

INITIAL STUDY

FOR THE

**ID1 CAPACITY REHABILITATION AND
AUGMENTATION PROJECT No. 1**

Prepared for:

East Orange County Water District
185 N. McPherson Road
Orange, California 92869

Prepared by:

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TABLE OF CONTENTS

Introduction.....	1
Environmental Factors Potentially Affected	8
Determination	9
Evaluation of Environmental Impacts.....	10
I. Aesthetics	12
II. Agricultural and Forestry Resources	14
III. Air Quality	16
IV. Biological Resources	29
V. Cultural Resources	31
VI. Energy.....	33
VII. Geology and Soils.....	34
VIII. Greenhouse Gas Emissions	38
IX. Hazards and Hazardous Materials	40
X. Hydrology and Water Quality	44
XI. Land Use and Planning	48
XII. Mineral Resources	49
XIII. Noise	50
XIV. Population and Housing.....	55
XV. Public Services	56
XVI. Recreation.....	58
XVII. Transportation / Traffic.....	59
XVIII. Tribal Cultural Resources	62
XIX. Utilities and Service Systems	63
XX. Wildfire	67
XXI. Mandatory Findings of Significance.....	68
Summary of Mitigation Measures	70
References	74

APPENDICES

Appendix 1	ID1 Capacity Rehabilitation and Augmentation Project #1
Appendix 2	Fallen Leaf Sewer Memo
Appendix 3	Air Quality / Greenhouse Gas Analysis
Appendix 4	IPaC / CNDDb
Appendix 5	Soils Map
Appendix 6	GeoTracker Data
Appendix 7	Trip Generation Evaluation

FIGURES

Figure 1	Aerial Depiction of the Regional Locations of the Proposed Sewer Improvements
Figure 2	Browning Avenue Sewer
Figure 3	Clarissa Lane Sewer
Figure 4	Fallen Leaf Sewer
Figure 5	Crawford Canyon Sewer
Figure 6	6 th Street Sewer
Figure I-1	Scenic Highway Plan
Figure II-2	Farmland Map
Figure VII-1	Alquist-Priolo Fault Traces
Figure VII-2	Fault Activity Map
Figure VII-3	Liquefaction and Landslide Zones
Figure IX-1	AELUP Notification Area for John Wayne Airport
Figure IX-2	John Wayne Airport Obstruction Imaginary Surfaces
Figure IX-3	John Wayne Airport Safety Zone Reference Map
Figure X-1	FEMA Crawford
Figure X-2	FEMA Fallen Leaf
Figure X-3	FEMA Clarissa
Figure X-4	FEMA Browning
Figure X-5	FEMA 6 th Street
Figure XII-1	Orange County Mineral Resources (Generalized)
Figure XIII-1	Airport Land Commission for Orange County (Airport Planning Areas)
Figure XIII-2	John Wayne Airport Impact Zone
Figure XX-1	Fire Hazard Severity Zone Viewer Map

TABLES

Table III-1	Ambient Air Quality Standards.....	17
Table III-2	Health Effects of Major Criteria Pollutants	19
Table III-3	Air Quality Monitoring Summary (2015-2018)	20
Table III-4	South Coast Air Basin Emissions Forecasts	21
Table III-5	Daily Emission Thresholds.....	23
Table III-6	Construction Activity Equipment Fleet	25
Table III-7	Total Annual Construction Emissions	26
Table III-8	LST and Project Emissions.....	28
Table VIII-1	Construction Emissions	39
Table XIX-1	Solid Waste Disposal Facilities Used by Orange – Capacities.....	65

LIST OF ABBREVIATIONS AND ACROYNMS

AAQS	Ambient Air Quality Standards
ACOE	Army Corps of Engineers
APE	Area of Potential Effect
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
AT&SF	Atchison, Topeka & Santa Fe
bgs	below ground surface
BMPs	Best Management Practices
CBC	California Building Code
CCAR	California Climate Action Registry
C&D	construction and demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CNDDDB	California Natura Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Species
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DCCSP	Downtown Commercial Core Specific Plan
DTSC	Department of Toxic Substance Control
EO	Executive Order
EOCWD	East Orange County Water District (or District)
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FGC	Fish and Game Code
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Authority
GHG	Greenhouse Gas
HCP	Habitat Conservation Plan
HDR	High Density Residential
IPaC	Information for Planning and Consultation
IS/MND	Initial Study / Mitigated Negative Declaration
LDR	Low Density Residential
LF	lineal feet
LSTs	Localized Significance Thresholds
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act

MCLs	maximum contaminant levels
MDR	Medium Density Residential
MGD	million gallons per day
MHP	Mobile Home Park
MND	Mitigated Negative Declaration
mWh	megawatts/hour
NAAQS	National Ambient Air Quality Standards
NBP	Nesting Bird Plan
NCCP	Natural Community Conservation Plan
NDPES	National Discharge Pollution Elimination System
NEPA	National Environmental Policy Act
NOI	Notice of Intent
OC Basin	Orange County Groundwater Basin
OCFA	Orange County Fire Authority
OCFCD	Orange County Flood Control District
OCLAFCO	Orange County Local Agency Formation Commission
OCPW	Orange County Public Works
OCSD	Orange County Sanitation District
OCWD	Orange County Water District
OUSD	Orange Unified School District
PCR	Planned Community Residential
PI	Public/Institutional
PO	Professional Office
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCRRA	Southern California Regional Rail Authority
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TUSD	Tustin Unified School District
USACOE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UWMP	Urban Water Management Plan
VCP	Vitrified Clay Pipe
VdB	Vibration decibel
VMT	Vehicle Miles Traveled
WQMP	Water Quality Management Plan

ENVIRONMENTAL CHECKLIST

1. Project Title: East Orange County Water District ID1 Capacity Rehabilitation and Augmentation Project No. 1
2. Lead Agency Name: East Orange County Water District
Address: 185 N. McPherson Rd. Orange, CA 92869
3. Contact Person: Jeff Smyth, P.E., Engineering Manager
Phone Number: 714-538-5815
4. Project Location: The project proposes five areas in which sewer segments would be rehabilitated, installed, or replaced/upsized. Refer to Figure 1 for an aerial depiction of the regional locations of the proposed sewer improvements.

Browning Avenue Sewer (Figure 2)

Latitude/Longitude: 33.730134°, -117.807427°

From Mitchell Avenue and Browning Avenue to Bent Twig Lane and Browning Avenue, Tustin, CA 92782

The project site is generally located within Section 22, Township 5 South, Range 9 West of the USGS 7.5 Minute Tustin, CA topographical quadrangle.

Clarissa Lane Sewer (Figure 3)

Latitude/Longitude: 33.750930°, -117.813674°

Clarissa Lane, Tustin, CA 92780

The project site is generally located within Section 9, Township 5 South, Range 9 West of the USGS 7.5 Minute Orange, CA topographical quadrangle.

Fallen Leaf Sewer (Figure 4)

Latitude/Longitude: 33.717148°, -117.817211°

Fallen Leaf Place/Royal Oak Rd., Tustin, CA 92780

The project site is generally located within Section 21, Township 5 South, Range 9 West of the USGS 7.5 Minute Tustin, CA topographical quadrangle.

Crawford Canyon Sewer (Figure 5)

Latitude/Longitude: 33.783860°, -117.795916°

S Crawford Canyon Road & Stoller Lane to Crawford Canyon and Brae Glen, Orange County (unincorporated North Tustin), CA 92705

The project site is generally located within Section 35, Township 4 South, Range 9 West of the USGS 7.5 Minute Orange, CA topographical quadrangle.

6th Street Sewer (Figure 6)

Latitude/Longitude: 33.740066°, -117.824930°

S B Street and W 6th Street, to El Camino and 6th Street, Tustin, CA 92780

The project site is generally located within Section 16, Township 5 South, Range 9 West of the USGS 7.5 Minute Tustin, CA topographical quadrangle.

5. Project Sponsor's Name and Address: East Orange County Water District
185 N. McPherson Rd. Orange, CA 92869
6. General Plan Designation: The proposed improvements will occur within existing public rights-of-way, within existing or new easements, or otherwise below ground. Refer to "9. Surrounding land uses and setting," below.
7. Zoning Classification: The proposed improvements will occur within existing public rights-of-way, or otherwise below ground. Refer to "9. Surrounding land uses and setting," below.
8. Project Description:

Introduction

East Orange County Water District (District or EOCWD) encompasses an area of approximately 10,000 acres and is a member of the Municipal Water District of Orange County which is a member of the Metropolitan Water District, and is therefore entitled to receive Colorado River and Northern California imported water through the distribution facilities of the Metropolitan system.¹

On May 11, 2016, the Orange County Local Agency Formation Commission (OCLAFCO) approved EOCWD's application for transfer of the Orange County Sanitation District's (OCSD's) Area 7 Local Sewer System. The actual transfer of the gravity sewer assets was performed on August 1, 2016.

The District's ID1 Capacity Rehabilitation and Augmentation Project No. 1 is a result of the capacity analysis performed under EOCWD's Sewer Master Plan. The project involves rehabilitation, installation, and replacement/upsizing of existing sewer alignments through replacement of distinct sewer segments, as follows:

- Browning Avenue Sewer (Figure 2)
- Clarissa Lane Sewer (Figure 3)
- Fallen Leaf Sewer (Figure 4)
- Crawford Canyon Sewer (Figure 5)
- 6th Street Sewer (Figure 6)

¹ <https://www.eocwd.com/about>

Project Description

Please review the details provided in Appendix 1 outlining the improvements proposed by the ID1 Capacity Rehabilitation and Augmentation Project No. 1. Much of the details provided below have been extracted from this document.

Browning Avenue Sewer

Segment 1 – Segment 1 of the Browning Avenue Sewer Improvement includes trenchless installation of approximately 300 feet of 18-inch pipe in a casing under the I-5 Freeway to connect to segments at El Camino Real on the north and Nisson Road on the south. EOCWD requires that the existing sewer—originally constructed in 1962 with 184 feet of 30-inch diameter steel casing jacked and bored and 18 feet of concrete encasement—be maintained as a backup sewer. The sewer was lengthened by moving a manhole when the I-5 Freeway was widened. This segment will also require construction of new manholes and reconstruction of a portion of the sewer in El Camino Real, which is a heavily traveled street.

Construction Timing: 5 months of construction beginning in approximately April of 2022, anticipated to conclude by around September of 2022.

Segment 2 – This segment will replace and upsize 2,475 feet of 12-inch sewer in Browning Road between Bryan Avenue and the I-5 Freeway and upsize approximately 1,500 feet of 10-inch sewer between Bryan Avenue and Bent Twig Lane. The recommended replacement sizes are 18-inches (replacing the 12-inch pipes) and 15-inches (replacing the 10-inch pipes). Replacement and upsizing of the existing pipes will be performed either via open trench excavation or trenchless methods.

Construction Timing: 6 months of construction beginning in approximately September of 2021, anticipated to conclude by around February of 2022.

Segment 3 – This segment will replace and upsize 1,235 feet of 12-inch sewer in Browning Road between the I-5 Freeway and Mitchell Avenue. The recommended replacement size is 18-inches. Replacement and upsizing of the existing pipes will be performed via open trench excavation.

Construction Timing: 3 months of construction beginning in in approximately September of 2021, anticipated to conclude by around November of 2021.

Fallen Leaf Sewer

There is an existing 21-inch vitrified clay pipe (VCP) sewer that is the continuation of the Browning Trunk Sewer located between the cul-de-sacs at Royal Oak Road and Fallen Leaf Place. It runs southwest and crosses under the Orange County Flood Control District's (OCFCD) Santa Ana-Santa Fe Channel, which is a riprap lined trapezoidal channel, and under the Atchison, Topeka, and Santa Fe (AT&SF) Railroad (Metrolink rails) before connecting to the existing sewer in Edinger Avenue.

Based on record drawings, the sewer is encased in concrete under the 65-foot channel right-of-way and is encased in steel casing under the railroad right-of-way. EOCWD has experienced issues in maintaining this section of sewer due to accessibility limitations on both sides of the under channel and under rail crossings with one manhole located in the sidewalk between the cul-de-sacs and the downstream manhole is located inside the railroad fence. In addition, the 21-inch pipe below the channel has about 3 feet of cover over the concrete encasement and appears

to have a sag, which may retain debris that could cause blockage and a potential overflow. EOCWD requires that this existing sewer be maintained as a backup sewer, which may require rehabilitation.

In the planning stages for the Fallen Leaf Sewer, 3 alternatives were proposed (refer to Figure 4), however, the District has selected Alternative 1 as the preferred alternative, and as such it is the only alternative that will be analyzed herein. Alternative 1 would construct a new 20 to 24-inch sewer parallel to the existing crossing. Construction would entail jack and boring of a steel encasement and the sewer pipe would be installed inside the steel pipe. The annular space would be filled with grout. The parallel pipeline would be bored adjacent to the existing sewer pipeline, and level of service to the affected homes will be improved. Permitting this new pipeline may take longer due to crossing the Metro Rail lines but is the most cost-efficient alternative. Constructing a parallel line within the existing easement will require acquisition of a temporary construction easement from the homeowners/HOA to allow for a temporary construction easement.

Construction Timing: Construction of the Fallen Leaf Sewer is discussed in a memorandum provided as Appendix 2 to this Project Description and Initial Study. Construction of Alternative 1 is anticipated to require 4 months of construction beginning in approximately February of 2022, anticipated to conclude by around May of 2022.

6th Street (B Street) Sewer

This segment will convey the flows north of B Street to OCSD by designing and constructing a new 10-inch sewer pipeline in 6th Street that connects to the existing OCSD manhole located at the intersection of 6th and El Camino Real. This new sewer pipeline would relieve limited future capacity to the existing sewer pipeline in B Street south of 6th Street. Construction of the new pipeline is expected to be completed using open trench methods. The length of sewer that would be installed is approximately 775 feet.

Construction Timing: 4 months of construction beginning in approximately September of 2021, anticipated to conclude by around December of 2021.

Crawford Canyon Sewer

This segment entails the replacement and upsizing of about 605 feet of existing 8-inch sewer with a new 12-inch sewer. Due to pipe materials open trench construction is preferred for replacement.

Construction Timing: 3.5 4 months of construction beginning in approximately September of 2021, anticipated to conclude by about December of 2021.

