or solvents) may also be temporarily stored on-site inside service trucks and project personnel will be trained to handle these materials. No hazardous materials will be used during project operation.

The project impacts are presented as follows:

a) *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

**Less than Significant Impact.** Some hazardous materials, such as diesel fuel, would be transported and used at the site during construction, which is a hazard in the event of a spill. The appropriate transport and use of hazardous materials is detailed by Federal and State laws and the transport of such materials to the site would comply with appropriate regulations. The project work plan will include a description of BMPs and a spill containment plan.

- b) *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

**Less than Significant Impact.** Since the use of hazardous materials will be limited to very small quantities, the project has no potential to create a significant hazard to the public or the environment.

- c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

**No Impact.** The project will not generate hazardous emissions nor would it require the handling of hazardous or acutely hazardous materials within one quarter mile of an existing or proposed school.

- d) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?*

**No Impact.** The site is not located within an airport land use plan or within two miles of a public or private airport; therefore, no hazards of this type are expected.

- e) *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*

**No Impact.** The site is not located within the vicinity of a private airstrip; therefore, no hazards of this type are expected.

- f) *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

**No Impact.** Since the project is located on an existing facility, there is no expectation that the construction activities will impede emergency response or emergency evacuation for the site or nearby sites.

- g) *Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

**No Impact.** Although the CTP facility is located within the Aliso and Woods Canyons Wilderness Parks, areas that include open lands, none of the proposed site activities are expected to represent a fire concern; therefore, no impacts are expected.

### 5.2.8 Hydrology and Water Quality

The Aliso Creek watershed is located in Southern Orange County, and encompasses a drainage area of approximately 36 square miles. The watershed extends 19 miles from the foothills of the Santa Ana Mountains to the Pacific Ocean south of Laguna Beach, and includes the tributaries of Wood Canyon, Sulphur Creek, Aliso Hills Channel, Dairy Fork, Munger Creek, and English Canyon. Residential developments within the watershed include portions of Lake Forest, Laguna Beach, Foothill Ranch, Portola Hills, Mission Viejo, Laguna Hills, Aliso Viejo, and Laguna Niguel. The majority of the watershed is urbanized with residential development of up to 18 units per acre.

Because high turbidity precludes water diversions during storm events, low flow periods are most likely to be affected by the diversion of water from Aliso Creek.

#### *Historic Stream Flows (Upper Aliso Creek)*

The stream flow gauge at Jeronimo Road provides the longest data record for Aliso Creek: 1932-present. The US Geological Survey (USGS) stream gage data on Aliso Creek at Jeronimo Road were analyzed by US Army Corps of Engineers (USACOE, 1999a) to characterize the changes in the low flow condition (Figure 3-1). From 1950 to 1970, the lowest flows were “consistently near zero” (USACOE 1999b). In an Environmental Impact Study prepared for Aliso Water Management Agency, stream flow in Aliso Creek was characterized as “not significant and generally amounts to a trickle quantity” (Jones & Stokes, Boyle Engineering 1972). Trends in the data clearly show an increase in the magnitude of the low flows within the Aliso Creek watershed, especially since the mid-1970's.

Figure 3-1 shows a graph of time series *cumulative flow data* from the Aliso Creek stream flow gauge at Jeronimo Road with recent high-flow (flood) years indicated (USACOE 1999a). The cumulative flow by definition is always increasing over time. Of interest is the rate at which the cumulative flows increase, indicated by the slope of the line.

Cumulative flow contributions from low-flow conditions correspond to the segments of the line with a relatively mild gradual slope, whereas the sharp increases in slope correspond to high-flow years. Aside from the high-flow years, the slope remains relatively flat indicating little or no flows from the mid-1940s through the late 1970s. Beginning in the late 1970s, the slope for non-flood years becomes noticeably steeper, indicating an increase in low-flows from the earlier time period. The time period showing the increase in low-flows corresponds to years of increased urbanization in the Aliso Creek watershed.

