CITY OF SAN CLEMENTE
RECYCLED WATER SYSTEM EXPANSION

PROJECT NUMBER 18201

INITIAL STUDY &
DRAFT
MITIGATED NEGATIVE DECLARATION

AUGUST 6, 2011

Prepared by:
Ed Almanza & Associates
INITIAL STUDY
City of San Clemente, California

1. **PROJECT:** City of San Clemente Recycled Water System Expansion

2. **CONTACT PERSON & PHONE:** David Rebensdorf, P.E., Assistant City Engineer, (949) 361-6130

3. **PROJECT LOCATION:** The project proposes to expand existing facilities and construct new facilities to serve the City’s Recycled Water System. Proposed facilities include pipelines throughout the city and new and/or expanded facilities at the existing Water Reclamation Plant located on Avenida Pico, and a new reservoir adjacent to the existing water Cordillera Reservoir in Rancho San Clemente. The locations of proposed facilities are shown in Exhibits 1 through 4.

4. **PROJECT DESCRIPTION:**

This document addresses potential environmental effects of expansion of the City of San Clemente’s Recycled Water System. The City of San Clemente is in south Orange County (see Exhibit 1). The City currently provides domestic water to most of the 17 square miles within the corporate boundaries. It also delivers recycled water to users. In 2007, the City’s updated Recycled Water Master Plan identified a demand for recycled water that far exceeds the capacity of the City’s current Water Reclamation Plant and distribution system. The current system has a secondary treatment capacity of 6.96 mgd, and an additional 2.2 mgd tertiary treatment capacity. The City proposes to expand the recycled water production and distribution system to the master planned capacity of 4.4 mgd with a peak capacity of 5.0 mgd in order to meet the identified user demand.

The proposed expansion implements recommendations of the City’s Recycled Water Master Plan Update (2007)\(^1\). The project includes expansion of treatment and pumping facilities at the existing Wastewater Reclamation Plant, placement of new transmission and distribution pipelines throughout the service area, construction of a reservoir facility, installation of a pressure reducing station (see detailed descriptions below).

**Project Components**

**Water Reclamation Plant Facilities**

The City’s Water Reclamation Plant is located on Avenida Pico, south of the I-5 Freeway and north of El Camino Real. The 15-acre site has been in operation since 1970, with recycled water capacity (2.2 mgd) since 1991. Exhibit 2 shows the location of the Water Reclamation Plant and existing facilities. The exhibit also identifies locations of new treatment and pumping facilities, proposed as elements of this project.

Expansion of recycled water production to the master planned capacity of 4.4 mgd requires the addition of four pulse bed filters (along with upgrade of all filter controls to new standards) and construction of a new chlorine contact basin and sodium hypochlorite storage tank to expand the disinfection capacity of the facility. An existing recycled water pump station will be replaced and expanded to provide for distribution of expanded recycled water supply. These enlarged and new facilities will be located entirely within the site of the existing Water Reclamation Plant.

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\(^1\) The 2007 Master Plan, along with supporting technical memoranda, is on file for public review at the Engineering Division of the City’s Community Development Department.
San Clemente
Orange County
San Diego County
Riverside County
Laguna Beach
San Juan Capistrano
Mission Viejo
Pacific Coast Hwy.
Irvine
Newport Beach
Pacific Ocean
Dana Point
Camp Pendleton
Marine Corps Base
Exhibit 1
Regional Location
Note: New or expanded facilities are labeled in bold italics.

Source: City of San Clemente / Carollo Engineers
**Cordillera Reservoir**

A new 0.2 million gallon (mg) potable water reservoir will be constructed adjacent to the site of an existing 2.0 mg water reservoir at Cordillera (also referred as Reservoir #11) to allow for conversion of the existing water reservoir to recycled water use. The existing 2.0 mg Cordillera Recycled Water Reservoir will provide for operational storage. An air gapped potable water pipeline connection will be provided to the Cordillera Recycled Water Reservoir to provide for demands during high demand periods. The locations of the existing Cordillera Reservoir and proposed 0.2 mg reservoir are shown in Exhibits 3 and 4.

Existing pipelines will be used to connect the new 0.2 MG potable water reservoir to the distribution system, with construction of additional pipe segments to connect the existing 16-inch pipeline to the 0.2 MG tank’s inlet. All existing pipelines are buried, and the new piping will also be buried within the existing reservoir site.

The new 0.2 MG reservoir will be an above ground, precast concrete tank, 31.5 feet high, with a 35-feet diameter. Temporary shoring will be installed to retain excavation for the construction of the reservoir. The temporary shoring will include sheet piling or other retaining methods as applied by the project construction contractor.

**Pipelines**

The City has existing recycled water distribution pipelines constructed on Avenida Pico, Avenida Vista Hermosa, Avenida Vera Cruz and Avenida La Plata (and in the newly developed areas depicted as the dashed yellow lines on Exhibit 3) for current use and for future use upon expansion of the Master Plan facilities. The City is currently providing recycled water at the Municipal Golf Course, Bella Collina Towne & Golf Club (formerly Pacific Golf Course), and at the Water Reclamation Plant for process and irrigation.

The expansion project includes approximately 46,200 linear feet of distribution pipelines ranging in size from 6-inch to 20-inch diameter. Approximately 44,000 linear feet of distribution pipelines are planned to be constructed upon securing project funding and regulatory permits. An additional 2200 linear feet of pipeline and a pump station to serve Bella Collina Towne & Golf Club is planned for the future. Pipeline alignments are shown in Exhibit 3 and can be identified according to nine major pipeline segments.

**Pipeline Siting and Dimensions**

All pipelines will be constructed within existing streets and/or already developed sites (e.g., urban parks), with the exception of the easternmost extension of Pipeline J to the Cordillera Reservoir, which will be constructed within the existing pipelines easement, and the unconstructed reaches of the pipeline beneath the future extension of Avenida Vista Hermosa through the graded Marblehead Coastal site (to be built by others). Pipes will be laid in trenches two to four feet wide, at depths ranging from five to eight feet.

**Pressure Reducing Stations**

A pressure reducing station is proposed, at the intersection of Avenida Vista Hermosa and Calle Frontera (see Exhibit 3). The station will be installed within the City’s right-of-way.

**Future PGC Pump Station**

The City may construct a pump station in the future along Avenida La Pata for the golf course to increase operational use of the Cordillera Reservoir for other areas. The pump station would be constructed within the right-of-way of the existing street.
**Codes, Regulations and Materials**

Specifications and construction will comply with all applicable federal, state and local regulations pertaining to the use of recycled water. The existing recycled water use is governed by Order No. R9-2003-0123 issued to the City by the San Diego Regional Water Quality Control Board.

**Project Phasing**

The project design is currently funded from the State Proposition 50 grant, State Loan, USEPA grant and City funds. The City is planning to advertise for multiple bids for construction of the project. Contingent upon obtaining planned project funding by the end of Year 2011, the City plans to commence construction of facilities in early 2012 and complete overall construction within two years.

**Previous Environmental Documentation**

The City of San Clemente Recycled Water Master Plan was approved by the San Clemente City Council in September 2007. At that time the City Council also approved a Negative Declaration which was duly processed and distributed to relevant reviewing agencies and the public. Since that time, the project has undergone refinement to a more detailed level of design reflected in the current project description. The present document is therefore a supplement to the previously approved CEQA document for the Master Plan. The currently proposed project has been the subject of a thorough CEQA-Plus environmental review conducted by the State Water Resources Control Board in conjunction with the City’s loan application for State Revolving Funds (SRF). (CEQA-Plus is an intensive level of environmental review that addresses federal environmental requirements as well as the State Water Resources Control Board’s obligations under CEQA.) In addition, a portion of the current project has undergone separate environmental review in full compliance with Federal NEPA (National Environmental Protection Act) requirements, associated with a grant application for Environmental Protection Agency (EPA) funding for a portion of the proposed facilities expansion. The present document integrates the environmental requirements and mitigation measures of both of these stringent review processes by the State and Federal agencies, as well as the City’s own prior CEQA documentation. In addition, as a result of the CEQA-Plus and NEPA review processes, the current project has received:

- A) An Informal Section 7 Consultation with the U.S. Fish & Wildlife Service documenting that agency’s concurrence that the project is not likely to adversely affect the gnatcatcher and its habitat, January 28, 2010, reproduced in Attachment 1;

- B) A Waiver of Coastal Development Coastal Development Permit Requirements from the California Coastal Commission, Dated May 24, 2010, reproduced in Attachment 3;

- C) A Section 106 Determination of “No Historic Properties Affected) by the State Water Resources Control Board Resources Officer, dated February 3, 2010 and also reproduced in Attachment 2.
5.0 RESPONSES TO ENVIRONMENTAL CHECKLIST QUESTIONS

5.1 AESTHETICS

<table>
<thead>
<tr>
<th>Issues:</th>
<th>Potentially Significant Impact</th>
<th>Potentially Significant Unless Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
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<td>d)</td>
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<td>X</td>
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</table>

I. AESTHETICS. Would the project:

a) Have a substantial adverse effect on a scenic vista?  