Clarissa Lane

This is an existing sewer that crosses under another Orange County Public Works (OCPW) flood control channel. It is about 500-ft in length and only 6-inches in diameter and has outlived its useful life. Three alternatives are being considered during preliminary design: (1) design and construct a new parallel sewer with siphon under the channel; (2) design and construct a new sewer connecting the existing manhole at Clarissa Lane to the existing manhole in Plaza Drive with a new 8-inch sewer, about 220 ft long, and about 5-8 ft deep, utilizing the jack and bore method between the two existing homes in Clarissa Ln.; 3) design and construct a new sewer connecting the sewer in Clarissa Lane to an existing OCWD sewer west of Clarissa lane with a new 8-inch sewer, about 200 feet long, utilizing a combination of open trench and jack and bore method. In order to accomplish alternatives 2 or 3, new easements will be required from the property owners.

Construction Timing: 3 months of construction beginning in approximately August of 2021, anticipated to conclude by about November of 2021.

Construction Scenario: General

It is assumed that an underground utility installation team can install approximately 200 to 400 lineal feet (LF) of sewer pipeline per day. A team consists of the following:

- 200-400 feet of pipeline installed per day
- 1 Excavator
- 1 Backhoe
- 1 Paver
- 1 Roller
- 1 Water truck
- Traffic Control Signage and Devices
- 10 Dump/delivery trucks (80 miles round trip distance)
- Employees (11 members per team)

The emissions calculations are based upon the above assumptions for each pipeline installation team. For air emission calculations it is further assumed that 2 teams will be installing pipelines for a maximum total of 800 LF per day. It is assumed that installation of about 7,800 LF of sewer line will occur over about 60 construction days. The final activity associated with the sewer installation is repaving of roads disturbed by the construction. This is anticipated to occur over an approximately 60-day period. Note paving will probably occur as quickly as possible when large enough areas are completed.

Ground disturbance emissions assume roughly 0.2 acre of land would be actively excavated on a given day. It is anticipated that installation of pipeline in developed locations will require the use of a backhoe, crane, compactor, roller/vibrator, pavement cutter, grinder, haul truck and two dump trucks operating 6 hours per day; a water truck and excavator operating 4 hours per day and a paving machine and compactor operating 2 hours per day. Installation of pipeline in undeveloped locations would require the same equipment without the paving equipment (cutter, grinder, paving machine). The Contractor may occasionally use a portable generator and welder for equipment repairs or incidental uses.

9. Surrounding land uses and setting:

Browning Avenue Sewer (Figure 2)

The land uses in the vicinity of the Browning Avenue Sewer alignment are as follows:

- Southeast PCR - MHP - Mobile Home Park and PCR - Planned Community Residential;
- Northwest PCR - HDR - High Density Residential, PI - Public/Institutional, LDR - Low Density Residential, and MDR - Medium Density Residential;
- Northeast LDR - Low Density Residential; and,
- Southwest PCR - HDR - High Density Residential and LDR - Low Density Residential

Clarissa Lane Sewer (Figure 3)

The land uses in the vicinity of the Clarissa Lane Sewer alignment are as follows:

- South PCR - Planned Community Residential, HDR - High Density Residential, and PO - Professional Office;

- West PCR - Planned Community Residential, HDR - High Density Residential, and MDR - Medium Density Residential;
- East PCR - Planned Community Residential; and,
- North PCR - Planned Community Residential and MDR - Medium Density Residential.

Fallen Leaf Sewer (Figure 4)

The land uses in the vicinity of the Fallen Leaf Sewer alignment are as follows:

- South PCR - Planned Community Residential;
- West PCR - Planned Community Residential;
- East PCR - Planned Community Residential; and,
- North PCR - LDR - Low Density Residential and PI - Public/Institutional.

Crawford Canyon Sewer (Figure 5)

The land uses in the vicinity of the Crawford Canyon Sewer alignment are as follows:

- South 1B Suburban Residential;
- West 1B Suburban Residential;
- East 1B Suburban Residential; and,
- North 1B Suburban Residential.

6th Street Sewer (Figure 6)

The land uses in the vicinity of the 6th Street Sewer alignment are as follows:

- South DCCSP - Downtown Commercial Core Specific Plan;
- West DCCSP - Downtown Commercial Core Specific Plan and LDR - Low Density Residential;
- East DCCSP - Downtown Commercial Core Specific Plan; and,
- North DCCSP - Downtown Commercial Core Specific Plan and HDR - High Density Residential.

10. Other agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

Implementation of the above ID1 Capacity Rehabilitation and Augmentation Project may require a variety of approvals from other agencies. This section summarizes agency approvals that have been identified to date. This list may be expanded as the environmental review proceeds.

- Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) for a NPDES general construction stormwater discharge permit. This permit is granted by submittal of an NOI to the SWRCB, but is enforced through a Storm Water Pollution Prevention Plan (SWPPP) that identifies construction best management practices (BMPs) for the site. In the project area, the Santa Ana Regional Water Quality Control Board enforces the BMP requirements described in the NPDES permit by ensuring construction activities adequately implement a SWPPP. Implementation of the SWPPP is carried out by the construction contractor, with the Regional Board and county providing enforcement oversight.
- The project may have the potential to discharge of fill into or to make alterations of “waters of the United States,” “waters of the State,” and stream beds of the State of California. Regulatory permits to allow fill and/or alteration activities due to project activities such as pipeline installation are likely be required from the Army Corps of Engineers (ACOE), the Regional Board, and California Department of Fish and Wildlife (CDFW) over the life of

the Project. A Section 404 permit for the discharge of fill material into “waters of the United States” may be required from the ACOE; a Section 401 Water Quality Certification may be required from the Regional Board; a Report of Waste Discharge may be required from the Regional Board; and a 1600 Streambed Alteration Agreement may be required from the CDFW. Given that jack and bore techniques will generally be utilized to bore under channels and railways, the above permits may or may not be necessary.

- The U.S. Fish and Wildlife Service (USFWS) and/or CDFW may need to be consulted regarding threatened and endangered species documented to occur within an area of potential impact for future individual projects. This could include consultations under the Fish and Wildlife Coordination Act.
- Encroachment or other permits may be required from the City of Tustin, OCFCD, OCPW, OCSD, OCTA, Caltrans, and/or Metrolink (Southern California Regional Rail Authority [SCRRA]), amongst others that have not yet been identified, such as, Southern California Edison, The Gas Company, etc.

11. Have California Native American tribes traditionally and cultural affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun? Yes. Two tribes have requested consultation under AB 52 from East Orange County Water District: The Juaneño Band of Mission Indians, Acjachemen Nation and the Gabrieleño Band of Mission Indians – Kizh Nation. The tribes were contacted to initiate the AB-52 process on February 17, 2021 to notify the tribes of the proposed project through mailed letters. During the 30-day consultation period that concluded on March 30, 2021, no response was received from either tribe. Therefore, consultation has concluded with no request from any tribe to be included as a consulting party for this project.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED


The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology / Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials |
| <input checked="" type="checkbox"/> Hydrology & Water Quality | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources |
| <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

<input type="checkbox"/>	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately 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.

Tom Dodson & Associates
Prepared by

Lead Agency (signature)

May 28, 2021
Date

June 2, 2021
Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
I. AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant Impact* – The proposed project would install approximately 7,800 LF of sewer pipelines to replace the existing sewers along five different segments within the City of Tustin and County of Orange within EOCWD's existing service area. The construction of the sewer alignment systems would require temporary ground-disturbance almost wholly within existing roadway/public rights-of-way, including under the I-5 freeway, Metrolink rail, OCFCD, and OCPW facilities, with limited disturbance within new and existing easements on private property. In general, the sewer replacement would occur within the valley portion of the City of Tustin and within a roadway located in a canyon within the unincorporated community of North Tustin, and occur amongst urban areas containing surrounding development at all five proposed replacement alignments. The dominant landscape within the project area is that of an urban setting; however, the Santa Ana Mountains are located to the north and west of the project area, which provide valuable background viewsheds.

The presence of construction equipment and related construction materials would be visible from public vantage points, such as open space areas, sidewalks, and streets, but it would not adversely affect any scenic views or vistas. Construction of the sewer pipelines and manholes would not permanently affect views or scenic vistas. Thus, construction impacts to any scenic vistas would be less than significant. The entirety of the proposed project will be constructed below or at ground level, most commonly within existing roadways. Once constructed, the roadways will be returned to their original condition, and repaved, and all other alignments would be constructed utilizing tunnel methods. Given that the project would not degrade views to nearby scenic vistas and that the visual effects of pipeline installation and repaved sections of roadway would not substantially alter the views in the project footprint in the long-term, implementation of the proposed Capacity Rehabilitation and Augmentation Project is not expected to cause any substantial adverse effects on any important scenic vistas. No impacts are anticipated and no mitigation is required.

- b. *No Impact* – The proposed project will install the sewer pipeline below ground, most commonly within existing roadways. None of the roadways within which the proposed project will be installed are designated as a scenic highway by the State of California. Furthermore, none of the roadways have been identified as being located within a landscape corridor or viewscape corridor by Orange County's Scenic Highway Plan (Figure I-1). As such no impacts to a City, County, or State Scenic Highway are anticipated. No rock outcroppings or historic buildings exist within the project footprint

and as the proposed project would be constructed mostly within existing rights of way, and no trees will be impacted by installation of the proposed sewer pipeline alignments. Based on the lack of any intrinsic scenic resources within the proposed alignments, the proposed project will not cause substantial project-specific damage to any such resources. No impacts are anticipated to occur under this issue and no mitigation is required.

- c. *No Impact* – The proposed project would install approximately 7,800 LF of sewer alignment to replace the existing sewer along five different segments within the City of Tustin and County of Orange within EOCWD's existing service area. The proposed sewer pipelines would be placed underground or at ground level and would not be visible once construction is complete. As the pipelines will all be located below ground, and the roadways within which the pipelines are installed will be repaved as each segment of pipeline installation is completed, construction and operation of the proposed pipelines will have no potential to conflict with applicable zoning or other regulations governing scenic quality. No impacts are anticipated to occur under this issue and no mitigation is required.
- d. *No Impact* – There will be no new lighting associated with the proposed project. The pipelines will be constructed underground, mostly within existing roadways. No reflective materials or coatings are associated with this project. The construction activities are generally limited to daylight hours with the exception of bypass pumps running continuously at the Browning Avenue site, and unless an emergency occurs. Further, the amount of security lighting needed during construction will be minimal. Therefore, with no permanent aboveground features, it is not anticipated that the site would create any new permanent sources of light or glare. No significant impact associated with lighting or glare can be identified and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
II. AGRICULTURE AND FORESTRY 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. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *No Impact* – The proposed project footprint occupies various locations throughout urbanized areas of Unincorporated Orange County and the City of Tustin. Neither the project footprint nor the adjacent and surrounding properties are designated for agricultural use; no agricultural activities exist in the project area; and there is no potential for impact to any agricultural uses or values as a result of project implementation. According to the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, no prime farmland, unique farmland, or farmland of statewide importance exists within the vicinity of the proposed project (Figure II-1). No adverse impact to any agricultural resources would occur from implementing the proposed project. No mitigation is required.
- b. *No Impact* – The project footprint is not included in a Williamson Act contract or an Agricultural Preserve. Based on these facts, the proposed project will not cause a significant direct impact or

conflict with the Williamson Act or an existing agricultural use. The project footprint is not currently being farmed and the land use designations surrounding the project footprint (which consists mostly of existing roadways) support a variety of urban uses that are not agriculture-related uses. Therefore, no potential for indirect effects on agricultural resources or values would occur due to implementation of the Sewer Improvement Project.

- c. *No Impact* – There are no existing zoning ordinances that pertain to forest land, timberland, or timberland zoned Timberland Production. The land use designations surrounding the project footprint (which consists mostly of existing roadways) support a variety of urban uses that are not related to forestry use. Additionally, according to the City of Tustin General Plan, there are no land use designations that pertain to forest land, timberland, or timberland zoned Timberland Production, and no forestry designations are located within the project footprint or adjacent area as the project is far removed from the land designated as Cleveland National Forest by the Orange County General Plan. Therefore, the no potential for indirect effects to existing zoning for forest land, timberland, or timberland zoned Timberland Production would occur due to implementation of the Sewer Capacity Rehabilitation and Augmentation Project.
- d. *No Impact* – As described in the preceding evaluation, there are no forest lands within the project area, which is because the project area is urbanized. No potential for loss of forest land would occur if the project is implemented. No mitigation is required.
- e. *No Impact* – Because the project site and surrounding area do not support either agricultural or forestry uses and, furthermore, because the project site and environs are not designated for such uses, implementation of the proposed project would not cause or result in the conversion of farmland or forest land to alternative use. No adverse impact would occur. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: The following information utilized in this section of the Initial Study was obtained from the *Air Quality and GHG Impact Analysis, East Orange County Water District Well Project, Sewer Rehabilitation Project, City of Tustin and Unincorporated Orange County, California* prepared by Giroux and Associates dated March 17, 2021. This document is provided as Appendix 3 to this document.

Background

Climate

The climate of Tustin, technically called a Mediterranean-type climate, is characterized by warm summers, mild winters, infrequent rainfall, moderate afternoon breezes, and generally fair weather. Temperatures near the project area average a very comfortable 63°F year-round. Summer afternoons are typically in the middle 80s and winter mornings drop to the low- to mid-40s. About 45 summer days reach 90 degrees F, and five days per year may drop to 32 degrees, but significant extremes of temperature are rare in the project area. Rainfall in the Los Angeles Basin varies considerably in both time and space. Rainfall amounts vary from an average of 10 to 18 inches as a function of local exposure and topography.

The net effect of local airflow in terms of air pollution is that daytime ventilation is good and any locally generated air pollutants will be rapidly dispersed by the strong daytime turbulence. The governing role of inversions in atmospheric dispersion leads to a substantially different air quality environment in summer near the project area than in winter.

Air Quality Standards

Existing air quality is measured at established Southern California Air Quality Management District (SCAQMD) air quality monitoring stations. Monitored air quality is evaluated and in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table III-1. Because the State of California had established Ambient Air Quality Standards (AAQS) several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table III-1. Sources and health effects of various pollutants are shown in Table III-2.