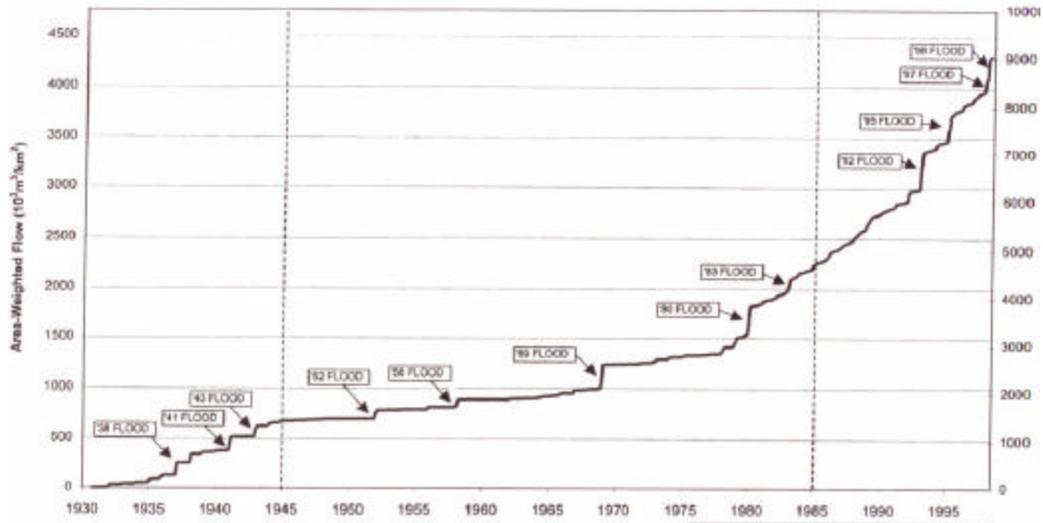


Figure 3-1. Total cumulative area-weighted flow volume for Aliso Creek Drainage at Jeronimo gauge (1930-1998). (Source: USACOE 1999a)

### *Historic Stream Flows (Lower Aliso Creek)*

Historically, stream flows in lower Aliso Creek during summer months or dry periods have been documented as having little or no flow. In one of the last observations of the tidewater goby in lower Aliso Creek, S. Goldberg (1977) documented his 1974 collecting conditions as:

“The mouth of Aliso Creek forms a lagoon which is closed from the ocean most of the time by the beach sand. It periodically fills and opens, at which time the 1.2-1.5m of water that accumulated drains into the ocean.”

As noted in the Aliso and Wood Canyons Wilderness Park Aliso Creek Resource Management Plan (LSA Associates, 2006), Aliso Creek was once an intermittent stream before the region became heavily urbanized, and now flows year-round through the eastern and southern sections of the Park, augmented in recent years by significant increases in upstream urban runoff. Presently, the year-round flows at the mouth of Aliso Creek are always too high to allow formation of a lagoon behind a berm of beach sand as described by Goldberg, above.

Stream flow data summarized in Figures 3-2, 3-3, and 3-4 illustrate the flows observed from 1973 to 1979, 1982 to 1987, and 2004 to 2006. These data were collected at three slightly different locations, but all were between the Coastal Treatment Plant and Pacific Coast Highway, a distance of approximately one mile. The complete data set for each of the monitored periods is provided in Attachment A.

Similar to the continuously monitored section of Aliso Creek at Jeronimo (Figure 3-1), the lower Aliso Creek monitored by Orange County from 1973 to 1979 had very low flows of approximately 1 to 2 cfs throughout the year (Figure 3-2), with many recorded flows of 0.5 cfs or less. The effects of urbanization of the upper reaches of the drainage during the 1980's is evident in the data from continuous monitoring conducted by USGS from 1982 to 1987 (Figure 3-3), when low flows averaged about 4 cfs.

The most recent data, for the period from 2004 to 2006, show how the runoff from urbanized areas has continued to increase. As illustrated in figure 3-4, low flows were generally about 10 cfs from July 2004 to June 2006. For the period July 1 to October 15 in 2004 and 2005, both periods without significant precipitation, the mean daily flows averaged 9.68 and 9.57 cfs, respectively. These recent flows are approximately double the low flows observed from 1982 to 1987, and approximately ten times higher than the flows in the 1970's or earlier.