No Impact. Significant scenic resources, including scenic vistas, are defined in policies of the City of San Clemente’s General Plan. The Urban Design Element of the City’s General Plan identifies a view corridor from Avenida Pico toward the Pacific Ocean in the vicinity of the City’s Existing Reclamation Plant. Exhibit 5 shows the alignment of the designated Avenida Pico view corridor. The corridor extends westerly from below the top of the grade where Avenida Pico descends in elevation as it approaches El Camino Real in the direction of the ocean from the east. The site plan of the City’s existing Water Reclamation Plant is shown in the upper right corner of the exhibit, along with elevational contours. As shown in the exhibit, the swath of the designated corridor includes the western corner of the Water Reclamation Plant site. There are no existing or proposed structures within this portion of the site.

The new facilities proposed with this project are sited within the outlined areas marked A and B. As shown in the Exhibit, both areas are well outside the designated view corridor. Not only are both areas outside the swath of the designated view corridor, they are both outside of any ocean views from Avenida Pico. Area A is east of Avenida Pico’s elevational crest where it descends toward the ocean, and therefore not within Avenida Pico’s viewshed of the Pacific Ocean. It is 14 to 16 feet lower in elevation than Avenida Pico at the nearest point. Area B is also 14 to 16 feet lower in elevation than the crest and setback 25 - 40 feet from Avenida Pico’s travel lanes, and therefore outside the existing viewshed from Avenida Pico. Proposed facilities in this area range from 9 to 12 feet in height, well below the height of existing structures on the site west of Avenida Pico’s crest. An existing concrete block wall and vegetative landscaping between Avenida Pico and the Water Reclamation Plant screen the site from the view of passing motorists. Proposed facilities at the Reclamation Plant will have no effect on the scenic vista of the designated view corridor. No other project facilities will be visible in the vicinity of the corridor.
Exhibit 5
Reclamation Plant and Pico View Corridor

Source: City of San Clemente Downtown Vision and Strategic Plan (for development of Pico View Corridor)
The site of the proposed Cordillera Reservoir is in the vicinity of a designated ridgeline (Exhibit 10-2 of the Natural and Historic/Cultural Resources Element of the General Plan). Policy 10.2.1 stipulates this provision relative to designated ridgelines.

Require that development, including the placement of fill material, be located beneath the visual crest of ridgelines so as to prevent disruption of ridgeline silhouettes as seen in viewsheds and consistent with the Scenic Highways Element. Points of reference to be determined by the Community Development Department based on the following criteria:

1. Preserve significant public views from areas along major arterial roadways;
2. Preserve significant public views from significant public viewing areas; and
3. Preserve significant public views from points along the I-5 Freeway.

The Scenic Highways Element identifies major and minor urban corridors with significant public viewpoints, including viewpoints along the I-5 Freeway (Exhibit 5-1in General Plan,). Designated major scenic corridors in the vicinity of the designated ridgeline are Avenida La Pata, Avenida Pico and Calle Del Cerro. Avenida Vista Montana, a designated minor urban corridor, is also in the vicinity. The Circulation Element identifies the trail along the ridgeline above the reservoir site as a designated Local Recreational Trail, which signifies it is the site of a public viewshed that warrants protection.

Exhibit 4 of this document (presented earlier) depicts the precise location of the proposed reservoir. The designated ridgeline is immediately to the north of the proposed reservoir site. The top elevation of the proposed reservoir (577 feet) is well below the crest of the ridgeline, which exceeds 600 feet in the vicinity of the reservoir site. The proposed reservoir, like the existing reservoir and existing pump station, is sited far enough below the elevational crest to avoid disruption of ridgeline silhouettes from public viewsheds and is consistent with the Scenic Highways Element, in accordance with Policy 10.2.1. Moreover, both the existing and proposed reservoirs are sited in a topographical depression that is screened from views to the south by natural terrain. The elevation of this terrain prevents the site of the proposed reservoir from being visible from the minor scenic corridor, Avenida Vista Montana, or from the considerably more distant I-5 Freeway (more than 1 mile away). Intervening terrain also obstructs views from Avenida Pico and Avenida La Pata.

A brief view of the existing reservoir is available from a short length of the public right-of-way along Calle Del Cerro. Exhibit 6 depicts the view from this segment and shows that the top of the existing reservoir is barely visible. The reservoir site is more than 400 feet away from Calle Del Cerro and is almost entirely obscured by trees. (The distance is shown in Exhibit 7.) No part of the existing reservoir rises above ridgelines in the background. Because the new reservoir will be an even greater distance from Calle Del Cerro, and its height will be approximately five feet lower than that of the existing reservoir, it is evident that the proposed reservoir will not significantly alter the public viewshed from Calle Del Cerro. Indeed, the new reservoir is not likely to be visible at all, given its location, scale and elevation.

The new reservoir will be partially visible from some residences along Calle Sol. The views from these residences are not public and Calle Sol is not a significant view corridor or a designated view point identified by the City's General Plan. Exhibit 7 illustrates the relationship of the proposed reservoir site relative to Calle Sol residences. The residential lots on Calle Sol are all higher in elevation than the existing reservoir. Their views, for the most part, extend above the reservoir site, such that the existing reservoir does not significantly obscure ocean or ridgeline views. As shown in Exhibit 7, the new reservoir will not be visible to most of the nearest lots on Calle Sol. The proposed
Source: City of San Clemente
Exhibit 7

Proposed Reservoir - Aerial View

Source: City of San Clemente
tank will be mostly hidden behind the much larger existing reservoir from lots 61, 59, 57, 55 and 53 (Exhibit 7).

The new tank may be partially visible from Lot 51 and other lots further south on Calle Sol. Lot 49 is the nearest lot that will have a clear line-of-sight to the new reservoir. Exhibit 8a is a panoramic view from the property line of Lot 49. The existing reservoir is visible on the right and the smaller proposed tank is depicted on its left, through a visual rendering that is based on the tank’s proposed location, scale and elevation. As seen in the view, the proposed tank is a very small element in the viewshed. Its height does not exceed that of the existing reservoir. It does not rise above distant ridgelines. Nor does it obscure views of other significant visual resources, such as the ocean. The new tank introduces additional mass to the already existing facilities, as seen from this location. It does not obstruct significant views or substantially alter the viewshed in a way that significantly damages scenic resources.

Exhibit 8b is a panoramic view of the reservoir site as seen from the local recreational trail. The proposed new reservoir is depicted as a digital rendering to the right of the existing reservoir. The location on the trail from which this image was taken is identified in Exhibit 7. The proposed tank’s height is lower than that of the existing reservoir and does not exceed the horizon line of the background. The new tank will introduce additional visual mass in the form of infrastructure on the reservoir site. It does not obscure views of significant visual resources. Nor does it substantially alter the viewshed or damage significant scenic resources.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. There are no historic buildings, trees, rock outcroppings or other significant scenic resources that will be affected by the project’s proposed facilities. Other scenic resources, as defined by policies of the City’s General Plan (such as designated ridgelines and views from public trails), are addressed in response to (a) above.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

No Impact. Proposed pipes will be underground and therefore have no effect on visual character. New facilities at the Water Reclamation Plant are similar in appearance to existing facilities at the site. The proposed reservoir will not substantially degrade the existing visual character or quality of the site or its surroundings.

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

No Impact. The project does not include any significant new sources of light. The site of the proposed reservoir already has low-level security lighting, but this is not a source of substantial light or glare. No additional lighting is proposed. The new reservoir will be constructed of pre-cast concrete and will therefore not be a source of glare. Proposed facilities at the Water Reclamation Plant will not result in additional lighting. Proposed pipelines will be underground.
II. AGRICULTURE RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

a) 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?  
   X

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?  
   X

c) Involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland, to non-agricultural use?  
   X

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a) 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 is in an urbanized area and will not convert any designated farmlands.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?  
   No Impact. The project is not located on or near any properties zoned for agricultural use or under Williamson Act contract.

c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?  
   No Impact. The nature of the project is such that it will not change the existing environment in any way that would affect farmland. In addition, there are no farmlands or agricultural uses in the vicinity.
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?  
   X

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?  
   X

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

d) Expose sensitive receptors to substantial pollutant concentrations?  
   X

e) Create objectionable odors affecting a substantial number of people?  
   X

A technical assessment of the project’s air quality emissions was prepared to evaluate potential impacts to air quality (Mestre Greve Associates, 2009a). The assessment quantified the project’s projected emissions for several criteria pollutants:

- ozone
- sulfur dioxide
- carbon monoxide
- reactive organic gases
- nitrogen dioxide
- inhalable particulate matter
- volatile organic compounds

Emissions were gauged against criteria and standards of local, State and Federal agencies, and included a Clean Air Act general conformity analysis.