**Table III-1
AMBIENT AIR QUALITY STANDARDS**

Pollutant	Average Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O3) ⁸	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM10) ⁹	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter (PM2.5) ⁹	24 Hour	–	–	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15.0 µg/m³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	–	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9 ppm (10 mg/m³)		9 ppm (10 mg/m³)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO2) ¹⁰	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	–	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO2) ¹¹	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	–	Ultraviolet Flourescence; Spectrophotometry (Paraosaniline Method)
	3 Hour	–		–	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas) ¹¹	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) ¹¹	–	
Lead 8 ^{12,13}	30-Day Average	1.5 µg/m³	Atomic Absorption	–	–	–
	Calendar Quarter	–		1.5 µg/m³ (for certain areas) ¹²	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Avg	–		0.15 µg/m³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Footnotes

- 1 California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter – PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- 2 National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year, with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$, is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
- 3 Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- 4 Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
- 5 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- 6 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- 7 Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
- 8 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- 9 On December 14, 2012, the national PM2.5 primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour PM2.5 standards (primarily and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM10 standards (primarily and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- 10 To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- 11 On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
- 12 The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- 13 The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- 14 In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

**Table III-2
HEALTH EFFECTS OF MAJOR CRITERIA POLLUTANTS**

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter. 	<ul style="list-style-type: none"> • Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions. 	<ul style="list-style-type: none"> • Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O ₃)	<ul style="list-style-type: none"> • Atmospheric reaction of organic gases with nitrogen oxides in sunlight. 	<ul style="list-style-type: none"> • Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	<ul style="list-style-type: none"> • Contaminated soil. 	<ul style="list-style-type: none"> • Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Fine Particulate Matter (PM-10)	<ul style="list-style-type: none"> • Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions. 	<ul style="list-style-type: none"> • Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	<ul style="list-style-type: none"> • Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NO_x, sulfur oxides, and organics. 	<ul style="list-style-type: none"> • Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes. 	<ul style="list-style-type: none"> • Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Baseline Air Quality

Existing and probable future levels of air quality around the project area can best be best inferred from ambient air quality measurements conducted by the SCAQMD at the Anaheim monitoring station. This station measures both regional pollution levels such as smog, as well as primary vehicular pollution levels

near busy roadways such as nitrogen oxides. Pollutants such as particulates (PM-10 and PM-2.5) are also monitored at Anaheim. Monitoring of carbon monoxide was discontinued in all of Orange County in 2014 due to low background concentrations. Table III-3 is a 4-year summary of the most recent monitoring data for the major air pollutants compiled from the Anaheim air monitoring station. From this data the following conclusions regarding air quality trends can be drawn:

Photochemical smog (ozone) levels rarely occasionally exceed standards. All state and federal ozone standards have been exceeded less than one percent of all days in the past four years. Measurements from more recent years demonstrate progressively improved ozone levels in the area. While ozone levels are still occasionally elevated, they are much lower than 10 to 20 years ago.

Respirable dust (PM-10) levels occasionally exceed the state standard on approximately three percent of all days. The less stringent federal PM-10 standard has not been exceeded in the last four years.

The federal ultra-fine particulate (PM-2.5) standard of 35 $\mu\text{g}/\text{m}^3$ has been exceeded on approximately one percent of measurement days in the last four years.

More localized pollutants such as carbon monoxide, nitrogen oxides, etc. are very low near the project site. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NO_x or CO without any threat of violating applicable AAQS.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Table III-3
AIR QUALITY MONITORING SUMMARY (2015-2018)
(Number of Days Standards Were Exceeded, And Maximum Levels During Such Violations)
(Entries Shown As Ratios = Samples Exceeding Standard/Samples Taken)

Pollutant/Standard	2015	2016	2017	2018
Ozone				
1-Hour > 0.09 ppm (S)	2	0	1	1
8-Hour > 0.07 ppm (S)	4	4	1	1
8- Hour > 0.075 ppm (F)	0	2	0	1
Max. 1-Hour Conc. (ppm)	0.103	0.090	0.112	0.096
Max. 8-Hour Conc. (ppm)	0.074	0.076	0.071	0.082
Nitrogen Dioxide				
1-Hour > 0.18 ppm (S)	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.064	0.081	0.066	0.059
Inhalable Particulates (PM-10)				
24-hour > 50 $\mu\text{g}/\text{m}^3$ (S)	3/353	17/332	13/320	13/364
24-hour > 150 $\mu\text{g}/\text{m}^3$ (F)	0/353	0/332	0/320	0/364
Max. 24-Hr. Conc. ($\mu\text{g}/\text{m}^3$)	74.	128.	129.	127.
Ultra-Fine Particulates (PM-2.5)				
24-Hour > 35 $\mu\text{g}/\text{m}^3$ (F)	1/349	6/305	3/353	3/346
Max. 24-Hr. Conc. ($\mu\text{g}/\text{m}^3$)	44.4	53.9	54.1	36.1

Source: South Coast AQMD Air Monitoring Station Data Summary, Anaheim Station (3176)

Air Quality Planning

The U.S. EPA is responsible for setting and enforcing the NAAQS for O₃, CO, NO_x, SO₂, PM₁₀, PM_{2.5}, and lead. The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955, and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance. The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. Substantial reductions in emissions of ROG, NO_x and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air “blueprint” in August 2003. The 2003 Air Quality Management Plan (AQMP) was approved by the EPA in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. The attainment date was to “slip” from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard. Because projected attainment by 2021 required control technologies that did not exist yet, the SCAQMD requested a voluntary “bump-up” from a “severe non-attainment” area to an “extreme non-attainment” designation for ozone. The extreme designation was to allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on “black-box” measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from “severe-17” to “extreme.” This reclassification set a later attainment deadline (2024), but also required the air basin to adopt even more stringent emissions controls.

Table III-4
SOUTH COAST AIR BASIN EMISSIONS FORECASTS (EMISSIONS IN TONS/DAY)

Pollutant	2015 ^a	2020 ^b	2025 ^b	2030 ^b
NO_x	357	289	266	257
VOC	400	393	393	391
PM-10	161	165	170	172
PM-2.5	67	68	70	71

^a2015 Base Year.

^bWith current emissions reduction programs and adopted growth forecasts.

Source: California Air Resources Board, 2013 Almanac of Air Quality

AQMPs are required to be updated every three years. The 2012 AQMP was adopted in early 2013. An updated AQMP was required for completion in 2016. The 2016 AQMP was adopted by the SCAQMD Board in March, 2017, and has been submitted the California Air Resources Board for forwarding to the EPA. The

2016 AQMP acknowledges that motor vehicle emissions have been effectively controlled and that reductions in NO_x, the continuing ozone problem pollutant, may need to come from major stationary sources (power plants, refineries, landfill flares, etc.). The current attainment deadlines for all federal non-attainment pollutants are now as follows:

8-hour ozone (70 ppb)	2032
Annual PM-2.5 (12 µg/m ³)	2025
8-hour ozone (75 ppb)	2024 (old standard)
1-hour ozone (120 ppb)	2023 (rescinded standard)
24-hour PM-2.5 (35 µg/m ³)	2019

The key challenge is that NO_x emission levels, as a critical ozone precursor pollutant, are forecast to continue to exceed the levels that would allow the above deadlines to be met. Unless additional stringent NO_x control measures are adopted and implemented, ozone attainment goals may not be met.

The proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations governing water improvement projects. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

Thresholds of Significance

Air quality impacts are considered “significant” if they cause clean air standards to be violated where they are currently met, or if they “substantially” contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following four tests of air quality impact significance. A project would have a potentially significant impact if it:

- Conflict with or obstruct implementation of the applicable air quality plan?
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
- Expose sensitive receptors to substantial pollutant concentrations?
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

**Table III-5
DAILY EMISSIONS THRESHOLDS**

Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

Impact Analysis

- a. *Less Than Significant Impact* – Projects such as the proposed ID1 Capacity Rehabilitation and Augmentation Project do not directly relate to the AQMP in that there are no specific air quality programs or regulations governing general infrastructure development. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less than significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis. Based on the analysis of the City's General Plan Land Use section, the proposed project is consistent with the adopted City's General Plan. Thus, the proposed project is consistent with regional planning forecasts maintained by the Southern California Association of Governments (SCAG) regional plans. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less than significant only because of consistency with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis. As the analysis of project-related emissions provided below indicates, the proposed project will not cause or be exposed to significant air pollution, and is, therefore, consistent with the applicable air quality plan.
- b. *Less Than Significant With Mitigation Incorporated* – Air pollution emissions associated with the proposed project would occur over both a short and long-term time period. Short-term emissions include fugitive dust from construction activities (i.e., site prep, demolition, grading, and exhaust emission) at the project site. Long-term emissions generated by future operation of the proposed pipeline are negligible as additional operation will not require a new source of energy to operate. The

proposed project primarily include energy consumption and trips generated by the future maintenance. It is anticipated that existing conveyance systems (booster pumps and other appurtenances) will require minimally greater energy to accommodate the sewage conveyed by the larger capacity pipelines, but this increase in energy demand would be minimal.

Construction Emissions

CalEEMod was developed by the SCAQMD to provide a model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

The project includes the following activities all adding or modifying sewer lines to allow for the increased capacity demands.

Browning Avenue Sewer

1. Segment 1: Trenchless installation of approximately 300 feet of 18-inch pipe in a casing under the I-5 Freeway. Will also require construction of new manholes and reconstruction of a portion of the sewer in El Camino Real.

Construction Timing: 5 months of construction beginning in approximately April of 2022 date, anticipated to conclude by September of 2022 date.

2. Segment 2: Open trench excavation or trenchless methods to replace and upsize 2,475 feet of 12-inch sewer in Browning Road and upsize approximately 1,500 feet of 10-inch sewer.

Construction Timing: 6 months of construction beginning in approximately September of 2021 date, anticipated to conclude by February of 2022 date.

3. Segment 3: Utilizing open trench methods add 1,235 feet of 12-inch sewer in Browning Road

Construction Timing: 3 months of construction beginning in approximately September of 2021 date, anticipated to conclude by November of 2021 date.

Fallen Leaf Sewer

1. Construct a new 20 to 24-inch sewer parallel to the existing crossing. Would entail jack and boring of a steel encasement and the carrier pipe would be installed inside the steel pipe.

Construction Timing: Anticipated to require 4 months of construction beginning in approximately February of 2022 date, anticipated to conclude by May of 2022 date.

6th Street Sewer

1. Construction of a new line is using open trench methods. The length of sewer that would be installed is approximately 775 feet.

Construction Timing: 4 months of construction beginning in approximately September of 2021 date, anticipated to conclude by December of 2021 date.

Crawford Canyon Sewer

1. Replacement and upsizing of about 605 feet of existing 8-inch sewer with a new 12-inch sewer.

Construction Timing: 3.5 4 months of construction beginning in approximately September of 2021 date, anticipated to conclude by December of 2021 date.

Clarissa Lane Sewer

1. Install sewer approximately 500-ft in length

Construction Timing: 3 months of construction beginning in approximately August of 2021 date, anticipated to conclude by November of 2021 date.

Construction assumptions used in this analysis were obtained from the project engineer. It is assumed that an underground utility installation team can install approximately 200 to 400 LF of sewer pipeline per day. A team is assumed to perform the following activities to complete a section of installation:

Cut and Install:

1 Excavator	(4 hrs day)
1 Concrete Saw	(6 hrs day)
1 Crane	(6 hrs day)
Forklift	(6 hrs day)
5 Signal Boards	(6 hrs day)
5 Dump Trucks	80 miles round trip
5 Delivery Trucks	

Backfill and Pave:

1 Compactor	(6 hrs day)
1 Backhoe	(6 hrs day)
1 Paver	(2 hrs day)
1 Paving Equipment	(2 hrs day)
1 Roller	(6 hrs day)
5 Signal Boards	(6 hrs day)

It is assumed that 2 teams with 11 employees each, will be installing pipelines for a maximum total of 800 LF per day such that installation of 7,800 LF of sewer pipeline will occur over 60 construction days. The final activity associated with the sewer installation is repaving of roads disturbed by the construction. This is anticipated to occur over an approximately 60-day period. Ground disturbance emissions assume roughly half an acre of land would be actively excavated on a given day.

Estimated construction emissions were modeled using CalEEMod2016.3.2 to identify maximum daily emissions for each pollutant during project construction using the above assumptions. CalEEMod was run for a single team, then the results were doubled since both teams would be operating simultaneously.

**Table III-6
CONSTRUCTION ACTIVITY EMISSIONS MAXIMUM DAILY EMISSIONS (pounds/day)**

Maximal Construction Emissions	ROG	NOx	CO	SO ₂	PM-10	PM-2.5
2021 (One Team)	1.2	10.6	9.1	0.0	1.5	1.0
2021 (Two Teams)	2.4	21.2	18.2	0.0	3.0	2.0
SCAQMD Thresholds	75	100	550	150	150	55

Peak daily construction activity emissions are estimated to be below SCAQMD CEQA thresholds without the need for added mitigation. Mitigated conditions reflect dust suppression associated with twice daily watering during demo and grading.

The proposed project involves compliance with the National Environmental Policy Act due to the requirement from Caltrans (on behalf of the Federal Highway Administration [FHWA]) that EOCWD obtain an Encroachment Permit for the segment of sewer that crosses under I-5 at Browning Avenue.

Annualized construction activity emissions were calculated by assuming all construction activities would occur during the same calendar year to represent a worst-case condition. The calculated emissions were then compared to the EPA *de minimis* emission thresholds that would allow for a federal conformity finding with Section 176c of the Clean Air Act.

If the project-related emissions from construction and operations are less than specified "*de minimis*" levels, no further SIP consistency demonstration is required. As stated, there are no operational emissions associated with this project.

Thresholds vary dependent on the attainment status for each pollutant in the basin. The SCAB is designated as a "extreme" non-attainment area for the federal 8-hour ozone standard. The basin is a non-attainment area for PM-2.5, and a maintenance area for PM-10. Sulfur Dioxide and Carbon Monoxide are maintenance areas. Based upon these designations, the following emissions levels are presumed evidence of SIP conformity:

VOC/ROG	-	10 tons/year
NOx	-	10 tons/year
PM-2.5	-	70 tons/year
PM-10	-	100 tons/year
CO	-	100 tons/year
SO ₂	-	100 tons/year
Lead	-	25 tons/year

Annual construction emissions were calculated with the CalEEMod computer model. Maximum annual project-related air pollution emissions relative to federal standard attainment designations and appropriate *de minimis* thresholds are shown in Table III-7. Although currently only the Fallen Leaf section requires NEPA analysis, to be conservative, the entire project is represented below.