As proposed in **MITIGATION MEASURE BIO-2**, above, the Project shall incorporate a control system for low-flow cutoff at flows less than 6 cfs at the point of diversion to allow a minimum downstream flow of 4.77 cfs. At 4.77 cfs the reduced flow would be similar to low flows recorded in the 1982 to 1987 period (Figure 3-3), but are still higher than the natural low flows recorded before urbanization of the Aliso Creek drainage (Figure 3-2). Implementing this mitigation measure will ensure that the Project would never cause flows to be below natural levels.

Figure 3-2. 1973-1979 Stream Flow Data for Aliso Creek (USGS Data)

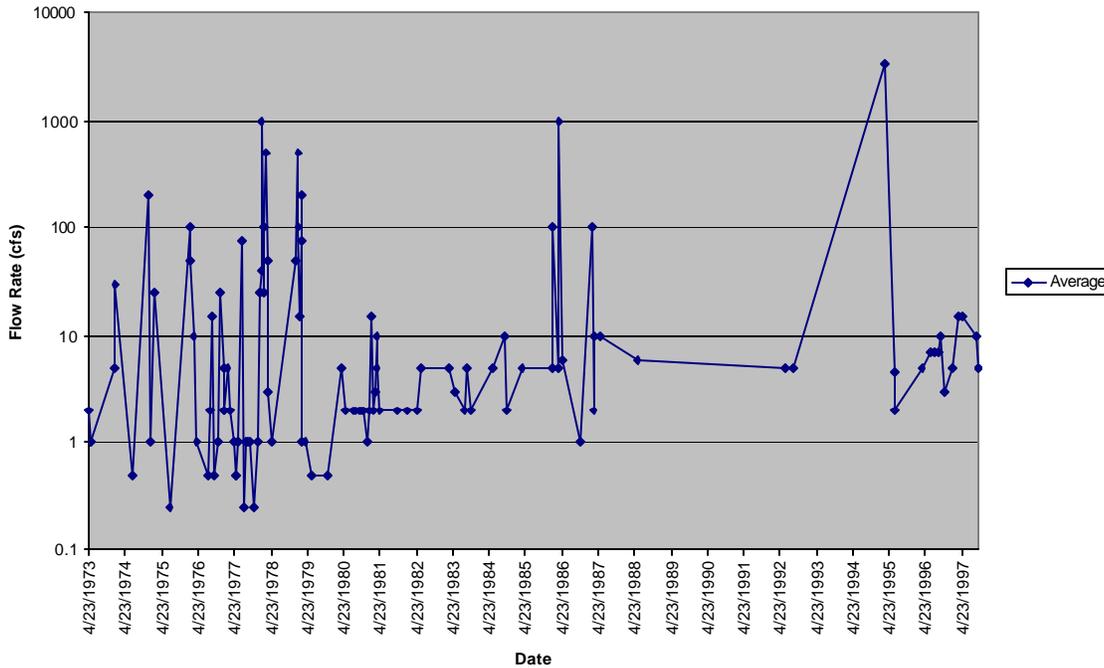


Figure 3-3. 1982-1987 Stream Flow Data for Aliso Creek (USGS Data)