The assessment quantified the project’s emissions from both construction activities and long-term operations after construction. Project emissions are shown in Table 1 below. The assessment found that construction emissions for all 7 critical pollutants will be well below the thresholds of significance for construction emissions. Moreover, the project will result in a net reduction of operational emissions over existing conditions, because the use of local recycled water will replace use of imported water, resulting in a substantial reduction in energy used to transport water from long distances. (See Operational Emissions; and Section 3.1.1 of the Air Quality report on file with the Engineering Division.)
**TABLE 1**

**PROJECT EMISSIONS AND THRESHOLDS**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Status (Attainment, Nonattainment or Unclassified)</th>
<th>Threshold of Significance for the Area (if applicable) Tons/year¹</th>
<th>Construction Emissions (Tons/Year)</th>
<th>Operation Emissions (Tons/Year)²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>Attainment</td>
<td>100</td>
<td>1.8</td>
<td>n/a</td>
</tr>
<tr>
<td>Ozone (O₃)</td>
<td>Nonattainment</td>
<td>--</td>
<td>--</td>
<td>n/a</td>
</tr>
<tr>
<td>Oxides of Nitrogen (NOₓ)</td>
<td>Attainment</td>
<td>25</td>
<td>3.5</td>
<td>n/a</td>
</tr>
<tr>
<td>Particulate Matter (PM₁₀)</td>
<td>Nonattainment</td>
<td>70</td>
<td>0.2</td>
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</tr>
<tr>
<td>Reactive Organic Gases (ROG)</td>
<td>Nonattainment</td>
<td>25</td>
<td>0.4</td>
<td>n/a</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO₂)</td>
<td>Attainment</td>
<td>--</td>
<td>--</td>
<td>n/a</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>Nonattainment</td>
<td>25</td>
<td>0.4</td>
<td>n/a</td>
</tr>
</tbody>
</table>

¹ De Minimis Thresholds for SCAQMD (Source: 40 CFR 93.153 (b)(2)).
² The project will result in a net reduction of operation emissions (see Operational Emissions, and Section 3.1.1 of the Air Quality report, Mestre Greve Associates, 2009a).

The technical study also identifies the amount of Greenhouse Gas (GHG) emissions that would be generated during the project's construction phase (Table 2, below). (The project’s operational emissions will result in a net reduction compared to current operational emissions, and thus no impact; therefore, long-term, operational GHG emissions were not calculated.)

**TABLE 2**

**CONSTRUCTION GHG EMISSIONS**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Construction GHG Emissions CO₂ MTs</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Excavation/Construction Equipment</td>
<td>25</td>
</tr>
<tr>
<td>- Pipeline Installation/Construction</td>
<td></td>
</tr>
<tr>
<td>Equip.</td>
<td>81</td>
</tr>
<tr>
<td>- Trenching Emissions</td>
<td>164</td>
</tr>
<tr>
<td><strong>Total Peak Construction Emissions:</strong></td>
<td><strong>270</strong></td>
</tr>
</tbody>
</table>

NOTE: CO₂ emissions comprise approximately 99.6 percent of emissions from burning diesel fuel.
Other GHG emissions (such as CH₄, N₂O, and Fluorinated Gases) are not calculated; MTs = metric tons.

The emission of GHG is extremely small when compared to regional and global emissions. For this reason, and because these GHG emissions will be short term, the project’s GHG impacts will be less than significant.
Would the project:

a) **Conflict with or obstruct implementation of the applicable air quality plan?**

*No Impact.* The project will not obstruct implementation of the South Coast Air Quality Management Plan. Rather it is consistent with the plan in that construction emissions are well below the significance thresholds put forth by the plan, and operational emissions will result in a net reduction in emissions.

b) **Violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

*No Impact.* The project’s emissions are well below emission standards.

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

*No Impact.* The project’s emissions are not cumulatively considerable for non-attainment pollutants.

d) **Expose sensitive receptors to substantial pollutant concentrations?**

*No Impact.* The project’s construction emissions will not expose sensitive receptors to substantial pollutant concentrations.

e) **Create objectionable odors affecting a substantial number of people?**

*No Impact.* Expansion of the City’s recycled water system will not result in creation of odors.

### 5.4 BIOLOGICAL RESOURCES

<table>
<thead>
<tr>
<th>Issues</th>
<th>Potentially Significant Impact</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV. BIOLOGICAL RESOURCES. Would the project:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) 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?</td>
<td>X</td>
<td></td>
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</tr>
<tr>
<td>b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</td>
<td>X</td>
<td></td>
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</tbody>
</table>
Issues:

| c) | 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? | X |
| d) | 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? | X |
| e) | Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | X |
| f) | Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | X |

A biological resources assessment was prepared to identify the project’s potential effects on biological resources (See PCR, 2009a on file with City Engineering Division). The geographic scope of the assessment included all areas potentially affected by the project: the existing water reclamation plant, the site of the proposed reservoir, and all proposed pipeline alignments (including a 50-foot buffer area surrounding the proposed alignments within ornamental or disturbed chaparral vegetation communities).

No sensitive plant species were observed within the study area; however, five species have a low potential to occur. These include intermediate mariposa lily (CNPS List 1B.2), summer holly (CNPS List 1B.2), Palmer’s grapplinghook (CNPS List 4.2), Nuttall’s scrub oak (CNPS List 1B.1), and San Miguel savory (CNPS List 1B.2). None of these ten species are State or federally listed as threatened or endangered; they are all CNPS listed species. Due to the disturbed nature of the habitat present on-site and the minor amount of impact area in relation to the suitable habitat areas within the study area, the potential loss of individuals of these species, if present, is not expected to reduce regional population levels to the degree that their existence is threatened. Therefore, impacts would not be significant.

No sensitive wildlife species were observed within the study area; however, eight species have the potential to occur. The golden eagle, orange-throated whiptail, Dulzura pocket mouse, northwestern San Diego pocket mouse, northern red-diamond rattlesnake, Coronado skink, western mastiff bat, and coast horned lizard do not hold State or federal listings as threatened or endangered; they are all SSC species. Potential impacts to these species, if present, would not threaten regional populations. Impacts would, therefore, be less than significant.

Developed portions of the study area, adjacent to existing paved streets in which some of the project’s pipelines are proposed, overlap with designated USFWS critical habitat areas for the coastal California gnatcatcher. However, the areas directly affected by the project do not include suitable habitat for the California gnatcatcher and the gnatcatcher is therefore not expected to utilize these areas. All construction activities within a 300-foot buffer of designated critical habitat areas will begin prior to the California gnatcatcher’s breeding season (February 15 to August 31) as an added assurance that there will be no indirect impacts to nesting birds in these areas. (See additional discussion below in response to question (a)).
As an element of the CEQA-Plus process, the project was the subject of Informal Section 7 Consultation with the US Fish and Wildlife Service. Based on review of the project components and the technical biological resources assessment (PCR, 2009a), the Service found that the proposed expansion is not likely to adversely affect the gnatcatcher or its critical habitat (see correspondence, U.S. Fish and Wildlife Service, January 28, 2010, in Attachment 1).

Would the project:

a) 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?

Potentially Significant Unless Mitigation Incorporated. Developed portions of the study area, adjacent to existing paved streets in which some of the project’s pipelines are proposed, overlap with designated USFWS critical habitat areas for the coastal California gnatcatcher. Areas directly affected by the project do not include suitable habitat for the California gnatcatcher, therefore the gnatcatcher is not expected to utilize these areas. There will be no direct impacts to gnatcatchers or their critical habitat.

However, there is the potential for the project to have indirect impacts resulting from construction noise generated near the adjacent designated critical habitat. To avoid any adverse indirect effects on nesting birds within critical habitat areas, the project’s construction phase will implement the following mitigation measures.

1. Construction for areas within 91.4-m (300 ft) of critical habitat will avoid the breeding season (February 15 to August 31).

2. If the breeding season cannot be avoided, a qualified biologist will survey any critical habitat within 91.4-m (300 ft) of the construction site within 7 days prior to onset of construction; and

3. If an active gnatcatcher nest occurs within the 94.1-m (300 ft) of the proposed construction activities, construction within the area will be postponed and the Carlsbad Fish and Wildlife Office contacted.

The areas potentially subject to this provision are shown in Exhibit 9 and include very limited sections of the following pipeline segments:

- Segment G1 (portion) – 12-inch future pipe
- Segment C3 (portion) – proposed 12-inch pipe in Camino Vera Cruz
- Segment A5 small portion of the proposed 8-inch pipeline in Camino Vera Cruz from Calle De Los Arboles to the easement between Benedict Truman Elementary School and Forster Ranch Community Park.
- Segment B (portion) – 6-inch pipeline on Calle de los Arboles
- Segment I1 (portion of) – 6-inch pipe along Calle del Cerro
- Segment J1 (small portion) – proposed 20-inch pipeline to Cordillera Reservoir
California Gnatcatcher Critical Habitat with 300-ft Buffer

Source: Aerial Express, 2007; USFWS, 2007; PCR Services Corporation, 2009
Because of the urbanized character of the area, no other sensitive species are expected to be in the vicinity. Any minor loss or disturbance of habitat or of plant or wildlife species would be much too small to be significant.