Table III-7
TOTAL ANNUAL CONSTRUCTION EMISSIONS (tons/year)

Activity	ROG	NOx	CO	SO ₂	PM-10	PM-2.5
Maximal Construction Emissions						
Single Team	0.06	0.50	0.47	<0.01	0.06	0.04
Two Teams	0.12	0.10	0.94	<0.01	0.12	0.08
NEPA Threshold	10	10	100	100	100	70

Maximum annual emissions for both teams are much less than their associated *de minimis* thresholds. The Fallen Leaf section alone would be even less than the emissions shown in Table III-7. A formal SIP consistency analysis is not required. The following summarizes the impacts of the entire project with their applicable thresholds.

Pollutant	Threshold	Project Emissions
VOC/ROG	10 tons/year	0.12 tons/year
NOx	10 tons/year	0.10 tons/year
PM-2.5	70 tons/year	0.08 tons/year
PM-10	100 tons/year	0.12 tons/year
CO	100 tons/year	0.94 tons/year
SO ₂	100 tons/year	<0.1 tons/year
Lead	25 tons/year	<0.1 tons/year

Though construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds, emissions minimization through enhanced dust control measures is recommended for use because of the non-attainment status of the air basin. As such, the following mitigation measure shall be implemented:

AIR-1 Fugitive Dust Control. The following measures shall be incorporated into project plans and specifications for implementation during construction:

- **Apply soil stabilizers to inactive areas.**
- **Prepare a high wind dust control plan and implement plan elements and terminate soil disturbance when winds exceed 25 mph.**
- **Stabilize previously disturbed areas if subsequent construction is delayed.**
- **Apply water to disturbed surfaces 3 times/day.**
- **Replace ground cover in disturbed areas quickly.**
- **Reduce speeds on unpaved roads to less than 15 mph.**
- **Trenches shall be left exposed for as short a time as possible.**
- **Identify proper compaction for backfilled soils in construction specifications.**

This measure shall be implemented during construction, and shall be included in the construction contract as a contract specification.

Similarly, ozone precursor emissions (ROG and NOx) are calculated to be below SCAQMD CEQA thresholds. However, because of the regional non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. Combustion emissions control options include:

AIR-2 Exhaust Emissions Control. The following measures shall be incorporated into Project plans and specifications for implementation:

- **Utilize off-road construction equipment that has met or exceeded the maker's recommendations for vehicle/equipment maintenance schedule.**
- **Contactors shall utilize Tier 4 or better heavy equipment.**
- **Enforce 5-minute idling limits for both on-road trucks and off-road equipment.**

With the above mitigation measures, any impacts related to construction emissions are considered less than significant. No further mitigation is required.

Operational Impacts

A sewer rehabilitation project will not have any associated operational impacts. Sewer pipelines are primarily gravity fed. Therefore, the project does not create any operational emissions.

Conclusion

With the incorporation of mitigation measures **AIR-1** and **AIR-2**, the development of the ID1 Capacity Rehabilitation and Augmentation Project would have a less than significant potential to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

- c. **Less Than Significant With Mitigation Incorporated** – The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital or convalescent facility.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NO_x), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

LST pollutant screening level concentration data is currently published for 1-, 2- and 5-acre sites for varying distances. For this project, the most stringent thresholds for a 1-acre site were applied.

Because LSTs only apply to emissions directly adjacent to construction equipment operating within 25 meters of a receptor, the emissions from a single team were used for this evaluation. A two-team analysis is appropriate for the regional emissions analyzed in Table III-8. The following thresholds and emissions in Table III-8 are therefore determined (pounds per day):

**Table III-8
LST AND PROJECT EMISSIONS (pounds/day)**

LST 1 acre/25 meters Central Orange County	CO	NO_x	PM-10	PM-2.5
LST Threshold	485	81	4	3
Max On-Site Emissions				
2021 (One Team)	8	10	1	1

LSTs were compared to the maximum daily construction activities. As seen in Table III-8, LST impacts are less than significant.

Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. The SCAQMD does not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a relatively brief construction period due to the lack of health risk associated with such a brief exposure. With the incorporation of mitigation measures **AIR-1** and **AIR-2**, the development of the ID1 Capacity Rehabilitation and Augmentation Project would have a less than significant potential the proposed project would have a less than significant potential to expose sensitive receptors to substantial pollutant concentrations.

- d. *Less Than Significant Impact* – Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts particularly given that the sewer pipeline will be located below ground. Project operations (pumping) are an essentially closed system with negligible odor potential. Therefore, impacts under this issue are considered less than significant. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IV. BIOLOGICAL RESOURCES: 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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: The following information utilized in this section of the Initial Study was obtained from the U.S. Fish and Wildlife Service IPaC Trust Resources and the California Natural Diversity Database (CNDDB) reports generated on March 5, 2021 pertaining to the EOCWD ID1 Capacity Rehabilitation and Augmentation Project areas only, which are provided as Appendix 4 to this document.

- a. *No Impact* – The EOCWD ID1 Capacity Rehabilitation and Augmentation Project sites are in urbanized areas. The majority of the project will be installed below ground within existing road rights of way. There are portions of the project that will require jack and bore techniques to install the pipeline below existing facilities and avoid impacting above ground facilities, and thereby avoiding impacting any habitat or species identified as a candidate, sensitive, or special status species. The habitat conditions within and adjacent to the Project area are not suitable to support for any sensitive habitat and/or any species listed or proposed for listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA), or species designated as sensitive by the California Department of Fish and Wildlife (CDFW), or California Native Plant Society (CNPS). With no habitat or species of concern located within the project area, the development of the EOCWD ID1 Capacity Rehabilitation and Augmentation Project has no potential for impact to any native biological resources. No impacts are anticipated. No mitigation is required.

- b. *No Impact* – The Project footprint will require crossing under channels in two locations (Fallen Leaf and Clarissa Lane), which are jurisdictional features subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and Porter Cologne Water Quality Control Act, and CDFW under Section 1602 of the California Fish and Game Code respectively. However, the Project activities will not encroach into the jurisdictional limits of the channels. Additionally, neither the project footprint or surrounding area contain any riparian habitat or other sensitive natural community resources. Therefore, no adverse impact to riparian habitat or any native biological resources would occur from implementing the proposed project. No mitigation is required.
- c. *No Impact* – According to the IPaC Trust Resources Report (Appendix 4), as well as a review of the project area, the project footprint does not contain any wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.), or any other sensitive natural community resource. As stated above, while the proposed project would require jack and bore techniques to extend pipeline across two channels, which are considered jurisdictional features, the project will not encroach into the jurisdictional limits of the channels, and with no federally protected wetland habitat within the project footprint, no impacts thereof are anticipated and no mitigation is required.
- d. *Less Than Significant With Mitigation Incorporated* – The proposed project will involve installing replacement sewer pipeline within existing road rights of way, and otherwise below ground within urban environs. No trenching activity is anticipated to occur in areas containing native habitat. With no native habitat, and no wildlife corridors that traverse the project footprint, implementation of the proposed project is not anticipated to interfere with the movement of native animals of any kind, or to impede the use of any native wildlife nursery sites. However, due to the large project footprint the project has a low potential to impact nesting birds, which is addressed by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (FGC). The following mitigation measure shall be implemented as a contingency in the event that any nesting birds are in the vicinity of within the project footprint:

BIO-1 *The State of California prohibits the “take” of active bird nests. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal should be conducted outside of the State identified nesting season (typically February 1 through September 1). Alternatively, nesting bird surveys shall be conducted by a qualified avian biologist no more than three (3) days prior to vegetation clearing or ground disturbance activities. Preconstruction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified avian biologist will make every effort to avoid potential nest predation as a result of survey and monitoring efforts. If active nests are found during the preconstruction nesting bird surveys, a Nesting Bird Plan (NBP) shall be prepared and implemented by the qualified avian biologist. At a minimum, the NBP shall include guidelines for addressing active nests, establishing buffers, ongoing monitoring, establishment of avoidance and minimization measures, and reporting. The size and location of all buffer zones, if required, shall be based on the nesting species, individual/pair’s behavior, nesting stage, nest location, its sensitivity to disturbance, and intensity and duration of the disturbance activity. To avoid impacts to nesting birds, any grubbing or vegetation removal should occur outside peak breeding season (typically February 1 through September 1).*

With implementation of the above mitigation measure, any impacts under this issue are considered less than significant.

- e. *No Impact* – The proposed project footprint within which the pipeline alignments will be installed will occur within existing road rights-of-way or otherwise underground. The footprint is not anticipated to contain trees that will require removal as part of construction. No other local policies or ordinances

protecting biological resources would apply to the proposed project, as no native biological resources exist within the project footprint. Therefore, impacts under this issue are considered less than significant and no mitigation is required.

- f. *No Impact* – The EOCWD ID1 Capacity Rehabilitation and Augmentation Project footprint and surrounding area are not covered by an adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP) such as the Orange County Central/Coastal NCCP and HCP, and there are no other adopted plans to protect native habitats or natural communities that affect the project site. Therefore, no impacts are anticipated and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a&b. *Less Than Significant With Mitigation Incorporated* – CEQA establishes that "a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (PRC §21084.1). "Substantial adverse change," according to PRC §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired."

The proposed project consists of installation of about 7,800 LF of sewer pipeline to rehabilitation, installation, and replacement/upsizing existing sewer alignments through installation of distinct sewer segments, as follows:

- Browning Avenue Sewer (Figure 2)
- Clarissa Lane Sewer (Figure 3)
- Fallen Leaf Sewer (Figure 4)
- Crawford Canyon Sewer (Figure 5)
- 6th Street Sewer (Figure 6)

The proposed project will occur within existing road rights of way, and involves boring in some places to cross under the I-5 freeway, Metrolink rail, OCFCD, OCPW facilities and private property. . Much of the excavation that will occur to install the new sewer pipeline will occur in areas that have been previously disturbed, or will only be minimally disturbed during jack and bore activities. It has been determined that, because the sewer alignment has been previously disturbed, the potential for unearthing any buried cultural resources is less than significant. However, where earth moving activities are required, the following mitigation measure will ensure that impacts to any unknown buried cultural materials that may be discovered during earth moving activities is carried are less than significant:

CUL-1 *Should any cultural resources be encountered during construction of these sewer facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with EOCWD. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.*

Additionally, the following measure will ensure that the treatment of any discovered cultural materials follows the appropriate protocol to minimize impacts to such resources:

CUL-2 *If significant cultural resources, as defined by CEQA, are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to District for review and comment. The archaeologist shall monitor the remainder of that segment of the project and implement the Plan accordingly.*

With the incorporation of the above mitigation measures, potential for impact to cultural resources will be reduced to a less than significant level. No additional mitigation is required.

- c. *Less Than Significant With Mitigation Incorporated* – As noted in the discussion above, no available information suggests that human remains may occur within the Area of Potential Effect (APE) and the potential for such an occurrence is considered very low. Human remains discovered during the project will need to be treated in accordance with the provisions of HSC §7050.5 and PRC §5097.98, which is mandatory. State law (Section 7050.5 of the Health and Safety Code) as well as local laws requires that the Police Department, County Sheriff and Coroner's Office receive notification if human remains are encountered. Compliance with these laws is considered adequate mitigation for potential impacts, the following mitigation measure shall be implemented in relation to discovery and treatment of human remains:

CUL-3 *If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.*

With the incorporation of the above mitigation measure, potential for impact to discovery and treatment of human remains will be reduced to a less than significant level. No additional mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. ENERGY: Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

a&b. *Less Than Significant With Mitigation Incorporated* – Energy consumption encompasses many different activities. For example, construction can include the following activities: delivery of equipment and material to a site from some location (note it also requires energy to manufacture the equipment and material, such as harvesting, cutting and delivering wood from its source); employee trips to work, possibly offsite for lunch (or a visit by a catering truck), travel home, and occasionally leaving a site for an appointment or checking another job; use of equipment onsite (electric or fuel); and sometimes demolition and disposal of construction waste. For the proposed project the number of employees will be limited to about 22 persons at a given time during construction with no new employees anticipated to be required once construction has concluded. The project would require removal of existing pavement in places where trenching is required along the replacement sewer pipeline alignments. To minimize energy costs of construction debris management, laws are in place that require diversion of all material subject to recycling. During construction, the proposed project will utilize construction equipment that is CARB approved, minimizing emissions generated and electricity required to the extent feasible (through MM **AQ-2** provided under Section III, Air Quality, above). As stated in Section III, Air Quality, the construction of the proposed ID1 Capacity Rehabilitation and Augmentation Project would require mitigation to minimize emissions impacts from construction equipment use. This mitigation measure also applies to energy resources as they require equipment not in use for 5 minutes to be turned off, and for electrical construction equipment to be used where available. This measure would prevent a significant impact during construction due to wasteful, inefficient, or unnecessary consumption of energy resources, and would also conform to the CARB regulations regarding energy efficiency.

Southern California Edison Company (SCE) is the primary distributor of electricity in the project area. However, the operation of the pipelines will not require a new source of energy to operate. This is because the sewer pipelines will replace existing sewer systems, and as such are not creating a new demand on the electrical system to deliver sewage to the OCSD wastewater treatment facility. No additional energy demand is anticipated and no natural gas would be required to operate the proposed project, and trips to the project footprint would occur only on an as needed basis for maintenance purposes. As such, petroleum consumption associated with implementation of the ID1 Capacity Rehabilitation and Augmentation Project would not be considered unnecessary, inefficient, or wasteful.