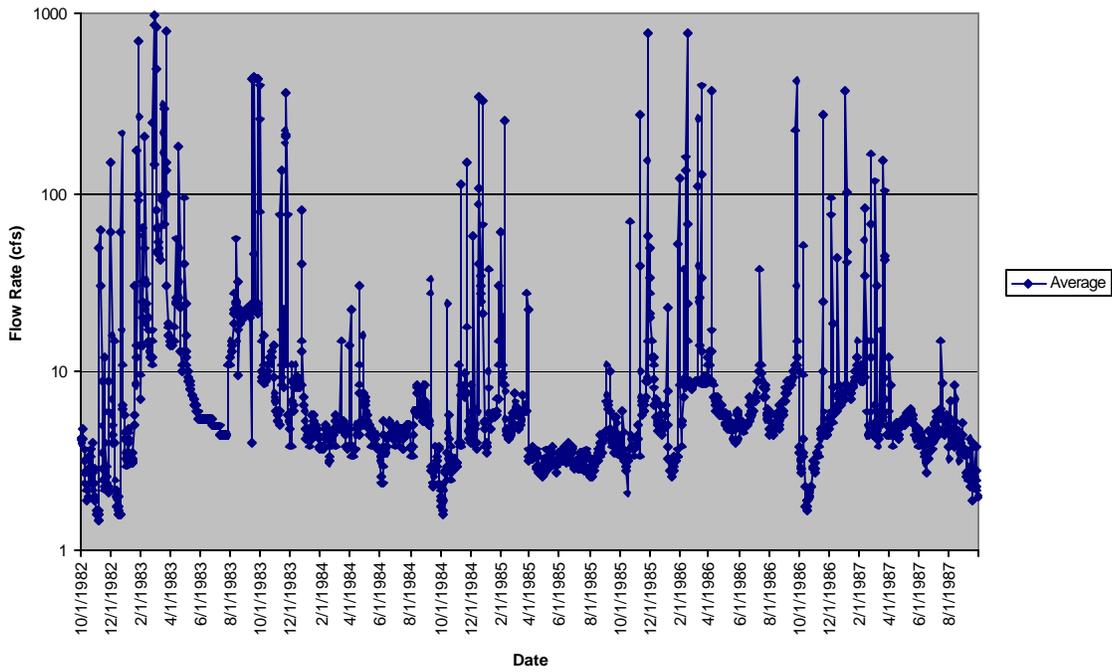
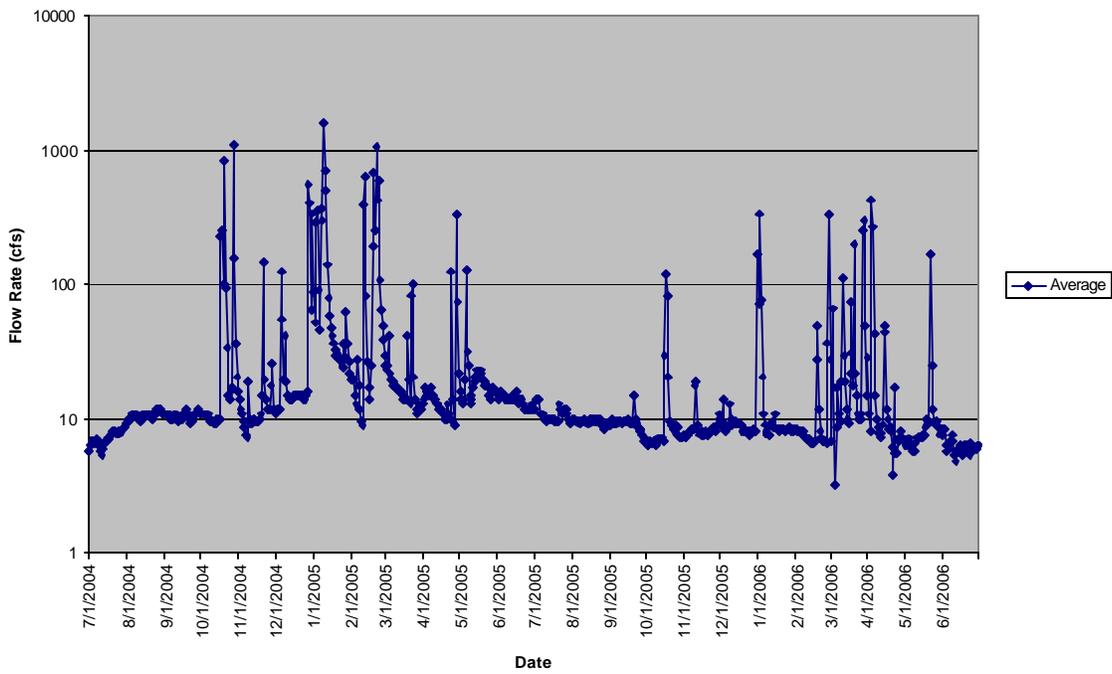