Implementation of the mitigation measures provided above will reduce potential impacts to a level below significant.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

**No Impact.** The areas affected by the project do not support any riparian habitat or other sensitive natural communities.

c) 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?

**No Impact.** The technical field assessment identified all areas within the project vicinity that might be regulated by the Army Corps of Engineers, Regional Water Quality Control Board and California Department of Fish and Game. The project will have no impact on federally protected wetlands. Nor will any wastewater be discharged into federally protected wetlands or surface waters that drain into wetlands. Thus, no impacts are anticipated on jurisdictional or federally protected wetlands.

d) 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?

**Potentially Significant Unless Mitigation Incorporated.** Most of the project’s facilities are proposed in areas devoid of either native or ornamental vegetation (existing streets and the interior of the City’s Water Reclamation Plant). However, in some very limited areas, the project may result in the removal of vegetation which, in turn may provide nesting habitat for migratory birds. The biological resources assessment identifies specific areas where this potential impact might occur (PCR, 2009a, page 13, final paragraph). They include the area of the proposed reservoir and the portion of Pipeline J that extends from the existing cul-de-sac on Calle Cordillera to the new reservoir. Also included are the ornamental landscaped areas adjacent to proposed pipeline segment F1 in San Gorgonio Park, and adjacent to pipeline segment A5 near Benedict Elementary School, and along the landscaped hillside adjacent to proposed segment B on Vista Jardin. Although these are areas of ornamental rather than native vegetation, they have a low potential to provide habitat for wildlife species (nesting birds). It is not certain that vegetation will be removed in all or any of these areas and the extent of removals cannot be determined until the construction phase begins and the plan of construction is developed by the contractor.

In order to avoid any adverse effects on nesting migratory birds resulting from vegetation removal, the following mitigation measure will be implemented during the construction phase:

> The contractor’s plan of construction shall clearly identify any vegetation to be removed in the three specific areas identified in the biological assessment report (PCR, 2009a, page
13, final paragraph). The contractor shall make every feasible effort to schedule vegetation removals so that they occur prior to the beginning of nesting season (nesting season is February 15 to August 31). This will ensure that no active nests are disturbed during vegetation removals. In the event that it is not feasible to schedule construction to begin before nesting season, any vegetation that is to be removed (native or ornamental) will be thoroughly surveyed for the presence of nesting birds by a qualified biologist retained by the City or its contractor before commencement of construction activity in these areas. If any active nests are detected, a buffer of at least 300 feet from active nests will be delineated, flagged and avoided until the nesting cycle is complete as determined by the biological monitor.

The areas affected by the project do not support extensive natural habitats that would support regional wildlife movement. The proposed pipelines are underground features and will have no effect on wildlife movement. Nor will addition of the new tank at the existing Cordillera Reservoir site or the expansion of facilities at the Water Reclamation Plant affect wildlife movement.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. Portions of the project area are located within the coastal zone; however, no impacts will occur to any environmentally sensitive habitat as established in the City of San Clemente’s Coastal Element. The project does not conflict with any other local policies or ordinances protecting biological resources.

f) 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 is within the County of Orange Southern Natural Community Conservation Plan (NCCP) area. The proposed facilities will not conflict with the provisions of the NCCP. As indicated above in response to question (a), the project will have no impact on the California Gnatcatcher or its habitat, which are subject to protection under the NCCP.

5.5 CULTURAL RESOURCES

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<thead>
<tr>
<th>Issues:</th>
<th>Potentially Significant Impact</th>
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<th>Less Than Significant Impact</th>
<th>No Impact</th>
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<tbody>
<tr>
<td>V. CULTURAL RESOURCES. Would the project:</td>
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<tr>
<td>a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>d) Disturb any human remains, including those interred outside of formal cemeteries?</td>
<td></td>
<td>X</td>
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</table>

A Cultural Resources Survey was conducted for the project (PCR, August 2009b, on file at City Engineering Division). The survey addresses historical, prehistorical and paleontological resources. The survey included a cultural resources records search through the California Historical Resources Information System – South Central Coastal Information Center, a Sacred Lands file search through the California Native American Heritage Commission and follow-up Native American consultation, a paleontological records search through the Natural History Museum of Los Angeles County, and an onsite survey by qualified field archaeologists.

The study found prior records of five prehistoric (archaeological) sites in the vicinity of the project. Three of these sites are outside the immediate area of potential impact. One is located along a proposed pipeline alignment but in an area that has already been heavily disturbed by development. No surface remnants exist and no subsurface testing can be performed because of the already developed character of the area (office complexes, paved roads, etc.). A second site is located in the vicinity of the proposed Cordillera Reservoir. The site has already been studied and surface artifacts have been collected in conjunction with prior grading and development of the area (1984). The site has subsequently been further disturbed by development (grading, paving of Ridge Line Trail, installation of v-ditches, landscaping, etc.). Given the level of prior disturbance (and collection) the site’s potential value is low. It is not eligible for listing in the National Register of Historic Places or the California Register of Historical Resources.

The entire project area has been graded in association with previous development of San Clemente's four major specific plan areas: Forster Ranch, Marblehead Inland, Rancho San Clemente and Talega. Development of these areas included mass grading and subsequent grading to develop roads and building pads. All of the project’s pipelines are proposed in areas that have been previously disturbed. The depth of trenching excavations for pipelines will be 5 to 8 feet. Because most pipelines will be placed in the right-of-way of existing roads, there is very little potential to encounter previously undisturbed soils. In some areas, excavation for pipelines may exceed the depth of previous grading. If this condition occurs in proximity to one of the 5 archaeological sites recorded within or immediately adjacent to the project’s impact area, there may be a slight potential to impact previously undisturbed resources. If this condition occurs in areas where fossil-bearing geologic formations are exposed, paleontological resources may be impacted. In addition to the pipelines, there will be subsurface disturbance at the Water Reclamation Plant to install a chlorine contact basin. However, excavation for the basin will occur within an area that has already been previously disturbed and so the potential to encounter buried cultural resources is extremely low (PCR 2009b, p. 40). The new reservoir will also be within a previously disturbed area, at the already existing Cordillera reservoir site, and excavations for the new reservoir will not exceed the depth of the previous disturbance (Ninyo & Moore, March 2011, page 9 and Figure 4).

Would the project:

a) **Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?**

No Impact. There are no significant historical resources in the project area that would be adversely affected by the proposed facilities.

b) **Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?**

Potentially Significant Unless Mitigation Incorporated. Archaeological resources that may have existed in the project area are likely to have been displaced as a result of prior development. There is very low potential to encounter previously undisturbed soils during the construction of the
proposed pipelines and reservoir, because of the disturbed character of the area. However, the potential to encounter buried archaeological resources is considered moderate to high in excavations of previously undisturbed soils near the five previously recorded archaeological sites, despite the developed nature of these areas. As a result, the following mitigation measures are provided to reduce any potential impacts to a less than significant level and to identify, evaluate, and recover archaeological resources encountered during implementation of the proposed undertaking.

1. A qualified archaeologist and Native American representative shall be retained by the City and approved by the reviewing agencies prior to the commencement of the project. The archaeologist and Native American representative shall monitor all ground-disturbing activities and excavations adjacent to CA-ORA-504, -746, -750, -789, and -903, as shown in Figure A1 – Results and Monitoring Extent Map, in Appendix A of the Cultural Resources Survey (PCR, August 2009b). The archaeologist shall determine whether additional monitoring is warranted beyond the boundary in Figure A1. The archaeologist shall be familiar with Orange County archaeology.

2. If archaeological resources are encountered during implementation of the undertaking, ground-disturbing activities shall temporarily be redirected from the vicinity of the find. The archaeologist shall be allowed to temporarily divert or redirect grading or excavation activities in the vicinity in order to make an evaluation of the find and determine appropriate treatment. All cultural resources recovered will be documented on California Department of Parks and Recreation Site Forms to be filed with the CHRIS-SCCIC. The archaeologist shall prepare a final report about the find to be filed with the City and the CHRIS-SCCIC, as required by the California Office of Historic Preservation. The report shall include documentation and interpretation of resources recovered. Interpretation will include full evaluation of the eligibility with respect to the National Register of Historic Places and California Register of Historical Resources and CEQA. The report shall also include all specialists’ reports as appendices. The City shall designate repositories in the event that resources are recovered.

3. If the project is financed through the State Revolving Fund, the State Water Resources Control Board Cultural Resources Officer (CRO) shall be notified of any unexpected discoveries. The CRO shall be consulted and approve any additional studies, treatment, and evaluations of cultural resources.