According to SCE's website², SCE is committed to delivering power reliably and to meet demand; SCE is expanding and upgrading the transmission and distribution networks to meet the region's growing demand for electricity, and improve grid performance, while meeting California's ambitious renewable-power goals. As such, it is anticipated that SCE will continue to have ample power supply to serve the construction of the project without the need for additional electrical capacity. Therefore, given the lack of energy required to operate the proposed project, it is not anticipated that the project

²<https://www.sce.com/about-us/reliability/meeting-demand>

would either result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operations, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Impacts under these issues are considered less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VII. GEOLOGY AND SOILS: Would the project:				
a) Directly or indirectly cause 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

a. i. Ground Rupture

Less Than Significant Impact – The project footprint is located in Orange County in the unincorporated community of North Tustin and within the City of Tustin. The nearest Alquist-Priolo fault zone is located about 14 miles to the northeast of the project site along the mountains in Riverside County; this is depicted on Figure VII-1, the Seismic Hazards Program: Alquist-Priolo Fault Traces map

prepared by the California Geologic Survey. As such, according to Figure VII-1, the footprint is not located within an Alquist-Priolo fault zone, though the pipelines are likely to be subject to strong ground shaking throughout the life of the pipelines. Underground pipelines are not typically susceptible to severe damage from groundshaking fault rupture, depending on the severity of a seismic event. While damage to pipelines can occur, pipelines can be repaired and placed back into operation with no loss of human life. Therefore, the proposed project would have a less than significant potential to expose people or structures to rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map.

ii. Strong Seismic Ground Shaking

Less Than Significant Impact – As stated in the discussion above, the proposed project is located in an area that is seismically active, and as with much of southern California, the proposed pipelines will be subject to strong seismic ground shaking impacts should any major earthquakes occur in the future. As shown on the Fault Activity Map of California prepared by the California Geologic Survey (Figure VII-2), there are several faults that traverse the project area. As a result, and like all other development projects in the City and throughout the southern California region, the proposed project will be required to comply with all applicable seismic design standards contained in the 2019 California Building Code (CBC). Compliance with the CBC and the use of best management design practices will enable maximum structural integrity of the pipelines to be maintained in the event of an earthquake. As stated above, generally, underground pipelines are not typically susceptible to severe damage from ground shaking. Many such facilities exist and function within areas susceptible to strong ground shaking effects. Therefore, given that the proposed project consists of pipelines that will be constructed mostly within existing roadways and that no structures will be developed in support of the proposed project, there is a less than significant potential for people or structures to be exposed to strong seismic ground shaking.

iii. Seismic-Related Ground Failure Including Liquefaction

Less Than Significant Impact – The three factors determining whether a site is likely to be subject to liquefaction include seismic shaking, type and consistency of earth materials, and groundwater level. Liquefaction of saturated cohesionless soils can be caused by strong ground motion resulting from earthquakes. Soil liquefaction is a phenomenon in which saturated, cohesionless soils lose their strength due to the build-up of excess pore water pressure during cyclic loading such as that induced by earthquakes. According to the California Geologic Survey map showing the Seismic Hazards Programs for both Liquefaction and Landslide Zones provided as Figure VII-3, a portion of the project footprint is located within a general area known to be susceptible to liquefaction. As with other ground failure potential, pipelines are not susceptible to significant adverse effects associated with liquefaction. Damage to pipelines can occur, but can be repaired and placed back into operation with no loss of human life. Therefore, potential impacts associated with seismic-related ground failure would be considered less than significant. No mitigation is required.

iv. Landslide

Less Than Significant Impact – Landslides in the project area are generally known to occur around the hills in northeast Orange County and south towards the Laguna Hills. The proposed project footprint is located in the valley region of Tustin and North Tustin, and generally is not located in an area that would be susceptible to landslide with the exception of the Crawford Canyon sewer, which will be placed within roadways in a canyon surrounded in a hilly area of North Tustin. According to California Geologic Survey map showing the Seismic Hazards Programs for both Liquefaction and Landslide Zones provided as Figure VII-3, the Crawford Canyon portion of the project footprint is located within a general area containing small sections that appear to be located in a landslide zone. However, pipelines are not typically susceptible to significant adverse effects associated with landslides. Damage to pipelines can occur, but can be repaired and placed back into operation with

no loss of human life. Therefore, potential impacts associated with landslides are considered less than significant. No mitigation is required.

- b. *Less Than Significant With Mitigation Incorporated* – The majority of the project area has been graded, compacted, and paved with asphalt because the proposed sewer pipeline replacement project will occur mostly within existing roadways, with some jack and bore techniques required to enable sewer to cross under existing channels and other techniques to cross under bridges and other features. The proposed sewer pipeline improvement project will result in land disturbance in the areas that will require construction within roadways and adjacent rights-of-way to accommodate the trenching required to install the sewer pipeline. Adequate drainage facilities exist to accommodate existing drainage flows, and no change in drainage will result once the roadways are repaved and the pipelines are in place belowground. This project will result in the disturbance of more than one acre of land and will require filing a Notice of Intent (NOI), securing a National Pollutant Discharge Elimination System (NPDES), general construction stormwater discharge permit, and preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP will include but not be limited to the following measures to mitigate potential impacts associated with erosion and surface water quality degradation during construction:

GEO-1 *Stored backfill material shall be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of stored backfill material. Where covering is not possible, measures such as the use of straw bales or sand bags shall be used to capture and hold eroded material on the Project site for future cleanup such that erosion does not occur.*

GEO-2 *Excavated areas shall be backfilled and compacted such that erosion does not occur. Paved areas disturbed by this project shall be repaved in such a manner that roadways and other disturbed areas are returned to the pre-project conditions or better.*

GEO-3 *All exposed, disturbed soil (trenches, stored backfill, etc.) will be sprayed with water or soil binders twice a day or more frequently if fugitive dust is observed migrating from the site within which the pipelines are being installed.*

GEO-4 *The length of trench which can be left open at any given time will be limited to that needed to reasonably perform construction activities. This will serve to reduce the amount of backfill stored onsite at any given time.*

With implementation of the above mitigation measures, any impacts are considered less than significant. No further mitigation is necessary.

- c. *Less Than Significant Impact* – As stated under issues VII(a[iii]) and VII(a[iv]) above, the project footprint traverses through areas that are susceptible to landslides and liquefaction. This indicates that the project footprint and general area may be underlain by unstable soils, or be affected by subsidence, lateral spreading, or collapse. However, the proposed project consists of the installation of sewer pipelines mostly within existing roadways, with some jack and bore techniques required to enable sewer to cross under existing channels and other techniques to cross under bridges, and pipelines are generally not susceptible to significant adverse effects associated with unstable soils. As stated under issues VII(a[iii]) and VII(a[iv]) above, damage to pipelines can occur, but can be repaired and placed back into operation with no loss of human life. Based on the analysis above, though the project is located within soils that may be unstable, the type of project would minimize impacts to structures or humans from occurring. No mitigation measures are required.
- d. *Less Than Significant Impact* – The majority of the proposed project will be located underground. As stated throughout the Geology and Soils section of the Initial Study, pipelines are generally not

subject to experiencing significant effects of soil instability or in this case, expansive soils. Because of the varied locations associated with the site, the soils underlying each site are varied with the following soil types present according to data gathered from the United States Department of Agriculture Web Soil Survey for each of the pipeline alignments (Appendix 5):

- Cropley clay
- Mocho loam
- Nacimiento clay loam
- Mocho sandy loam
- Chino silty clay loam
- Omni clay

Expansive soils are typically in the clay soil family, which are present within the project footprint; however, while damage to pipelines can occur, damaged pipelines can be repaired and placed back into operation with no loss of human life. Further, the pipelines will be installed on engineered fill and cover material that will minimize potential damage. Given the above, the proposed project would have a less than significant potential to 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. *No Impact* – The proposed project proponent is EOCWD, and the overall purpose of the proposed project is intended to repair the sewer system to improve their wastewater collection service. No septic systems or alternative wastewater disposal systems are proposed as part of the project. Thus, because the project will be served by a municipal wastewater provider, no impacts related to the use of septic tanks or alternative water disposal systems will occur.
- f. *Less Than Significant With Mitigation Incorporated* – The potential for discovering paleontological resources during development of the project is considered unlikely due to the past disturbance and extent of ground disturbance within disturbed areas of the project site. The vast majority of the pipeline alignments are contained within the rights-of-way of existing public roadways, where typically the top five to six feet of soils are practically engineered fill that has been greatly disturbed by road construction and the installation of subsurface utility lines. In other cases, such as where jack and bore techniques would be utilized, much of the soils/sediment will be well underground with little potential for disturbance of subsurface paleontological resources. No unique geologic features are known or suspected to occur on or beneath the sites. However, because these resources are located beneath the surface and can only be discovered as a result of ground disturbance activities, the following measure shall be implemented:

GEO-5 *Should any paleontological resources be accidentally encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection should be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with the EOCWD. The paleontological professional shall assess the find, determine its significance, and determine appropriate mitigation measures within the guidelines of the California Environmental Quality Act that shall be implemented to minimize any impacts to a paleontological resource.*

With incorporation of this contingency mitigation, the potential for impact to paleontological resources will be reduced to a less than significant level. No additional mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: The following information utilized in this section of the Initial Study was obtained from the *Air Quality and GHG Impact Analysis, East Orange County Water District Well Project, Sewer Rehabilitation Project, City of Tustin and Unincorporated Orange County, California* prepared by Giroux and Associates dated March 17, 2021. This document is provided as Appendix 3 to this document.

a&b. *Less Than Significant Impact –*

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statues and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07. AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions, are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate "early action" control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California's GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 continues. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been developed. GHG sources are categorized into direct sources (i.e., company owned) and indirect sources (i.e., not company owned).

Thresholds of Significance

In response to the requirements of SB 97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,
- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of Project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to “select the model or methodology it considers most appropriate.” The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO₂ equivalent/year. In September 2010, the SCAQMD CEQA Significance Thresholds GHG Working Group released revisions which recommended a threshold of 3,000 MT CO₂e for all land use projects. This 3,000 MT/year recommendation has been used as a guideline for this analysis. In the absence of an adopted numerical threshold of significance, Project related GHG emissions in excess of the guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

Construction Activity GHG Emissions

The project is assumed to require less than one year for construction. During project construction, the CalEEMod2016.3.2 computer model predicts that the construction activities will generate the annual CO₂ emissions identified in Table VIII-1.

**Table VIII-1
CONSTRUCTION EMISSIONS (Metric Tons CO₂e)**

	CO₂e
Single Team	82.5
Two Teams	165.0
Amortized	5.5

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are considered individually less than significant.

Consistency with GHG Plans, Programs, and Policies

The City of Tustin and the County of Orange have not yet developed Greenhouse Gas Reduction Plans. The applicable GHG planning document is AB-32. As discussed above, the project is not expected to result in a significant increase in GHG emissions. As a result, the project results in GHG emissions below the recommended SCAQMD 3,000 ton threshold. Therefore, the project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

a&b. *Less Than Significant With Mitigation Incorporated* – The project should not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; but it may 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 during construction. During construction, there is a potential for accidental release of petroleum products in sufficient quantity to pose a significant hazard to people and the environment. The following mitigation measure will be incorporated into the SWPPP prepared for the project and it can reduce such a hazard to a less than significant level:

HAZ-1 *All accidental spills or discharge of hazardous material during construction activities shall be reported to the Certified Unified Program Agency and shall be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately a licensed disposal or treatment facility. This measure shall be incorporated into the SWPPP prepared for the proposed project. Prior to accepting the site as*

remediated, the area contaminated shall be tested to verify that any residual concentrations meet the standard for future residential or public use of the site.

Additionally, roadways adjacent to and within the project footprint are public roads that can be used by any common carrier to or from the local area. For such transporters, the existing regulatory mandates ensure that the hazardous materials and any hazardous wastes transported to and from the project site will be properly managed. These regulations are codified in Titles 8, 22, and 26 of the California Code of Regulations. For example, maintenance trucks for construction equipment must transport their hazardous materials in appropriate containers, such as tanks or other storage devices. In addition, the haulers must comply with all existing applicable federal, state and local laws and regulations regarding transport, use, disposal, handling and storage of hazardous wastes and material, including storage, collection and disposal. Compliance with these laws and regulations related to transportation will minimize potential exposure of humans or the environment to significant hazards from transport of such materials and wastes.

The proposed project will install about 7,800 LF of sewer pipeline. The proposed pipeline will be constructed underground within existing roadways or underground by way of jack and bore techniques; once constructed, the roadways will be repaved to their original condition and the disturbance at jack and pit locations will be recompacted. Thus, once constructed, the pipelines will not require or result in transport, use, or disposal of hazardous materials. Therefore, with implementation of the identified mitigation measure, impacts are considered less than significant.

- c. *Less Than Significant Impact* – The project sites are located within one quarter mile of a school; the Browning Avenue segment traverses Browning Avenue along which C. E. Utt Middle School is located, with Marjorie Veeh Elementary School (1701 San Juan St, Tustin, CA 92780) located about 1,000 feet northwest of the Browning Avenue alignment. The Fallen Leaf segment is located about 2,000 feet to the southeast of Sycamore Magnet Academy (1402 Sycamore Ave, Tustin, CA 92780). The Clarissa Lane segment is located 2,000 feet to the east of the Columbus Tustin Middle School (17952 Beneta Way, Tustin, CA 92780). The Crawford Canyon segment is located about 1,000 feet north of Panorama Elementary School (10512 S Crawford Canyon Rd, Santa Ana, CA 92705). While the proposed project would be developed within one quarter mile of a school, it is not anticipated to emit hazardous emissions or handle large quantities of hazardous materials or substances that would cause a significant impact to a local school. Furthermore, the District will develop further safety standards and operational procedures and continue to enforce existing safety standards and operational procedures for safe transport and use of its operational and maintenance materials that are potentially hazardous. As such, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste during construction or operation in a quantity that would pose any danger to people adjacent to, or in the general vicinity of, the project site. Therefore, the impacts of the proposed project to this issue area would be considered less than significant.
- d. *Less Than Significant Impact* – The proposed project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment. The proposed ID1 Capacity Rehabilitation and Augmentation Project consists of a footprint traversing 5 sewer segments. The following describes the data contained in Appendix 6:
- Browning Avenue: No open Leaking Underground Storage Tank (LUST) Cleanup sites located within the project footprint. Two closed LUST Cleanup sites and three Department of Toxic Substance Control (DTSC) Cleanup sites are located within 2,500 feet of the project alignment.
 - Clarissa Lane: There are two open LUST cleanup sites and one open Military Cleanup site located about 100 yards southwest of the project footprint (refer to Appendix 6). The Chevron Cleanup site consisted of groundwater contamination, verification monitoring of wells within 2,000 feet of the site has been ongoing since 10/2014. The Mobile Cleanup site, like the Chevron site, consisted of groundwater contamination with assessment and interim remedial action ongoing

since 02/2017. The Defense Logistics Agency Military Cleanup site consisted of drinking water contamination from a jet fuel spill that has been under remediation since 07/2010.