Figure 3-4. 2004-2006 Stream Flow Data for Aliso Creek (OC RDMD Data)



**Water Quality**

The County of Orange Resource and Development Management Department report Aliso Creek Watershed Management Plan<sup>5</sup> describes the Aliso Creek as follows:

“Aliso Creek has been in a state of decline since intense development of the watershed began in the 1960s...The Aliso Creek watershed has been designated by the San Diego Regional Water Quality Control Board (SDRWQCB) as a target watershed for priority water quality enhancement efforts. Aliso Creek is listed as a Category I Impaired Priority Watershed (Aliso-San Onofre, #18070301) in the California Unified Watershed Assessment List (USEPA, 2000). The section of the creek from Aliso Beach to one mile upstream is designated as impaired for high coliform concentrations under the 1998 Clean Water Act Section 303(d). The primary causes of impairment of this watershed are non-point source pollution. Residential and commercial use of fertilizers and pesticides, and pet and waterfowl waste, are most likely the primary contributors to the nutrient and potential storm water toxic impacts and elevated bacteria load. High temperatures also contribute to poor water quality.”

The project impacts are presented as follows:

- a) *Would the project violate any water quality standards or waste discharge requirements?*  
**No Impact.** The project will not violate water quality standards or waste discharge requirements, which will be verified through required testing.
- b) *Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*  
**No Impact.** The project will not use groundwater and will not interfere with groundwater recharge.
- c) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?*  
**No Impact.** The project will not substantially alter the existing drainage pattern of the site or area and will not result in substantial erosion or siltation on- or off-site.
- d) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*  
**No Impact.** The project will not substantially alter the existing drainage pattern of the site in a manner that would result in flooding on- or off-site. As was indicated in Sections 1 and 2, by removing excess urban runoff from the creek, the project would help to return the creek to historic conditions, which would be beneficial to recreation and habitat downstream of the project site.

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<sup>5</sup> Report may be reviewed at [www.ocwatersheds.com](http://www.ocwatersheds.com) (Section 2.3.1).

- e) *Would the project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?*  
**No Impact.** The project will not create or contribute runoff water; therefore, no impacts of this type are expected.
- f) *Would the project otherwise substantially degrade water quality?*  
**No Impact.** The project would have no impact on the water quality of Aliso Creek. Diversion of urban runoff will reduce the total load of constituents and contaminants now discharged at the creek confluence with the Pacific Ocean at Aliso Beach State Park. The concentrated constituents of the treated water will be discharged in the outfall along with the existing CTP and AWT effluents. Based on the testing conducted the brine will be of similar quality as the water entering the outfall from the CTP secondary treatment process. Because constituents in the water diverted from the creek will be discharged to the ocean via the outfall, no increase in nutrient loads to the ocean are expected from this project.
- g) *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?*  
**No Impact.** The project does not include housing construction; therefore, no impacts of this type are expected.
- h) *Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?*  
**No Impact.** The project does not include the construction of permanent structures in flood zones that would impede or redirect flood flows; therefore, no impacts are expected.
- i) *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?*  
**No Impact.** The project does not include new permanent structures and will not expose people or structures to any significant loss, injury, or death as a result of dam or levee failure.
- j) *Would the project cause inundation by seiche, tsunami, or mudflow?*  
**No Impact.** The project is not located in an area which could cause inundation by seiche, tsunami, or mudflow; therefore, no impacts of this type are expected.

### 5.2.9 Land Use and Planning

The CPT is located within the Aliso and Woods Canyons Wilderness Areas and the project will be located on the existing CTP facility. Based on the location of the project within the CTP, the proposed project is not expected to impact the surrounding wilderness lands or require changes to zoning or City of Laguna Beach land use.