4. If archaeological resources are encountered during implementation of the undertaking outside the monitoring extent delineated on Figure A1 when the archaeological or Native American monitor is not present, ground-disturbing activities shall temporarily be redirected from the vicinity of the find. The City shall immediately notify a qualified archaeologist of the find. The archaeologist shall coordinate with the City as to the immediate treatment of the find until a proper site visit and evaluation is made by the archaeologist. The City shall then follow the procedures outlined in Mitigation Measure 2 above. The archaeologist shall also determine the need for archaeological and Native American monitoring for any

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3 Figure A1 of the Technical Cultural Resources Survey report is not shown in this document because the location of cultural resources is considered sensitive information and not for public dissemination.
additional ground-disturbing activities in the area of the find thereafter.

5. If human remains are encountered unexpectedly during construction excavation and grading activities, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the California Native American Heritage Commission (NAHC). The NAHC will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American, who will then help determine what course of action should be taken in dealing with the remains. The City shall then undertake additional steps as necessary in accordance with CEQA Guidelines Section 15064.5(e).

Implementation of these measures will reduce any potential impacts to archaeological resources to a level below significant.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Potentially Significant Unless Mitigation Incorporated. No paleontological resources were found during the onsite survey of the project areas. Like most of San Clemente, the area is underlain by the Monterey and Capistrano Formations, both of which have been known to yield significant fossil remains. The potential to encounter buried paleontological resources is considered moderate to high in excavations of previously undisturbed soils. The new reservoir will also be within a previously disturbed area, at the already existing Cordillera reservoir site, and excavations for the new reservoir will not exceed the depth of the previous disturbance (Ninyo & Moore, March 2011, page 9 and Figure 4). The depth of trenching excavations for pipelines will be 5 to 8 feet. Because most pipelines will be placed in the right-of-way of existing roads, there is very little potential to encounter previously undisturbed soils. In order to ensure that no significant impacts result from trenching for pipelines in the few areas that have not yet been disturbed by previous grading, the following mitigation measures will be implemented.

1. A qualified paleontologist shall be retained by the City and approved by the reviewing agencies prior to the commencement of the project to develop and execute a paleontological monitoring plan. A qualified paleontologist is here defined as a paleontologist meeting the qualifications established by the Society of Vertebrate Paleontologists. The paleontological monitor shall be familiar with the Monterey and Capistrano Formations. The monitoring plan shall address those areas where monitoring is warranted based on the likelihood of encountering paleontological resources resulting from ground-disturbance and excavations associated with activities within areas shown in Figure A1 – Results and Monitoring Extent Map, of the Cultural and Paleontological Resources Assessment (PCR, 2009b). In determining the areas to be monitored, the paleontologist shall also consider available geotechnical sources that identify the extent and depth of previous grading, including Ninyo & Moore, March 2011, and others.

2. If fossils are found during ground-disturbing activities, the paleontological monitor shall be empowered to halt the ground-disturbing activities within 25 feet of the find in order to allow evaluation of the find and determination of appropriate treatment.
3. If fossils are found, the paleontologist, in coordination with the City, shall establish a curation agreement with an accredited facility, such as the Natural History Museum of Los Angeles County, prior to the commencement of the project. This agreement shall establish the facility as the curator for all paleontological resources identified during project implementation.

4. The paleontologist shall prepare a final report on the monitoring. If fossils were identified, the report shall contain an appropriate description of the fossils, treatment, and curation. A copy of the report shall be filed with the City, the reviewing agencies, and the curating facility, and shall accompany any curated fossils. Implementation of these measures will reduce any potential impacts to paleontological resources to a level below significant.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Potentially Significant Unless Mitigation Incorporated. Potential disturbance of human remains is addressed in the mitigation measures under (b) above.

5.6 GEOLOGY AND SOILS

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<tr>
<th>Issues:</th>
<th>Potentially Significant Impact</th>
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<th>Less Than Significant Impact</th>
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<tr>
<td>VI. GEOLOGY AND SOILS - Would the project:</td>
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<tr>
<td>a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:</td>
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<tr>
<td>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.</td>
<td>X</td>
<td></td>
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<tr>
<td>ii) Strong seismic ground shaking?</td>
<td>X</td>
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<tr>
<td>iii) Seismic-related ground failure, including liquefaction?</td>
<td>X</td>
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<tr>
<td>iv) Landslides?</td>
<td>X</td>
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<tr>
<td>b) Result in substantial soil erosion or the loss of topsoil?</td>
<td>X</td>
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<tr>
<td>c) 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?</td>
<td>X</td>
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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?

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

Responses to the following questions are based on four geotechnical reports prepared specifically for the project (Ninyo & Moore, November 2008, 2009, 2010 and 2011). The technical studies focus on geologic and soils conditions at the two sites proposed for major infrastructure improvements: the City’s Water Reclamation Plant and the site of the Cordillera Reservoir. Geotechnical conditions described in both reports are consistent with general conditions identified in the City’s General Plan and General Plan EIR (pp 6-294 to 6-318).

Would the project:

a) 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.

No Impact. The project area is not identified as a State of California Earthquake Fault Zone (formerly known as an Alquist-Priolo Special Studies Zone). No known active seismic faults traverse the project area. Therefore, there is no potential for adverse effects resulting from ground rupture.

ii) Strong seismic ground shaking?

Less Than Significant Impact. The project is located in the seismically active southern California region and would likely be subject to ground shaking, potentially exposing proposed water treatment and storage facilities and pipelines to seismic hazards. While no known active seismic faults traverse the project area, the project is within 50 miles of several known potential sources of strong shaking, including the offshore segment of the Newport-Inglewood fault system located approximately 4 miles west of San Clemente. Other potentially active faults in the region include the Whittier, San Andreas, San Jacinto, Malibu-Coast-Raymond, Palos Verdes, San Gabriel, and Sierra Madre-Santa Susana-Cucamonga faults.

As a standard condition of approval, the project will be required to conform to the International Building Code (IBC), the City’s Seismic Hazard Mitigation Ordinance, and other applicable standards. Conformance with these engineering standards in the design of proposed facilities will reduce the effects of seismic ground shaking to less than significant levels.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction is the loss of strength of cohesionless soils when the pore water pressure in the soil becomes equal to the confining pressure. It generally occurs as a
“quicksand” type of ground failure caused by strong ground shaking. The primary factors influencing liquefaction potential include groundwater, soil type, relative density of the sandy soils, confining pressure, and the intensity and duration of ground shaking. According to the geotechnical investigation of the site, the potential for surface effects due to liquefaction are considered very low due to the depth of the groundwater table (11 to 17 feet) and relatively thin layers of liquefiable soil. Potential hazards resulting from other forms of seismic-related ground failure can be reduced to a level below significant through compliance with seismic requirements of the International Building Code and site specific recommendations of the geotechnical investigation. Compliance with these requirements and recommendations is a standard component of the City’s project design.

iv) Landslides?

Less Than Significant Impact. There is no potential for landslide hazards at the Water Reclamation Plant site because of the site’s flat and graded terrain. Pipelines proposed in existing streets and right-of-way are not at risk of landslide or slope instability. An ancient landslide was mapped during earlier investigations at the Cordillera Reservoir site. However, the lower portion of the slide was stabilized during the previous grading for the slope (Ninyo & Moore, 2008; Irvine Soils, 1985a, 1985b). Construction of the reservoir will not impact stability of the existing slope (Ninyo & Moore, 2011). Detailed recommendations (along with the global stability analysis) are provided in the geotechnical study (Ninyo & Moore, 2008, 2010 and 2011). Compliance with the recommendations of the geotechnical studies will ensure that construction of the reservoir does not introduce slope instability or the potential hazard for landslides at the reservoir site.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Potential erosion related to grading and construction activities will be addressed through Statewide Construction General NPDES Permit (#CAS000002), which requires implementation of appropriate erosion control, sediment control, tracking control, non-storm water management, waste management and material management Best Management Practices (BMPs) to prevent discharges of pollution from construction activities. Construction BMPs will also be implemented to comply with requirements of the South Orange County Municipal NPDES Stormwater Permit (#CAS0108740).

c) 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?

Less Than Significant Impact. The geotechnical investigation for the Cordillera Reservoir site (Ninyo & Moore, 2008) found that the fill soils of the existing slope provide a satisfactory factor of safety (i.e., greater than or equal to 1.5). Groundwater at the site is anticipated to be deeper than 50 feet below ground surface (Ninyo & Moore, 2008). The geologic units found at the site (fill material and the underlying Capistrano formation) do not include liquefaction-prone soils. The Water Treatment Plant site is not within an area mapped as potentially liquefiable. Moreover, exploratory borings indicate that the alluvial and terrace deposits underlying the near-surface fill soils consist predominantly of firm to hard clay that are in turn underlain by Capistrano Formation bedrock (and not the granular soils that characterize liquefaction-prone areas). Historic high groundwater at the site is expected to be deeper than 50 feet below ground surface. Consequently, liquefaction and liquefaction-related hazards (i.e., ground subsidence and dynamic settlement) are not significant hazards at the site. The site’s flat terrain and graded condition preclude hazards related to landslides or unstable soils.
Pipelines are located within the existing streets or easement areas. Geotechnical sample borings within these areas do not indicate a potential for liquefaction.

d) 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?