- **Fallen Leaf:** There are two closed Military Cleanup Sites located to the southwest of the project site, while there are two DTSC Cleanup Sites located within the project footprint. The Tustin NG Rifle Range consisted of contaminated soil and the cleanup requires no further action as of 06/2010. The Tustin Rag Bomb/Score Site, located within close proximity to the project footprint, states that the cleanup status is inactive, and is therefore not of concern for contamination potential at the project site.
- **Crawford Canyon:** No open Leaking Underground Storage Tank (LUST) Cleanup sites located within the project footprint. One closed LUST Cleanup site is located within 2,500 feet of the project alignment.
- **6th Street:** No open Leaking Underground Storage Tank (LUST) Cleanup sites located within the project footprint. Eleven closed LUST Cleanup sites and one DTSC site are located within 2,500 feet of the project alignment. One open Cleanup site is located 1,200 feet north of the project footprint.

Based on the data contained Appendix 6 containing the California State Water Board's GeoTracker website (consistent with Government Code Section 65962.5) data for the project footprint, there is some potential to encounter contaminated soils or materials during trenching or jack and bore activities on behalf of the project. To prevent impacts from unknown subsurface hazardous materials or wastes, the following mitigation measure shall be implemented:

HAZ-2 *If subsurface hazardous materials, including but not limited to buried trash and debris, UXO, and contaminated media, including soil, soil gas, and/or groundwater are encountered during sewer installation activities, EOCWD shall perform further environmental assessment and, if necessary, perform remediation recommended by a qualified professional. The recommendations of the professional to address the accidental discovery shall be implemented and documented to remove the hazard.*

No further hazardous materials of concern are anticipated to be located within the project footprint. Therefore, with the implementation of the mitigation measures outlined above, historic contamination within the project area is not forecast to cause a significant adverse impact pertaining to hazardous materials. No mitigation further mitigation is required.

- e. **Less Than Significant Impact** – The proposed project is located greater than 3 miles northwest of an airport or private airstrip at any point within the project footprint. The nearest airport is the John Wayne Airport located within the City of Santa Ana, CA. According to the Land Use Plan for John Wayne Airport (2008),³ the Fallen Leaf Sewer is located at the boundary of the AELUP Notification Area for John Wayne Airport (Figure IX-1), and is located within the John Wayne Airport Obstruction Imaginary Surfaces area as well (Figure IX-2). However, the entirety of the proposed project is located outside of the John Wayne Airport Safety Zone (Figure IX-3). Given that the proposed project does not propose development of any above ground structures, that construction would not require utilization of construction materials that would exceed the height limits delineated by the Obstruction Imaginary Surfaces Map (Figure IX-2), and that the whole of the project is located outside of the John Wayne Airport Safety Zone (Figure IX-3), the potential for the proposed project to cause or experience any routine or substantial adverse impact related to public airport operations is considered less than significant. No mitigation is required.
- f. **Less Than Significant With Mitigation Incorporated** – The proposed project will be located within existing roadways within the City of Tustin and within Unincorporated Orange County. The proposed ID1 Capacity Rehabilitation and Augmentation Project will not be developed within or conflict with

³ https://files.ocair.com/media/2021-02/JWA_AELUP-April-17-2008.pdf?VersionId=cB0byJjdad9OuY5im7Oaj5aWaT1FS.vD

any emergency response or evacuation route. The City of Tustin does not identify specific emergency routes in their Emergency Operations Plan.⁴ The proposed sewer pipeline segments are generally not located within major roadways, and while the proposed project will require an Encroachment Permit from Caltrans, the proposed project would not conflict with traffic along the I-5 freeway, nor would it conflict with Metrolink rail traffic. At no time during the installation of any segment of pipeline will the entirety of this roadway be closed. The project would require one lane to be closed, which would allow for through-traffic so long as a traffic management plan is developed and implemented. As such, please refer to the Transportation/Traffic Section of this document, Section XVII. Mitigation measure **TRAN-1** and **TRAN-2** would be implemented to address any potential traffic disruption and emergency access issues on area roadways. With implementation of these measures requiring construction traffic control and that roadways are returned to their original or better condition; impacts are reduced to a less than significant. No additional mitigation is required.

- g. *Less Than Significant Impact* – The proposed project would not 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. The proposed project footprint traverse urban landscapes within the City of Tustin and Unincorporated Orange County. The project is located not located within any very high fire hazard zone according to the CALFIRE Fire Hazard Severity Zone Viewer Map (Figure XX-1). The proposed project will install 7,800 LF of replacement sewer pipeline within existing roadways and otherwise below ground. Below ground pipelines are not susceptible to wildfire hazards and the development of the proposed pipeline will not increase the risk of wildland fires to nearby residences and structures. Therefore, because the entirety of the project will be installed below ground and outside of any fire hazard severity zones, the proposed project would have a less than significant potential to expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. No mitigation is required.

⁴ <https://www.tustinca.org/DocumentCenter/View/570/Emergency-Operations-Plan-PDF>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation onsite or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?; or,	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant With Mitigation Incorporated* – The project proposes to install 7,800 LF of sewer pipeline to replace sewer collection system segments that have experienced deficiencies, thus the sewer replacement would expand existing and future sewer collection capacity and improve reliability. The area of disturbance from the construction of the pipeline will occur within existing rights-of-way including paved roadways or otherwise underground through jack and bore methods. Three main sources of potential violation of water quality standards or waste discharge requirements are as follows: from generation of municipal wastewater; from stormwater runoff; and potential discharges of pollutants, such as accidental spills. To address stormwater and accidental spills within this environment, any new project must ensure that site development implements a Storm Water Pollution Prevention Plan (SWPPP) to control potential sources of water pollution that could violate any standards or discharge requirements during construction and a Water Quality Management Plan (WQMP) to ensure that project-related surface runoff meets discharge requirements over the short- and long-term. In the short term, construction activities will have some potential to affect the quality of stormwater discharged from the project sites. Land disturbance activities could result in erosion and sedimentation immediately adjacent to the disturbed project alignment. Spills or leaks of

petroleum products used by construction equipment could also potentially affect the quality of surface water. The project will be required to obtain a general construction National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit prior to the start of construction. Obtaining coverage under the General Construction NPDES permit requires the preparation and implementation of the SWPPP, which specifies Best Management Practices (BMPs) that must be implemented during construction of this specific project. Compliance with the terms and conditions of the NPDES and the SWPPP, as well as the WQMP, is mandatory and is judged adequate mitigation by the regulatory agencies for potential impacts to stormwater during construction activities. Implementation of the following mitigation measure is also considered adequate to reduce potential impacts to stormwater runoff to a less than significant level.

HYD-1 *EOCWD shall require that the construction contractor prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. The SWPPP shall include a Spill Prevention and Cleanup Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented in the SWPPP may include but not be limited to:*

- *The use of silt fences;*
- *The use of temporary stormwater desilting or retention basins;*
- *The use of water bars to reduce the velocity of stormwater runoff;*
- *The use of wheel washers on construction equipment leaving the site;*
- *The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;*
- *The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and*
- *Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.*

Once constructed, the proposed pipeline will operate underground within existing road rights-of-way that will be repaved to their original or better condition, and any other disturbed areas facilitating jack and bore would be returned to their original condition. Therefore, with no anticipated operational impacts or substantial change in the environment from implementation of the proposed project, implementation of these mandatory Plans and their BMPs, as well as MMs **HYD-1** and **HAZ-1** above, will prevent a violation of any water quality standards or waste discharge.

- b. *Less Than Significant Impact* – The project does not propose the installation of any water wells that would directly extract groundwater. The proposed project will install sewer pipeline at several locations throughout the City of Tustin and Unincorporated Orange County. Construction of the new sewer conveyance pipeline alignment would require approximately 5,000 gallons of potable water each day for a maximum of about 60 days, which equates to the construction of the conveyance pipeline requiring about 300,000 gallons of water (0.9-acre feet) to support the pipeline installation within existing roadways and otherwise below ground. This amount is considered nominal when compared to the availability of supply from the project proponent, EOCWD based on a review of their 2015 Urban Water Management Plan (UWMP). The District pumped about 646-acre feet per year (AFY) in 2015. Based on the data contained in the EOCWD Urban Water Management Plan (UWMP) 2015, the District intends to extract 669 AFY in 2020, and about 723 AFY by 2040 from the OC Basin. The proposed pipeline installation would require less than one percent of the District's planned demand, and therefore, given that EOCWD projects that supply will be available to meet demand,

impacts to the groundwater basin from installing the proposed sewer pipeline segments would be less than significant. Furthermore, once the pipeline has been installed, the roadways and disturbed areas will return to their original condition with no new impervious area resulting from this effort that would interfere with groundwater recharge in the area. No above ground features are proposed as part of this project that would require the use of potable water. Therefore, the proposed project is not anticipated to substantially deplete groundwater supplies such that there would be a net deficit in aquifer volume or lowering of the groundwater table. Impacts under this issue are considered less than significant and no mitigation is required.

c

- (i-iii). *Less Than Significant Impact* – No substantial impact to drainage patterns or structures will result from implementing this project. The roadways and areas of disturbance within which the pipeline will be installed will be returned to their original condition upon completion of the placement of each section of sewer pipeline, as will the area of compacted dirt within which a small portion of the alignment will be installed. The roadways will generate essentially the same amount of stormwater as they do at present because no expansion of roadway or change in drainage patterns are anticipated. Conveyance of stormwater to drainage alignments and storm drains within these roadways will remain intact and unchanged once construction has been completed. No substantial change to the existing drainage pattern will result from project implementation. Adequate drainage facilities exist to accommodate pre- and post-project drainage flows, and will therefore result in a less than significant impact. Based on the data outlined above, this project will not substantially alter the existing drainage pattern of the site or area; will not substantially alter the course of a stream or river in such a manner that will result in substantial erosion or siltation either on or off the project footprint; or contribute runoff water that could exceed the capacity of the existing drainage facilities. No additional sources of polluted runoff will result and impacts are considered less than significant. No additional mitigation is required.

c

- (iv). *Less Than Significant Impact* – According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) National Flood Hazard Layer Viewer provided as Figures X-1 through X-5:
- Crawford Canyon: A portion of the pipeline alignment is located within an area in a 0.2% Annual Chance Flood Hazard Zone with the remainder of the pipeline alignment located in Zone X, an area of minimal flood hazard (Figure X-1).
 - Fallen Leaf: A small portion of the pipeline alignment is located within an area in a 1% Annual Chance Flood Hazard Zone with the remainder of the pipeline alignment located outside of a flood hazard zone (Figure X-2).
 - Clarissa Lane: A portion of the pipeline alignment is located within an area in a 0.2% Annual Chance Flood Hazard Zone with the remainder of the pipeline alignment located in Zone X, an area of minimal flood hazard (Figure X-3).
 - Browning Avenue: A portion of the pipeline alignment is located within a 0.2% Annual Chance Flood Hazard Zone with the remainder of the pipeline alignment located outside of a flood hazard zone (Figure X-4). Additionally, at the northern boundary of the project site, there is a regulatory floodway (Zone AE) that overlaps with the project footprint.
 - 6th Street: The whole of the pipeline alignment is located within a 0.2% Annual Chance Flood Hazard Zone (Zone X) (Figure X-5).

The proposed project would install pipeline underground within existing roadways or otherwise will be installed below ground. This project will not substantially alter the existing drainage pattern of the site or area because the roadway and compacted alignment will be returned to their original condition once the pipeline has been installed. As such, once installed underground, the existing drainage pattern will be maintained, and given that no project components will be installed above ground, the proposed project would have no potential to impede or redirect flows. No mitigation is required and impacts are considered less than significant.

- d. *Less Than Significant Impact* – As stated above under issue X(c[iv]), the proposed project is located within Zone X (areas of 0.2% annual change flood (500-year flood)); regulatory floodway (Zone AE);

and areas that have not been mapped as being located within a flood hazard zone. The project footprint is not located in close proximity to any large bodies of water as the project is located at least 9 miles away from the ocean at an elevation of 65 feet or greater (up to over 350 feet in elevation), so impacts associated with seiche or tsunami are not anticipated to occur. Mudflow typically occurs on hillsides and the proposed project is not located on a hillside or in an area exposed to significant mudflow. Once the proposed pipeline is installed belowground, the roadways and other areas of disturbance will be returned to their original condition or better. With no above ground structures proposed, the proposed ID1 Capacity Rehabilitation and Augmentation Project would not risk release of pollutants due to project inundation. Impacts under this issue are considered less than significant. No mitigation is required.