The project impacts are presented as follows:

- a) *Would the project physically divide an established community?*  
**No Impact.** The proposed project area lies within the existing CTP facility. Based on this, the project will not physically divide an established community.
- b) *Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*  
**No Impact.** The proposed project area lies within the existing CTP facility; therefore, the project will not conflict with any land use plan or policy or regulation of any agency with jurisdiction over the project.
- c) *Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?*  
**No Impact.** Although the CTP is located within the Aliso and Woods Canyons Wilderness areas, the proposed project is located within the existing CTP facility. Based on this, the project will not conflict with any applicable habitat conservation plan or natural community conservation plan.

### 5.2.10 Mineral Resources

The project is located within the existing CTP facility, which does not contain any known mineral resources such as rock, sand, or gravel resources. Based on this, construction and operation of the project will not have any impact on mineral resources.

The project impacts are presented as follows:

- a) *Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*  
**No Impact.** The project is primarily located within the existing CTP, which does not contain any known mineral resources including any rock, sand, or gravel resources.
- b) *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*  
**No Impact.** The project is primarily located within the existing CTP, which does not contain any known mineral resources including any rock, sand, or gravel resources

### 5.2.11 Noise

Ambient sources of environmental noise in the vicinity of the project site primarily are limited primarily to the existing CTP. The construction of the project will include a minor increase in noise at the CTP facility from vehicle traffic and the operation of construction equipment (such as hammers, drills); however, the construction activities will be performed consistent with the Laguna Beach City Noise

Ordinance and General Plan Noise Element (City Noise Ordinance, Title 7 Health and Sanitation, Chapter 7.25 Noise, Subchapter 7.25.050 of the Laguna Beach Municipal Code) which states:

“No person shall construct, demolish, alter or repair any building, grade or excavate on any private or public property, or cause or permit such work to be done, the performance of which work is attended by any loud or unusual noise or sound which interferes with or may reasonably be presumed to interfere with the peace, comfort and repose of persons residing in the neighborhood or general vicinity in which such work is being performed, other than between the hours of seven a.m. and six p.m. on any weekday, except that in cases of urgent necessity, the building and safety director may grant a revocable permit authorizing such work to be done at different hours. The foregoing limitation shall not apply to any maintenance or repair work which does not create any loud or unusual noise or sound.”

The proposed project is anticipated to have a short-term noise impact during construction (approximately 2 to 4 weeks) and no impact after construction. The noise impact during construction would be mitigated to less than significant by complying with city noise standards and maintaining construction equipment in good working order.

The project impacts are presented as follows:

- a) *Would the project cause exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*  
**No Impact.** The proposed construction project is scheduled to occur on weekdays between the hours of 7:00 AM and 6:00 PM. No construction activities are proposed to be performed on weekends or legal holidays. As discussed above, the construction noise levels will comply with the City's Municipal Code; therefore, the project would not result in a violation of the City's noise ordinance standards. Once the construction is completed, no additional project noise is expected and noise would be limited to that of the existing CTP operation.
- b) *Would the project cause exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?*  
**No Impact.** The proposed project would use light construction equipment and small tools. Any noise or vibration produced by this equipment would be of short duration, intermittent, and is not expected to generator excessive ground-borne vibration or noise levels. .
- c) *Would the project cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*  
**No Impact.** There will be no permanent noise impacts from the project.
- d) *Would the project cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*  
**Less Than Significant Impact.** Construction activities related to the proposed project would result in noise levels that are higher than existing ambient levels but similar to normal maintenance activities at the CTP. The project would use construction equipment similar to the equipment used to repair utilities in roadways throughout residential areas and any noise or vibration produced by

this equipment would be of short duration, intermittent, and would have a less than significant impact.