**Less Than Significant Impact.** The Capistrano Formation underlies both the Cordillera Reservoir site and the City’s Water Reclamation Plant site. Along with the Monterey Formation, it is also prevalent throughout San Clemente. Soils of both the Capistrano and Monterey formations are known to be highly expansive. The two geotechnical reports provide specific recommendations to address conditions of underlying soils. For the Cordillera Reservoir site, the geotechnical study identifies the presence of expansive soils on-site, and the engineers recommend over-excavation to a depth of 3 feet below the footing bottom elevation, followed by backfilling and compaction using granular soil with a very low expansion index. Lateral limits of over-excavation should extend approximately 5 feet beyond the outside edge of the reservoir footprint (Ninyo & Moore, 2008, pp. 13 – 14).

Soils underlying the Water Reclamation Plant are identified as fill soils (placed at an earlier stage of site development) that are unsuitable for providing structural support in their present condition (Ninyo & Moore, 2009, pp. 12 – 13). Although the existing soils are not identified as expansive, the geotechnical study recommends removal and compaction of the existing fill soils to a depth of ten feet.

Excavation for the placement of proposed pipelines throughout the service area can be expected to encounter similar conditions with the potential for highly expansive native soils underlying compacted fill placed during construction of City streets and associated right-of-way. Standard soils engineering methods and compaction during backfill of trenching will remediate adverse soil conditions and avoid effects of settlement caused by expansive soils.

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

**No Impact.** The project does not involve septic tanks or alternative waste water disposal systems.

### 5.7 HAZARDS AND HAZARDOUS MATERIALS

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<th>Issues:</th>
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<th>Potentially Significant Unless Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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VII. **HAZARDS AND HAZARDOUS MATERIALS.** Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?  

b) 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?  

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?  

X

X

X
Issues:

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<tr>
<th>d)</th>
<th>Be located on a site included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5, and as a result, create a significant hazard to the public or the environment?</th>
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<tbody>
<tr>
<td>e)</td>
<td>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?</td>
</tr>
<tr>
<td>f)</td>
<td>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?</td>
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<tr>
<td>g)</td>
<td>Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</td>
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<tr>
<td>h)</td>
<td>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?</td>
</tr>
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Would the project:

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

*No Impact.* Recycled water treatment processes at the City’s Reclamation Plant currently use free chlorine gas, a hazardous material whose use, storage and disposal is regulated by the Office of Safety and Health Administration (OSHA). With implementation of the Master Plan and the operation of new facilities at the Reclamation Plant, the use of free chlorine gas will be discontinued. Sodium hypochloride will be used in the treatment process instead. The use of all hazardous materials is subject to the standard requirement to comply with OSHA regulations and the local fire code relative to the handling, storage, use and disposal of materials. Compliance with these requirements reduces the risk of adverse effects related to hazards to a level below significant. Because sodium hypochloride is a liquid and does not volatize when spilled, its use presents less of a public hazard than chlorine gas in the case of a spill. Therefore, the project will result in a net decrease in potential hazards from the use of materials.

b) **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?**

*No Impact.* The project will achieve a decrease in the potential hazard to the public or the environment through reasonably foreseeable upset and accident conditions due to the replacement of chlorine gas with sodium hypochloride in the treatment process for recycled water.

c) **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 existing Shorecliffs Middle School (the nearest existing or proposed school) is more than one-half mile to the north of the Water Reclamation Plant.
d) Be located on a site included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5, and as a result, create a significant hazard to the public or the environment?

No Impact. Project facilities are not proposed on any sites identified as hazardous materials sites.

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 result in a safety hazard for people residing or working in the project area?

No Impact. The project area is not located within an airport land use plan or within two miles of a public airport and would not result in a safety hazard for people residing or working in the project area. John Wayne Airport (Santa Ana), located 20 miles northwest of the project area, is the nearest airport (commercial or general aviation).

f) 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 project’s proposed facilities are not located within the vicinity of a private airstrip and would not result in a safety hazard for people residing or working in the project area.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The expanded water system will not affect emergency response plans or evacuation procedures or routes. It will not affect the local circulation system (except for temporary closure of travel lanes on local roadways during installation of pipelines).

h) 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. The project is not in or near a wildland area or a high fire hazard area.

5.8 HYDROLOGY AND WATER QUALITY

VIII. HYDROLOGY AND WATER QUALITY. Would the project:

a) Violate any water quality standards or waste discharge requirements? X

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)? X
Issues:

| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site? | X |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site? | X |
| e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? | X |
| f) Otherwise substantially degrade water quality? | X |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | X |
| h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows? | X |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | X |
| j) Inundation by seiche, tsunami, or mudflow? | X |

Would the project:

a) Violate any water quality standards or waste discharge requirements?

No Impact. Several regulatory mechanisms and procedures are already in place to ensure that the project does not result violate any water quality standards or waste discharge requirements. During construction, the project will obtain coverage under the Statewide Construction General NPDES Permit (#CAS0000002), which requires implementation of appropriate erosion control, sediment control, tracking control, non-storm water management, waste management and material management Best Management Practices (BMPs) to prevent discharges of pollution from construction activities. Construction BMPs will also be implemented to comply with requirements of the South Orange County Municipal NPDES Stormwater Permit (#CA50108740).

After construction, there will be no discharge or other potential water quality impacts associated with pipelines or the proposed Cordillera reservoir. Proposed new facilities at the City’s Water Reclamation Plant will be placed within an area that is already managed to avoid water quality impacts. Surface drainage from the entire Water Reclamation Plant site, including where the new facilities are proposed, is collected and sent back into the site for treatment. Post-construction BMPs are already implemented at the site.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?
No Impact. The project will not affect groundwater recharge or aquifers. No portion of the project is within an area designated as a Sole Source Aquifer.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site?

No Impact. No features of the project will alter the course of a stream or river. Potential impacts of erosion and siltation associated with the construction phase will be avoided through compliance with Statewide Construction General NPDES Permit and BMPs of the South Orange County Municipal NPDES Stormwater Permit (see response to (a) above).

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?

No Impact. Construction of proposed facilities will not alter existing drainage patterns. Nor will it affect any streams or rivers. None of the project features will create or contribute substantial runoff. Proposed pipelines will be underground. New facilities proposed at the Water Reclamation Plant will be sited in an area that is already covered by impervious surfaces with runoff managed onsite (see response to (a) above). The proposed reservoir will result in less than 5,000 square feet of new impervious surface, an area that is well below the threshold large enough to generate substantial runoff.

e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

No Impact. See response to (d) above.

f) Otherwise substantially degrade water quality?

No Impact. See response to (a) above.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The project does not propose housing.

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

No Impact. No part of the project falls within areas mapped by FEMA as “special flood hazard areas subject to inundation by the 1% annual chance flood event”. However some portions of the project fall within areas mapped by FEMA as Zone X (See Exhibit 10). These include portions of the Via San Gorgonio and Avenida Vaquero segments of Pipeline F. Portions of these pipeline segments are planned within the right-of-way of Via Avenida Vaquero which is within the floodplain of the Prima Deschecha Canada channel. FEMA identifies Zone X as an area of 0.2% annual chance flood; an area of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; or an area protected by levees from 1% annual chance
Source: FEMA Flood Insurance Rate Map, Orange County CA, 2004
flood.

The project proposes to bury 6” and 8” pipes for a distance of approximately 1,000 feet within Zone X at the Via Avenida Vaquera location. The project will thus not result in the placement of any structures in the floodway, nor will it result in the obstruction of flood flows or impede or redirect flows. No other pipeline segments or other project improvements are proposed within areas mapped in a 100-year floodplain or otherwise designated by FEMA.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding.

No Impact. See response to (h) above.

j) Inundation by seiche, tsunami, or mudflow?

No Impact. None of the sites proposed for new structures or facilities are in areas subject to seiche, tsunami or mudflow.

5.9 LAND USE AND PLANNING

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<thead>
<tr>
<th>Issues:</th>
<th>Potentially Significant Impact</th>
<th>Potentially Significant Impact Unless Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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<tr>
<td>IX. LAND USE AND PLANNING. Would the project:</td>
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<tr>
<td>a) Physically divide an established community?</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>b) 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?</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>c) Conflict with any applicable habitat conservation plan or natural community conservation plan?</td>
<td>X</td>
<td></td>
<td></td>
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</table>

a) Physically divide an established community?

No Impact. Expansion of the City’s recycled water system will not physically divide a community or portions of an existing community. The project features will be integrated into the fabric of the existing community and its established land uses.

b) 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 project is not in conflict with any land use plan, policy, or regulation. See response (c) below. See also discussion of the project’s relation to view preservation policies of the City of San Clemente General Plan in section 5.1 above (Aesthetics). For a discussion of the project’s consistency with other plans (e.g., South Coast Air Quality Management Plan), see the Air
Quality section 5.2, and other sections of this Initial Study.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The proposed project is within the County of Orange’s Southern Natural Community Conservation Plan (NCCP) area. The proposed facilities will not conflict with the provisions of the NCCP. As indicated above in response to question (a), the project will have no impact to the California Gnatcatcher or its habitat, which are subject to protection under the NCCP.