- e. *No Impact* – Please refer to the discussion under issue X(b) above. The Orange County Basin in which the project will extract water to provide additional potable water service to EOCWD is managed by OCWD which regulates groundwater levels in the Basin by regulating the annual amount of pumping. The OC Basin is not adjudicated and as such, pumping from the Basin is managed through a process that uses financial incentives to encourage groundwater producers to pump a sustainable amount of water. As such, the Basin does not have a sustainable groundwater management plan and the project will not interfere with the overall water quality of the Basin as discussed above. However, the water required during construction of the proposed project sewer pipeline installation project would be well within the District's planned and allowable pumping capacity for the Basin. Therefore, it is not anticipated that the proposed ID1 Capacity Rehabilitation and Augmentation Project would have a significant potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *No Impact* – The ID1 Capacity Rehabilitation and Augmentation Project footprint is located within the City of Tustin and the Unincorporated community of North Tustin within Orange County and will occur within developed roadway segments or otherwise below ground. The project footprint has no General Plan Land Use Designation because pipelines and the roadways in which the pipeline will be installed are considered essential infrastructure. Once in operation the project will not encroach on developed land surrounding the project footprint as the new sewer pipelines will be located underground. The proposed project is considered a benefit to EOCWD's service area because it would enable more efficient municipal wastewater service to residents within EOCWD's service area. Therefore, the project would not result in physically dividing an established community, particularly because the entirety of the project will occur within existing road rights-of-way or otherwise below ground, and once constructed, the roadways and compacted dirt area will continue to function as they do at present. No impacts are anticipated and no mitigation is required.
- b. *No Impact* – Please refer to the discussion under issue X(a) above. The project will occur mostly within existing roadways within an area surrounded by several land use designations, including Downtown Commercial Core Specific Plan, HDR - High Density Residential, LDR - Low Density Residential, Suburban Residential, Planned Community Residential, PI - Public/Institutional, MHP - Mobile Home Park, MDR - Medium Density Residential, and PO - Professional Office. The project will install (replace) new sewer pipeline within EOCWD's service area in the City of Tustin and Unincorporated Orange County. The project footprint consists of existing road rights-of-way and staging areas to facilitating boring underground that will be returned to their original condition and function as they do at present once the new sewer pipelines have been installed. Thus, the development of the proposed project within the proposed alignment will be compatible with existing land uses and land use plan, and no conflict or impact to land use can be identified. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a&b. *No Impact* – The proposed pipeline alignment is located within the City of Tustin and Orange County, and the project will be installed either within existing roadways or otherwise underground in staging areas for boring underground. According to the City of Tustin General Plan, the only mineral resource identified within the Tustin Planning Area is the Mercury-Barite deposit in Red Hill (the hill). However, this resource is not utilized. Furthermore, according to the Mineral Resources map prepared for the Orange County General Plan (Figure XII-1), no known mines or mineral resources are known to occur on or in the vicinity of the project footprint. As no current mining operations exist within or adjacent to the proposed pipeline alignment and overall project footprint, implementation of the proposed project will not 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 or a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. No impacts are anticipated under this issue and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. NOISE: Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of a project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

Background

Noise is generally described as unwanted sound. The proposed project consists of installing 7,800 LF of sewer pipeline within the EOCWD's service area. Once installed within existing roadways or otherwise below ground by way of boring, the pipeline will operate underground and the roadways will be repaved to function as they do at present. No above ground facilities are proposed as part of this project. The noise environment varies within the project footprint as some segments within the proposed sewer pipeline replacement traverse through roadways that experience a high volume of traffic, while other segments within the proposed sewer pipeline replacement are located in low traffic volume, residential areas.

The unit of sound pressure ratio to the faintest sound detectable to a person with normal hearing is called a decibel (dB). Sound or noise can vary in intensity by over one million times within the range of human hearing. A logarithmic loudness scale, similar to the Richter scale for earthquake magnitude, is therefore used to keep sound intensity numbers at a convenient and manageable level. The human ear is not equally sensitive to all sound frequencies within the entire spectrum. Noise levels at maximum human sensitivity from around 500 to 2,000 cycles per second are factored more heavily into sound descriptions in a process called "A-weighting," written as "dBA."

Leq is a time-averaged sound level; a single-number value that expresses the time-varying sound level for the specified period as though it were a constant sound level with the same total sound energy as the time-varying level. Its unit is the decibel (dB). The most common averaging period for Leq is hourly.

Because community receptors are more sensitive to unwanted noise intrusion during more sensitive evening and nighttime hours, state law requires that an artificial dBA increment be added to quiet time noise levels. The State of California has established guidelines for acceptable community noise levels that are based on the Community Noise Equivalent Level (CNEL) rating scale (a 24-hour integrated noise measurement scale). The guidelines rank noise land use compatibility in terms of "normally acceptable," "conditionally acceptable," and "clearly unacceptable" noise levels for various land use types. The State Guidelines, Land Use Compatibility for Community Noise Exposure, single-family homes are "normally acceptable" in exterior noise environments up to 60 dB CNEL and "conditionally acceptable" up to 70 dB CNEL based on this scale. Multiple family residential uses are "normally acceptable" up to 65 dB CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries and churches are "normally acceptable"

up to 70 dB CNEL, as are office buildings and business, commercial and professional uses with some structural noise attenuation.

City of Tustin

The following activities shall be exempted from the provisions of this chapter:

Chapter 6, Section 4617 – Exemptions

The following activities shall be exempted from the provisions of this chapter:

- (e) Noise sources associated with construction, repair, remodeling, or grading of any real property between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday and the hours of 9:00 a.m. and 5:00 p.m. on Saturdays, excluding city observed federal holidays.

Chapter 6, Section 4614 - Exterior Noise Standards

Noise Zone	Noise Level	Time Period
1: All residential properties	55 dBA 50 dBA	7 AM – 10 PM 10 PM – 7 AM
2: All commercial properties	60 dBA	Anytime
3: All industrial properties	70 dBA	Anytime
4: All special properties such as hospitals, convalescent homes, public and institutional schools, libraries and churches	55 dBA	Anytime
5: All mixed use properties	60 dBA	Anytime

Chapter 6, Section 4615 - Interior Noise Standards

Noise Zone	Noise Level	Time Period
1: All residential properties	55 dBA 45 dBA	7 AM – 10 PM 10 PM – 7 AM
5: All mixed use properties	55 dBA 45 dBA	7 AM – 10 PM 10 PM – 7 AM

Orange County

Chapter 6, Section 4-6-7 – Special Provisions

The following activities shall be exempted from the provisions of this article:

- (e) Noise sources associated with construction, repair, remodeling, or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a Federal holiday.

Chapter 6, Section 4-6-5 - Exterior Noise Standards

Noise Level	Time Period
55 dBA	7 AM – 10 PM
50 dBA	10 PM – 7 AM

Chapter 6, Section 4-6-6 - Interior Noise Standards

Noise Level	Time Period
55 dBA	7 AM – 10 PM
45 dBA	10 PM – 7 AM

Impact Analysis

- a. *Less Than Significant With Mitigation Incorporated* – The proposed project will install sewer pipeline within existing road rights-of-way and otherwise below ground. Sensitive receptors are located adjacent to the roadways within which the pipeline will be installed. However, once installed, the pipelines will be located underground; no above ground features are proposed, and no noise sources will affect adjacent land uses. The background noise varies throughout the various segments of pipeline. In some places, such as adjacent to the Metrolink rail line, or the I-5 freeway, background noise is high, whereas in residential areas, the background noise is moderate to low.

Short Term Construction Noise

Short-term construction noise impacts associated with the proposed project will occur over a period of 60 days and may impact nearby residential dwellings, churches, schools, or other sensitive receptors. These activities will include noise generated by construction activities, movement of construction materials to and from the site, and grading, paving, trenching, and excavation within the road rights-of-way. The noise of each of these construction activities varies depending on the type of construction equipment and the location within the footprint within which the construction takes place. The earth-moving sources are the noisiest type of equipment typically ranging from 82 to 85 dB at 50 feet from the source. Temporary construction noise is exempt from the City of Tustin's noise standards as long as work is limited to the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday, and the hours of 9:00 a.m. and 5:00 p.m. on Saturdays, excluding city observed federal holidays. This applies to all sewer pipeline replacement locations within the City of Tustin (all except Crawford Canyon). At Crawford Canyon, the Orange County noise standards enable construction during any period except 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a Federal holiday. The proposed project would be constructed in compliance with the City and County's noise standards, and construction of the project would be less than significant. However, to minimize the noise generated on the site to the extent feasible, the following mitigation measures shall be implemented:

NOI-1 *All construction vehicles and fixed or mobile equipment shall be equipped with operating and maintained mufflers.*

NOI-2 *All employees that will be exposed to noise levels greater than 75 dB over an 8-hour period shall be provided adequate hearing protection devices to ensure no hearing damage will result from construction activities.*

NOI-3 *Within the City of Tustin (at Fallen Leaf Ln./Royal Oak Rd., Browning Avenue, 6th Street, and Clarissa Lane), no construction activities shall occur during the hours of 6 PM through 7 AM, Monday through Friday, or 5 PM through 9 AM on Saturdays and at no time shall construction activities within the City of Tustin occur on Sundays or holidays, unless a declared emergency exists. Within Orange County (Crawford Canyon), no construction activities shall occur during the hours of 8 PM and 7 AM Monday through Saturday and at no time shall construction activities within Orange County occur on Sundays or holidays, unless a declared emergency exists.*

NOI-4 *Equipment not in use for five minutes shall be shut off.*

- NOI-5** *Equipment shall be maintained and operated such that loads are secured from rattling or banging.*
- NOI-6** *Construction employees shall be trained in the proper operation and use of equipment consistent with these mitigation measures, including no unnecessary revving of equipment.*
- NOI-7** *EOCWD will require that all construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by EOCWD.*
- NOI-8** *Construction staging areas shall be located as far from adjacent sensitive receptor locations as possible, for example north or west of the existing reservoir.*

Long-Term Operational Noise

The proposed project will not cause any measurable permanent increase in ambient noise levels in the vicinity of the project above levels existing without the project, in particular because this project would install pipeline below ground. Operation of the sewer pipeline alignments will not generate any new sources of operational noise within the project footprint. Therefore, through the implementation of the mitigation measures identified above, neither operation or construction of the proposed project would violate noise standards outlined in the City of Tustin Municipal Code or Orange County Code of Ordinances. Impacts under this issue are considered less than significant with mitigation incorporated.

- b. *Less Than Significant With Mitigation Incorporated* – Vibration is the periodic oscillation of a medium or object. The rumbling sound caused by vibration of room surfaces is called structure borne noises. Sources of groundborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous or transient. Vibration is often described in units of velocity (inches per second), and discussed in vibration decibel (VdB) units in order to compress the range of numbers required to describe vibration. Vibration impacts related to human development are generally associated with activities such as train operations, construction, and heavy truck movements.

The Federal Transportation Administration (FTA) Assessment states that in contrast to airborne noise, ground-borne vibration is not a common environmental problem. Although the motion of the ground may be noticeable to people outside structures, without the effects associated with the shaking of a structure, the motion does not provoke the same adverse human reaction to people outside. Within structures, the effects of ground-borne vibration include noticeable movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. FTA Assessment further states that it is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. However, some common sources of vibration are trains, trucks on rough roads, and construction activities, such as blasting, pile driving, and heavy earth-moving equipment. The FTA guidelines identify a level of 80 VdB for sensitive land uses. This threshold provides a basis for determining the relative significance of potential project related vibration impacts. This threshold provides a basis for determining the relative significance of potential project related vibration impacts.

In the short term, it is possible that groundbreaking construction equipment and other equipment required to construct the whole of the project may have some potential to create some vibration at the nearest sensitive receptors at some sites within the project footprint. Background vibration within project footprint that traverses through the County of Orange and City of Tustin would generally be mixed given that the traffic along the roadways in which the pipeline will be installed varies widely from heavily traveled to lightly traveled roads. Groundborne vibration is normally perceptible to

humans at approximately 65 VdB, while 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible. Construction activity can result in varying degrees of groundborne vibration; in the short term, construction from installing the pipeline has the potential to create some groundborne vibration to the nearest sensitive receptors at some sites within the project footprint. However, any short-term impacts to the nearest sensitive receptors would be considered less than significant through implementing the following mitigation measure:

NOI-9 EOCWD shall require the construction contractor(s) to implement the following measures:

- **Ensure that the operation of construction equipment that generates high levels of vibration including, but not limited to, large bulldozers, loaded trucks, pile-drivers, vibratory compactors, and drilling rigs, is minimized to below 72 vibration decibels (VdB), within 45 feet of existing residential structures and 35 feet of institutional structures (e.g., schools) during construction. Use of small rubber-tired bulldozers shall be enforced within these areas during grading operations to reduce vibration effects.**
- **The construction contractor shall provide signs along the roadway identifying a phone number for adjacent property owners to contact with any complaint. During future construction activities with heavy equipment within 300 feet of occupied residences, vibration field tests shall be conducted at the property line near the nearest occupied residences. If vibrations exceed 72 VdB, the construction activities shall be revised to reduce vibration below this threshold. These measures may include, but are not limited to the following: use different construction methods, slow down construction activity, or other mitigating measures to reduce vibration at the property from where the complaint was received.**

With implementation of the above mitigation measure, the project would prevent significant vibration impacts from occurring within the project area. Therefore, impacts from project related vibration would be considered less than significant with implementation of mitigation. No further mitigation is required.

- c. *Less Than Significant Impact* – The proposed project is located greater than 3 miles northwest of an airport or private airstrip at any point within the project footprint, as shown on the Airport Land Use Commission for Orange County Airport Planning Areas provided as Figure XIII-1. The nearest airport is the John Wayne Airport located within the City of Santa Ana, CA. According to the Land Use Plan for John Wayne Airport (2008),⁵ the proposed project is located outside of the John Wayne Airport Impact Zone for noise (Figure XIII-2). Given that the proposed project does not propose development of any above ground structures, and that the whole of the project is located outside of the John Wayne Airport Impact Zone for noise, it is not anticipated that persons working in the project area would be exposed to excessive noise levels generated by the nearby Airport; therefore, noise impacts under this issue are considered less than significant.

⁵ https://files.ocair.com/media/2021-02/JWA_AELUP-April-17-2008.pdf?VersionId=cB0byJjdad9OuY5im7Oaj5aWaT1FS.vD

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. 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 roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant Impact* – Implementation of the project will not induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). The project is considered a vital infrastructure project because it proposes to install sewer pipeline to replace segments of pipeline that are currently segments that have experienced deficiencies, thus the sewer replacement would expand existing and future sewer collection capacity and improve reliability. The proposed project will require a temporary work force; however, this is short-term and with a maximum of about 22 employees will not induce substantial population growth. Furthermore, according to the Southern California Association of Governments (SCAG), the total population of Tustin in 2018 was 82,344 persons⁶, while the 2018 population of unincorporated Orange County was 129,278 persons.⁷ The SCAG Connect SoCal Demographics and Growth Forecast⁸ notes that the City of Tustin's population is anticipated to grow to 92,600 residents by 2045 and Unincorporated Orange County is anticipated to grow to 181,000 residents by 2045. This indicates that the City and County have room for population growth in the future. As such, given that no additional employees will be required once the pipeline has been replaced and is in operation, the proposed project would have a less than significant potential to induce substantial population growth in an area, either directly or indirectly. No mitigation is required.
- b. *No Impact* – The proposed ID1 Capacity Rehabilitation and Augmentation Project will occur within roadways or otherwise below ground. No housing is proposed as part of the project and no persons reside within the project footprint. Therefore, implementation of the project as a whole will not displace any existing housing or displace a substantial number of people that would necessitate the construction of replacement housing elsewhere. No impacts will occur as a result of project implementation. No mitigation is required.