- e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

**No Impact.** The project area is not within an airport land use plan area or within two miles of an airport.

- f) *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

**No Impact.** The project area is not within two miles of a private airstrip.

### 5.2.12 Population and Housing

Construction of the project is expected to take approximately 2 to 4 weeks and would employ an average of approximately 3 to 4 construction workers. Operation of the project facilities will not require any additional workforce or housing. Construction of the proposed project will be short and only require only a few personnel and will not contribute to a significant increase in population to surrounding communities. During operation, the project will not require any additional employees and is not expected to have any impact on population or housing in the area.

The project impacts are presented as follows:

- a) *Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

**No Impact.** The project would not directly or indirectly induce substantial population growth in the project area.

- b) *Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

**No Impact.** The project is located within the existing CTP facility and will not displace any housing.

- c) *Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

**No Impact.** No people would be displaced as a result of the project.

### 5.2.13 Public Services

The project site is located within the existing CTP facility, which already operates utility infrastructure, such as water, sewer, and electricity. Operation of the completed project will not require any additional

employees and operation of the project will not have any adverse impact on schools, parks, or other public facilities in surrounding communities.

The project impacts are presented as follows:

- a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: (Fire protection? Police protection? Schools? Parks? Other public facilities?)*

**No Impact.** The project would not result in the need for new government facilities nor would the project physically alter government facilities or impede emergency services.

#### 5.2.14 Recreation

The project proposes no residential development and, therefore, will not create or increase the need for park or recreational facilities in the project vicinity. Although the proposed project is located within the Aliso and Woods Canyons wilderness and recreation areas, the proposed project is limited to the CTP area, where there are no public trails. Additionally, completion of the project would improve recreation at the Aliso Beach State Park downstream of the CTP, by removing a portion of the stream flow which would limit the contribution of bacteria-laden waters to beach recreation areas.

The project impacts are presented as follows:

- a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

**No Impact.** The project will not require any additional permanent employees and will not increase the use of existing neighborhood and regional parks or other recreational facilities.

- b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

**No Impact.** The project does not include recreational facilities or require the construction or expansion of recreational facilities.

#### 5.2.15 Transportation and Traffic

It is anticipated that construction of the proposed facility will take approximately 2 to 4 weeks years with an average construction workforce of approximately 3 to 4 persons. Assuming that there will be no ride sharing, the project will generate approximately 15 round trips per day during the construction period. Construction will typically be scheduled between 7:00 AM and 6:00 PM, Monday through Friday. The existing access road to the CTP will be the main route site workers and construction vehicles will take to get to the project site.

Project operation will not require any substantial vehicle traffic. Periodic inspections and/or routine maintenance of the new equipment will be performed, but these activities will be infrequent and will have an insignificant impact to transportation and traffic.

The project impacts are presented as follows:

- a) *Would the project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?*

**No Impact.** During the short construction period, increased traffic approximately 15 vehicles per day would occur on the existing access road to the CTP to bring workers to the site. Upon completion of the project, travel to and from the site is expected to be with the same as the current operation of the CTP.

- b) *Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?*

**No Impact.** During the construction period, minimally increased traffic of approximately 15 vehicles per day would occur along existing access roads to the CTP site for approximately 2 to 4 weeks. This is expected to have no impact on the level of service standards. Upon completion of the proposed project, travel to and from the site is expected to be the same as the current operation of the CTP.

- c) *Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

**No Impact.** The project will not result in a change in air traffic patterns, an increase in air traffic, or result in safety risks.

- d) *Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

**No Impact.** The project would not substantially increase hazards due to a design feature. The project does not include any changes to roadways.

- e) *Would the project result in inadequate emergency access?*

**No Impact.** During the construction period, minimally increased traffic would occur along existing access roads to the site for approximately 2 to 3 weeks; however, the construction activities are expected to be limited to the existing CTP and no affect to emergency access is expected. Upon completion of the proposed project, travel to and from the site is expected to be consistent with the current operation of the CTP.

- f) *Would the project result in inadequate parking capacity?*  
**No Impact.** The project will require only approximately 3 to 4 construction personnel and sufficient parking is available at the CTP facility. The project will have no impact on parking capacity.
- g) *Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?*  
**No Impact.** The project will not affect or conflict with adopted policies, plans, or programs supporting alternative transportation. There are no bus turnouts, bicycle racks, or any other alternative transportation facilities within the project area.