5.10 MINERAL RESOURCES

Issues:

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<th>Less Than Significant Impact</th>
<th>No Impact</th>
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</table>

X. MINERAL RESOURCES. Would the project:

a) 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? X

b) 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? X

Would the project:

a) 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. All areas in which facilities are proposed have been previously graded and committed to urban land use. No known mineral resources underlie the project area. None of the proposed project areas are viable mineral extraction sites.

b) 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. There are no locally important mineral resource recovery sites underlying the areas affected by the project’s components (pipeline alignments, Water Reclamation Plant or Cordillera Reservoir site).

5.11 NOISE

Issues:

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<th>Potentially Significant Impact Unless Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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</table>

XI. NOISE. Would the project result in:

a) 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? X
A technical noise assessment (Mestre Greve Associates, 2009b) was prepared for this Initial Study to address potential noise impacts of the project on neighboring land uses. Potential noise sources associated with the proposed expansion of the City’s recycled water system are construction noise and operational noise. Construction noise is of three categories: noise generated during the placement of proposed pipelines; construction of the proposed Cordillera Reservoir; and construction of proposed new facilities at the Water Reclamation Plant.

The City of San Clemente Noise Ordinance (Title 8 Health and Safety, Chapter 8.48 Noise Control) is designed to control unnecessary, excessive, and annoying sounds by setting limits that cannot be exceeded at adjacent residential properties and other uses. The Noise Ordinance identifies four different noise zones with different noise criteria for each zone. The four zones are: (1) residential, (2) residential portions of mixed-use, (3) commercial, and industrial or manufacturing. The Noise Ordinance specifies noise levels that cannot be exceeded for the specified use for a specified period of time. Both interior and exterior noise standards are specified for residential properties. The basic limits are shown in Table 3, below.

### Table 3
**Noise Ordinance Basic Limits**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Allowable Exterior Noise Level</th>
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<tbody>
<tr>
<td></td>
<td>7:00 a.m. to 10:00 p.m.</td>
</tr>
<tr>
<td>Residential</td>
<td>55 dBA</td>
</tr>
<tr>
<td>Residential portions of mixed-use, or</td>
<td>60 dBA</td>
</tr>
<tr>
<td>residences located on property zoned for</td>
<td></td>
</tr>
<tr>
<td>commercial, industrial or manufacturing land use</td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>65 dBA</td>
</tr>
<tr>
<td>Industrial or Manufacturing</td>
<td>70 dBA</td>
</tr>
</tbody>
</table>
The basic limits shown in 0 above represent the noise levels that should not be exceeded more than 30 minutes in any hour. This is also referred to as the L50% or L50 level.

The City’s General Plan also addresses construction noise through two policies.

**Policy 14.6.2**: Require that construction activities adjacent to residential land uses and dwelling units be regulated, as necessary, to prevent the generation of adverse and/or excessive noise impacts.

**Policy 14.6.3**: Require construction activities to employ feasible and practical techniques and practices which minimize the generation of adverse and/or excessive noise impacts on adjacent land uses.

Would the project result in:

a) 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 project will not generate noise levels that exceed standards. Temporary noise during the construction phase will increase ambient noise levels in some areas, and in some areas this increase will be audible to local residents. These construction-related increases, being temporary, are exempt from the Noise Ordinance and its standards, and do not constitute a significant environmental impact. See response to (d) below.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

**No Impact.** Neither construction activities nor operational activities after construction will generate groundborne vibration or groundborne noise.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

**Less Than Significant Impact.** Noise levels will not increase substantially. There are no significant sources of permanent noise introduced by the project. There will be no new pumps or other noise generating equipment introduced at the Cordillera Reservoir site. At the Water Reclamation Plant, the proposed new equipment will be similar to the existing equipment and will not generate noise above that of existing facilities. The nearest residence is about 1000 feet away with intervening buildings. Future noise levels will not be audible at the nearest residence, and will be well below noise ordinance limits.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

**Less Than Significant Impact.** Implementation of the project has the potential to result in a temporary increase in the ambient noise levels above existing levels, due to noise generated during construction. Construction noise will be generated at three locations: (1) along proposed pipeline alignments, (2) at the Cordillera Reservoir site, and (3) at the Water Reclamation Plant.

**Proposed Pipelines**

Installation of new pipes along proposed alignments is estimated to generate temporary noise during a period of up to 295 days with multiple sections of pipe being laid at the same time. The
pipe laying process is expected to proceed at a rate of about 100 feet per day. During this process, adjacent residents will experience, on average, exposure to high noise for 3 to 5 days. Construction activities will be limited to weekdays and are likely to occur between 7 AM and 5 PM.

The principal noise sources will be an asphalt/concrete cutter, a backhoe and a trencher. The asphalt cutter will cut through the road surface. The backhoe will then dig up the asphalt, followed by the backhoe or trencher digging the trench. Pipe segments will be lowered into the trench with the backhoe which will also refill the trench, followed by compaction of the fill material. The level of noise generated by this procedure can be as loud as 95.2 dBA or greater, based on noise measurements of a similar operation in Dana Point (Mestre Greve Associates, 2009b). Continuous construction noise at these levels results in a (L50) noise level of 83.2 dBA, i.e., the noise level that occurs 30 minutes out of an hour. The current ambient noise levels in a sampling of eight locations throughout the project area range from 42.5 to 59.5 (L50). Thus, construction noise is likely to be 24 to 40 dBA higher than the current ambient (L50) noise levels along the proposed alignment.

Many of the proposed alignments are adjacent to common landscaped areas or slopes of the communities of Forster Ranch, Marblehead Inland, Rancho San Clemente and Talega. Construction noise in these areas will not affect noise-sensitive land uses because these alignments are not immediately adjacent to residences or schools. Other alignments traverse commercial or industrial areas, which are generally not noise sensitive uses (as reflected in the higher noise levels permitted for commercial and industrial uses shown in Table 3 above). Most commercial/industrial areas are setback from the street at greater distances than residences, providing an effective buffer that reduces noise levels by as much as 12 dBA (for a distance of 80 feet). Alignments adjacent to open space or commercial/industrial areas include Alignments G1 (Calle Frontera), I1 – I4 (Calle del Cerro, Avenida Vista Montana and Calle Aguia) and J (Calle Amanecer).

Proposed alignments that traverse residential areas include Alignments B (Calle de Los Arboles, Vista Jardin, and Colina Rodante), E2 (Camino Laurel), F1 – F4 (Via San Gorgonio, Avenida Vacquero, Calle Cuadra and portions of Calle Frontera) and G2 – G5 (Avenida Platanar, Via Cereza, Avenida Oliva, Avenida Faceta, Via Merla, Via Golondrina, Via Mango, Paseo Laro, Via Teca, Via Faisan, Via Aguila, Calle Opalo, and Avenida Azor, Avenida Fuentes, Via Zumaque and Via Concha.) In addition to residential areas, sensitive land uses in the vicinity of proposed alignments include a public elementary school on Via Turqueza (near alignment E1), an elementary school near the intersection of Alignments I3 and I4, an elementary and a middle school (Truman Benedict) in the vicinity of Alignment A4, and San Clemente High School in the vicinity of Alignment G1 (Calle Frontera).

The level of construction noise that reaches residences will vary according to the distance from the pipeline, which is in turn a function of the distance of individual homes from the street, street width and the side of the street on which the pipe is installed. An (L50) noise level of 83.2 dBA reflects the approximate noise level that is likely to reach homes on the same side of the street as the pipeline. Homes across the street will be subject to lower noise levels. Most of the alignments in residential areas are on local, two-lane streets. The distance from one side of the street to homes on the opposite side ranges from approximately 60 to 80 feet. Distances of this magnitude would reduce construction noise to levels ranging from approximately 70 to 74 dBA (L50). (Some streets are single-loaded, with homes on only one side of the street, so construction noise would not affect properties on the unloaded side.) Construction noise is likely to be a temporary annoyance to some residents. However, the level of noise will not approach volumes that pose threats of ill health or injury. Construction noise will also be short-lived at all locations – not exceeding more than a few days. For these reasons, construction noise is not considered a significant adverse environmental impact.

Pipeline construction will be at least 200 feet away from the nearest building at San Clemente High
School (Calle Frontera). At that distance noise is likely to be in the range of 61 to 65 dBA (L50), below the level that would disturb school activities. In the vicinity of the elementary school on Via Turqueza, pipeline construction is likely to be at least 170 feet from the nearest building, yielding noise levels ranging from 59 to 63dBA (L50), also well below disturbance levels. Similar setback distances exist between proposed pipeline alignments in the vicinity of Truman Benedict Middle School and the elementary school near Alignment A4 (distances of 170 to 190 feet), and the elementary school in the vicinity of proposed Alignments 13 and 14 (130 to 170 feet).

Cordillera Reservoir Site

Construction of the reservoir will involve several types of equipment, including a front loader, a backhoe, a crane and a concrete pump. Construction will require the use of temporary sheeting and piles, though piles will not be driven. The homes nearest the reservoir site are at a distance of about 300 feet. The average noise generated by the front loader will be about 70 dBA at that distance, with a maximum noise of around 82 dBA. The backhoe, concrete pump and crane can be expected to be quieter.

Water Reclamation Site

Installation of the new facilities proposed at the Water Reclamation Plant will generate some noise, but will not involve large, noise-generating equipment other than the use of a backhoe to excavate foundations. For a period of approximately 14 days, graders and a backhoe would be active at the site. A crane would be used to place the new equipment. However, noise from these activities is not expected to adversely impact any sensitive land uses. The nearest residences are approximately 1,000 feet away and several buildings are located in between and would provide a barrier to noise. Noise levels at the nearest residences from construction activities would be less than the ambient noise levels that currently exist in the same location (Mestre Greve Associates, 2009b). The construction noise at the Water Reclamation Plant will not significantly increase noise levels.

Noise associated with construction of all facilities (pipelines, reservoir and Water Reclamation Site facilities) will be temporary and of short-term duration. A temporary noise increase will be audible at a very local scale due to pipeline construction along some alignments in residential areas, lasting 3 to 5 days along most segments. A temporary increase in noise will also be audible from homes near the Cordillera Reservoir over a period of several months. Noise during the construction period will vary, according to what equipment is in use. The increased level of noise is not permanent and will not result in significant long-term impacts on the acoustic environment.

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 or within two miles of a public or public use airport (the nearest airport, John Wayne Airport, is 20 miles away).

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 is not located within the vicinity of a private airstrip and would not expose people residing or working in the project area to excessive noise levels.
5.12 POPULATION AND HOUSING

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<th>No Impact</th>
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XII. POPULATION AND HOUSING. Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)?

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)?

*No Impact.* Expansion of the City’s recycled water system will not induce population growth, either directly or indirectly. The project does not propose to develop new homes or businesses. The availability of recycled water is not currently a limiting factor to growth in the region. Therefore, an enlarged capacity to provide recycled water will not remove an obstacle to growth.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

*No Impact.* The proposed facilities will not displace housing of any kind.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

*No Impact.* Construction of the project’s proposed facilities will not displace anyone.
5.13 PUBLIC SERVICES

XIII. PUBLIC SERVICES. Would the project:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the 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? X
- Police protection? X
- Schools? X
- Parks? X
- Other public facilities? X

Would the Project:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the 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:

No Impact. Implementation of the recycled water system expansion will not increase the demand for new government facilities related to fire protection, police protection, schools, parks or other public facilities. The project will not result in an increase in local population or in increased demand for the use of any of these local or regional services.

5.14 RECREATION

XIV. RECREATION. Would the project:

a) 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? X
Would the project:

a) **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 expanded recycled water system will serve existing parks and recreational sites with recycled water for irrigation purposes. However, provision of this service will not induce increased use of parks of recreational facilities.

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

*No Impact.* The project does not include recreational facilities. It will not increase the demand or need for expanded recreational facilities, as it will not result in an increase in the local population.

**5.15 TRANSPORTATION/TRAFFIC**

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<th>No Impact</th>
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XV. **TRANSPORTATION/TRAFFIC.** Would the project:

a) **Cause an increase in traffic that 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.*

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

*No Impact.*

c) **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.*

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

*No Impact.*

e) **Result in inadequate emergency access?**

*No Impact.*

f) **Result in inadequate parking capacity?**

*No Impact.*
Issues:

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<tr>
<td>g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?</td>
<td>X</td>
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</table>

Would the project:

a) Cause an increase in traffic that 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)?

Less Than Significant Impact. Expansion of the recycled water system will have no effect on traffic, the number of vehicle trips, or road capacity. The project will not generate new trips. It will therefore not contribute to existing or future traffic conditions or affect the level of service on any roadways. Placement of pipelines in public streets will necessitate temporary lane closures for periods ranging from 3 to 5 days in some areas. Lane closures will have no permanent impact on traffic conditions. The contractor will be required to prepare a traffic control plan (subject to approval by the City Engineer) to ensure that scheduled lane closures do not generate hazardous conditions and that emergency vehicles can be accommodated at all times.

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

No Impact. See response to (a) above.

c) 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 have no effect on air traffic. The proposed facilities are not in the vicinity of an airport or under a flight path. The project will not generate increased air traffic.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. During the placement of pipes, construction activity in travel lanes may create a temporary incompatibility with traffic flow. The construction plan will include site specific traffic management provisions to ensure that the temporary encroachment into travel lanes does not result in hazardous conditions.

e) Result in inadequate emergency access?

Less Than Significant Impact. The project will not alter circulation patterns or increase traffic levels. Nor will proposed infrastructure affect any proposed emergency access routes.

f) Result in inadequate parking capacity?
Less Than Significant Impact. The project will have no permanent effect on parking resources at any of the proposed locations where project facilities are planned. The new facilities proposed at the City’s Water Reclamation Plant will not impact existing parking onsite. Proposed pipelines in streets and public right-of-way will not affect existing parking capacity. No parking is affected at the Cordillera Reservoir site. Construction of pipelines in proposed alignments within the existing right-of-way of public streets may cause curb parking to be temporarily unavailable at some locations for the brief construction period for individual segments (3 to 5 days). This temporary effect will not significantly impact parking capacity because it will be very short-term and limited to a small number of spaces on a few residential streets where the demand for curbside parking is very low. (Curbside parking is prohibited on most arterial streets in the project area – e.g., Camino Vera Cruz, Calle Frontera, Avenida Vista Hermosa, Calle Amanecer, Calle del Cerro).

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

No Impact. The proposed facilities, because of their locations (underground or at sites well outside of transportation-related infrastructure) will have no effect on alternative transportation or present conflicts with adopted plans, policies or programs supporting alternative transportation.

5.16 UTILITIES AND SERVICE SYSTEMS

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<tr>
<th>Issues:</th>
<th>Potentially Significant Impact</th>
<th>Potentially Significant Impact Unless Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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XVI. UTILITIES AND SERVICE SYSTEMS. Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? X

b) 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? X

c) 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? X

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? X

e) Result in a determination by the wastewater treatment provider that 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? X

f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs? X

g) Comply with federal, state, and local statutes and regulations related to solid waste? X

Would the project:
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. The City’s Water Reclamation Plant Expansion, tertiary facility and recycled water distribution system comply with the reliability requirements of California’s Wastewater Reclamation Criteria, Title 22, Division 4 of the California Administration Code (Title 22).

b) 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 proposes expansion of existing wastewater treatment facilities. Potential environmental effects are discussed throughout this Initial Study (see Section 5.17, Mandatory Findings of Significance, below).

c) 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 proposed expansion will not require construction of any new storm water facilities.

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

No Impact. The project will enhance local water supply, thereby providing a beneficial effect related to water supply.

e) Result in a determination by the wastewater treatment provider that 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. The expansion will not generate wastewater, but will expand facilities to treat existing wastewater supplies.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?

No Impact. The project will not generate solid waste material.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. The project will not generate solid waste material.
5.17 MANDATORY FINDINGS OF SIGNIFICANCE

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XVII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat or 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?  

Potentially Significant Unless Mitigation Incorporated. Without mitigation identified above, the project would have the potential to indirectly impact designated critical habitat of the California Gnatcatcher and habitat that might be used by migratory birds. The project would also have a very low potential to adversely impact archaeological resources or paleontological resources. See mitigation measures identified in Sections 5.4 (Biological Resources) and 5.5 (Cultural Resources).

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 project, and the effects of probable future projects.)  

No Impact. The project has no substantial impacts that would be cumulatively considerable in combination with other projects.

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

No Impact.
No Impact. Expansion of the City's Recycled Water System will not adversely affect human beings. As discussed above, the project will have no significant, long-term adverse effects.

ENVIRONMENTAL 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 have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION has been prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect: (a) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (b) has been addressed by mitigation measures based on the earlier analysis as described on the attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been adequately analyzed in an earlier EIR or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

William E. Cameron, Public Works Director/City Engineer
6.0 REFERENCES

California Coastal Commission, May 24, 2010. Correspondence to David Rebensdorf, City of San Clemente. Subject: Waiver of Coastal Development Permit Requirement/De Minimis.

City of San Clemente, September 2009. CEQA-Plus Environmental Evaluation Form.


City of San Clemente, 1993a. General Plan,


Hirn, Cookie, February 3, 2010. Tier 2 Cultural Resources Review, Section 106 determination of “No Historic Properties Affected”. Cultural Resources Officer, California State Water Resources Control Board.


PCR, 2009a. Results of a Biological Resources Assessment for the San Clemente Recycled Water Master Plan, City of San Clemente, Orange County, California.

PCR, 2009b. Phase I Cultural and Paleontological Resources Assessment of the Proposed San Clemente Recycled Water Project.