### 5.2.16 Utilities and Service Systems

No significant solid waste would be produced during operation of the project and no other utilities or services are required to complete the proposed project. As was detailed in Sections 1.0 and 2.0, this project will produce more recycled water for existing water customers, which will reduce their dependency on potable water; therefore, the proposed project has a beneficial impact to the local water supply.

The project impacts are presented as follows:

- a) *Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*  
**No Impact.** Concentrated effluent (brine) from the RO system and backwash from the filtration package is the expected by-product of the packaged treatment system and will be directed to the ocean via the existing outfall. Clear Creek Systems, Inc., processed creek water using a portable test system on May 14, 2008. Effluent from the RO and filter process was analyzed using the same procedures as SOCWA's regular NPDES permit requirements for monthly toxicity monitoring. The results of the constituent analysis and toxicity testing are provided in Attachment B. There was no observed toxicity in the chronic kelp germination and growth test. However, there was a toxic effect observed in the 100% effluent concentration for the acute mysid survival test. This resulted in an acute toxicity unit value of 1.30, which is within the CTP and AWT permit effluent limits. The permit will have to be amended to include this additional waste stream, however the project will not exceed the wastewater treatment requirements of the Regional Water Quality Control Board.
- b) *Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*  
**No Impact.** The project includes the installation of a package treatment system for the diverted urban runoff. The project will not require new water or wastewater treatment facilities or expansion of existing facilities.

- c) *Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

**No Impact.** The construction of the project on the existing CTP facility will not require the construction of new storm water drainage facilities or expansion of existing facilities. No impacts are expected.

- d) *Does the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

**No Impact.** No new water supplies would need to be added or expanded as a result of this project. As detailed above, the proposed project has a beneficial impact to the local water supply by providing an additional source of recycled water.

- e) *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

**No Impact.** This project will not result in the delivery of wastewater for treatment at the existing CTP. Instead, the project will deliver treated water which can be blended with recycled water from the ATP, to produce a higher-quality recycled water for distribution. No impacts are expected.

- f) *Will the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

**No Impact.** This project will not generate significant construction waste; therefore, the project is not expected to adversely affect local landfills. The project will comply with all regulations related to solid waste.

- g) *Will the project comply with federal, state, and local statutes and regulations related to solid waste?*

**No Impact.** The project will comply with all federal, state, and local statutes and regulations related to solid waste management.

### 5.2.17 Mandatory Findings of Significance

The project impacts are presented as follows:

- a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

**Less than Significant Impact with Mitigation.** The proposed project has the potential to impact fish and other species that utilize the riparian habitat of Aliso Creek. Mitigation measures are proposed to reduce potential impacts to a level that is less than significant.

- b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

**No Impact.** The proposed project has not been found to have incremental effects that could affect current or other projects in the area.

- c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

**No Impact.** The proposed project does not have environmental effects which would cause substantial adverse effects to humans.

## 6.0 REFERENCES CITED AND SUPPORTING INFORMATION SOURCES

- California Department of Fish and Game (CDFG). 2007. California Natural Diversity Data Base (CNDDDB). <http://www.dfg.ca.gov/biogeodata/cnddb/>
- California Division of Mines and Geology, 2001, “Seismic Hazard Zone Report for the Laguna Beach 7.5-Minute Quadrangle, Orange County, California” Seismic Hazard Zone Report 013.
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## 7.0 LIST OF PREPARERS

Environmental & GIS Services, LLC, prepared this Initial Study under contract to the SCWD, which is the lead public agency responsible for overseeing and implementing the CEQA environmental review process for the proposed project. The following lists the specific persons directly involved in the preparation of this Initial Study:

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# ATTACHMENTS

## **Attachment A.**

# **Aliso Creek Hydrologic Conditions, Project Plans, and Adaptive Management**

## **Attachment B**

# **Toxicity Analysis for the Wastewater Discharge**