⁶ https://scag.ca.gov/sites/main/files/file-attachments/tustin_localprofile.pdf

⁷ https://scag.ca.gov/sites/main/files/file-attachments/unincarearangecounty_0.pdf?1606012197

⁸ https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_demographics-and-growth-forecast.pdf?1606001579

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant Impact* – The City of Tustin and Unincorporated Orange County are currently served by the Orange County Fire Authority (OCFA). The OCFA currently has three fire stations that are strategically located throughout the City of Tustin, providing primary response for fire suppression and emergency medical services to the community. The Orange County Fire Authority is a regional fire service agency that serves 23 cities in Orange County and all unincorporated areas. The OCFA protects over 1,680,000 residents from its 71 fire stations located throughout Orange County. OCFA Reserve Firefighters work 10 stations throughout Orange County.⁹ The three fire stations are located within two to three miles of each segment of pipeline at a maximum, and in some cases the fire stations are located within less than a quarter of a mile to the project alignment. Furthermore, the Orange City Fire Department Station #4 (210 S Esplanade St, Orange, CA 92869) and the OCFA Station #23 (5020 E Santiago Canyon Rd, Orange, CA 92869), while located outside of the City of Tustin, also serve the northern portion of the project footprint. These stations respond to medical emergencies, vegetation and structure fires, vehicle accidents, public assistance, false alarms, and other instances. The project will not include the use or storage of highly flammable materials. The proposed project would install 7,800 LF of sewer pipeline below ground. Though there may be some need for fire protection and emergency response services during construction of the pipeline, existing fire protection services within the area are considered adequate protection in such instances. Once construction of each segment has been completed there will be no potential for the operation of the pipeline to require fire protection services as these pipelines will be located below ground. Therefore, any impact to the existing fire protection system is considered random and less than significant. No additional mitigation is required.
- b. *Less Than Significant Impact* – The City of Tustin Police Department provides the citizens of the City with police services and protection. Service is primarily provided from the Police Department Office at 300 Centennial Way Tustin, CA 92780. This location is proximate to the project footprint within about a 2- to 3-mile radius, excepting the segment of pipeline that will be installed within Unincorporated Orange County. The Orange County Sheriff Department has several locations throughout the County, and employs more than 3,800 sworn and professional staff, along with more than 800 reserve personnel.¹⁰ The project is not anticipated to generate growth within the project area that would create a new permanent demand for police protection because no additional

⁹ <https://www.tustinca.org/414/Fire>

¹⁰ <https://www.ocsheriff.gov/about-ocsd>

employees will be required once the pipeline is installed and is in operation. The construction of the sewer pipeline will require only a temporary work force. The proposed project will not include the kind of use that would likely attract criminal activity, except for random trespass and theft; however, construction equipment will be stored in such a manner that the public will not have access to it, and once in operation, the project will not include any above ground components. Thus, due to the type of project proposed, no new or expanded police facilities would need to be constructed as a result of the project. Therefore, impacts to police protection resources from implementation of the proposed project are considered less than significant; no mitigation measures are required.

- c. *Less Than Significant Impact* – The proposed project is located within areas served by the Tustin Unified School District (TUSD) and the Orange Unified School District (OUSD). As discussed under Section XIV, Population and Housing, above, the project would not induce population growth within the City or the County, as it will neither construct housing, nor result in substantial growth in employment opportunities within the area. Further, though the proposed project would be installed within roadways that may run adjacent to a school, access and services at schools will be maintained during construction, and would return to pre-construction conditions once the pipeline is installed below ground. Because the project would develop infrastructure through the development of 7,800 LF of sewer pipeline and would not develop any above ground facilities that are commercial, residential, or industrial in nature, the proposed project is not required to pay any fees to offset impacts to school facilities. Thus, the proposed project will not generate an increase in elementary, middle, or high school population. Therefore, any impacts under this issue are considered less than significant. No mitigation is required.
- d. *No Impact* – Because the project would develop infrastructure through the installation of 7,800 LF of sewer pipeline and would not develop any above ground facilities that are commercial, residential, or industrial in nature, the proposed project is not required to pay any fees to offset impacts to park facilities. As stated in the preceding sections, the proposed project is not anticipated to create a substantial increase in population because it does not require additional EOCWD staff to operate the new sewer collection system. While the proposed project would be developed in proximity to several parks, the proposed project footprint would not impact access to any nearby parks, particularly given that the project footprint would return to pre-construction conditions once the pipeline is installed below ground. The following describes the locations of parks in proximity to the proposed project:
- **Fallen Leaf:** Centennial Park (14722 Devonshire Avenue, Tustin, CA 92780) is located within about 500 feet of the project footprint. Magnolia Park (2274 Fig Tree Drive, Tustin, CA 92780) is located within about 500 feet of the project footprint. Montgomery Square Park (1496 Montgomery St, Tustin, CA 92782) is located within about 1,000 feet of the project footprint.
 - **Browning Avenue:** Camino Real Park (13602 Parkcenter Ln, Tustin, CA 92780) is located within about 300 feet of the project footprint.
 - **6th Street:** No parks are located nearby.
 - **Clarissa Lane:** Columbus Tustin Park (14712 Prospect Ave, Tustin, CA 92780) is located within about 1,200 feet of the project footprint.
 - **Crawford Canyon:** El Modena Park (S Hewes Street, Orange CA, 92869) is located within about one-half mile of the project footprint. El Modena Open Space (N Cameron Street, Orange, CA 92869) is located within about one-half mile of the project footprint.

Thus, implementation of the proposed project would not cause a substantial adverse physical impact to any parks within the City. No impacts are anticipated, and no mitigation is required.

- e. *No Impact* – Other public facilities include library and general municipal services. The library system in the project area is operated by the Orange County Public Library system. Since the project will not directly induce substantial population growth, it is not forecast that the use of such facilities will be altered as a result of the proposed project. As a result, the implementation of the project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities; need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable

service ratios, response times or other performance objectives for public services to include other public facilities. Thus, no impacts are anticipated under this issue and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *No Impact* – As previously discussed in Section XIV, Population and Housing and Section XV, Public Services, this project will not contribute to an increase in the population beyond that already allowed or planned for by local and regional planning documents. Therefore, this project will not result in an increase in the demand for parks and other recreational facilities and implementation of the proposed project would not increase the use of any parks within the area, nor would it result in the physical deterioration of other surrounding facilities. No impacts are anticipated. No mitigation is required.
- b. *No Impact* – The proposed project does not include recreational facilities, nor does it require the construction or expansion of recreational facilities. The proposed project will install 7,800 LF of new sewer pipeline within EOCWD's service area in the City of Tustin and Unincorporated Orange County. The ID1 Capacity Rehabilitation and Augmentation Project will occur mostly within existing roadways and does not include the construction or expansion of recreational facilities. Thus, there will be no adverse effects on the recreational facilities from implementing this project. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVII. TRANSPORTATION: Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: Please refer to the *East Orange County Water District ID1 Capacity Rehabilitation & Augmentation Project Trip Generation Evaluation* (TGE) prepared by Urban Crossroads, dated April 12, 2021 for the proposed project. This TGE is provided as Appendix 7 to this Initial Study.

- a. *Less Than Significant With Mitigation Incorporated* — The proposed project would install 7,800 LF of sewer pipeline within existing roadways in the City of Tustin and Unincorporated Orange County. The entirety of the project will occur within existing roadway segments outlined in the project description or otherwise underground. The segments of roadway in which the pipeline will be constructed are varied from highly travelled regional roadways (Browning Avenue and Crawford Canyon Rd.) to local/residential roadways (Fallen Leaf Pl/Royal Oak Rd., Clarissa Lane, and 6th Street). The pipeline installation will require one lane to be closed to complete the installation of the sewer pipeline; this will ensure that each roadway can still operate during construction. However, the project will require implementation of a traffic management plan in order to ensure adequate traffic flow. The installation of new sewer collection pipelines would temporarily reduce the capacity of roadways along the pipeline alignment(s) due to open-trenching within existing roadway rights-of-way (ROWs) and the resulting temporary lane closures on the affected roadways. The impact of the lane closures would vary based on the number of lanes needed to be closed (a function of pipeline diameter and trench width) and the width (number of lanes) of the affected roads. Multi-lane roads (four or more lanes) would be better able to accommodate two-way traffic than two-lane roadways. Two lane roads would likely require active traffic control (flaggers) to allow alternate one-way traffic flow on the available road width, and could possibly require full road closure (with detour routing around the construction work zone). MM **TRAN-1**—addressed below—would be required to reduce potential impacts to traffic and transportation conditions. Implementation of this measure, in conjunction with the temporary character of the construction impacts, is considered sufficient to ensure adequate flow of traffic in a safe manner for pipeline installation.

TRAN-1 *EOCWD shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:*

- *Develop circulation and detour plans, if necessary, to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.*
- *To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.*
- *Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.*

- ***For roadways requiring lane closures that would result in a single open lane, maintain alternate one-way traffic flow and utilize flagger-controls.***
- ***Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.***

Construction employees are anticipated to arrive by private automobile, and no carpooling has been assumed for the purposes of this trip generation evaluation. It has been assumed that all construction employees would arrive to the site prior to the morning 7-9 AM peak commute period, however, all 22 employees are assumed to depart during the PM peak hour based on the anticipated work hours. It has conservatively been assumed that 25% of the daily truck trips would occur during the morning peak hour, however, no trucks activity is assumed during the PM peak hour as the truck activity is anticipated to cease prior to the end of the workday at 4 PM. For this analysis, a worst-case scenario was assumed where we are assuming 2 installation teams; therefore, the total potential vehicle trip generation from the proposed Project would be approximately 84 trips per day. The 2020 Updated Transportation Implementation Manual for the County of Orange (amended November 17, 2020) indicates that projects generating fewer than 110 two-way trips per day would screen out. The Project is anticipated to contribute fewer than 50 peak hour trips to the existing circulation system during construction and is anticipated to generate fewer than 110 two-way trips per day. As such, no additional traffic analysis is necessary based on the traffic study guidelines.

Once constructed, no traffic would be generated by this project other than visits to the pipeline alignment by EOCWD personnel to inspect and maintain facilities when necessary, resulting in minimal vehicle miles traveled once the pipelines are in operation. Implementation of the project has the potential to conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. However, with implementation of the above mitigation measure requiring a construction traffic management plan, and the following MM **TRAN-2** requiring disturbances within public roadways to be returned to their original or better condition, the proposed project would result in a less than significant impact pertaining to the circulation system, particularly given that impacts to transit, bicycle, and pedestrian facilities will be temporary, and will not permanently disrupt circulation thereof.

TRAN-2 ***EOCWD shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable County of Orange or City of Tustin standard design requirements.***

- b. ***Less Than Significant Impact*** – The proposed project would install 7,800 LF of sewer pipeline within the City of Tustin and Unincorporated Orange County in EOCWD's service area. Orange County VMT thresholds are used for the purpose of this analysis. According to the Orange County 2020 Updated Transportation Implementation Manual¹¹ utilities are exempt from further Vehicle Miles Traveled (VMT) analysis. In the short term, as stated above, during construction, an estimated 22 roundtrips from construction workers per day will occur to install the proposed new sewer pipeline. A maximum of 15 roundtrips per day would occur to support construction efforts (i.e., delivery or removal of construction materials), though the average would be about 10 roundtrips per day. The vehicle miles traveled in these instances would likely average less than 75 miles round trip. The number of temporary truck trips will be minimized by using 15 cubic yard material haulers instead of smaller 10 cubic yard trucks to haul material onto and off of the site. Additionally, the same trucks that haul material onto the site would also carry material off of the site. Once constructed, no traffic would be generated by this project other than visits to the pipeline alignment by EOCWD personnel to inspect and maintain facilities when necessary, resulting in minimal vehicle miles traveled once

¹¹ <https://ocds.ocpublicworks.com/sites/ocpwocds/files/2020-12/Transportation%20Implementation%20Manual%20-%202020.pdf>

the pipelines are in operation. As such, development of the ID1 Capacity Rehabilitation and Augmentation Project is not anticipated to result in a significant impact related to vehicle miles travelled, and thus would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Impacts under this issue are considered less than significant.

- c. *Less Than Significant With Mitigation Incorporated* – The project will temporarily alter existing roadways during construction of the proposed pipeline. However, this alteration will not create any hazards due to design features of incompatible uses. The proposed project will install approximately 7,800 LF of pipeline within existing rights-of-way within the City of Tustin and Unincorporated Orange County. As stated under issue XVII(a) above, with the implementation of mitigation measures **TRAN-1** and **TRAN-2**, which require implementation of a construction traffic management plan and requiring disturbances within public roadways to be returned to their original or better condition, any potential increase in hazards due to design features or incompatible use will be considered less than significant in the short term. In the long term, no impacts to any hazards or incompatible uses in existing roadways are anticipated because once the pipeline is constructed, the roadway and small segment of compacted earthwork will be returned to its original condition, or better. Thus, any impacts are considered less than significant with implementation of mitigation. No additional mitigation is required.
- d. *Less Than Significant With Mitigation Incorporated* – Please refer to the discussions under issue XVII(a) and XVII(c) above. The proposed project will require closure of one lane within the roadway in which each pipeline segment is installed. The ID1 Capacity Rehabilitation and Augmentation Project will install sewer pipeline within EOCWD's service area within the City of Tustin and Unincorporated Orange County. The roadways within which the pipeline installation will occur vary from local residential roadways to collector streets to primary arterial roadways. Primary roadways within the project footprint that would be used during an emergency or evacuation order would be I-5, El Camino Real, Bryan Avenue, Nissan Road, Holt Avenue, Edinger Avenue, Walnut Avenue, Red Hill Avenue, Chapman Avenue, and Newport Avenue. The proposed sewer pipeline segments do traverse several major roadways (Browning Avenue, 6th Street, Crawford Canyon Rd.), but access can be maintained through lane closure and direction of traffic. At no time during the installation of pipeline will the entirety of these roadways be closed. The project would require one lane to be closed, which would allow for through-traffic so long as a traffic management plan is developed and implemented. Adequate emergency access will be provided along these routes throughout construction. Though closure of one lane will impact traffic, the implementation of mitigation measures **TRAN-1** and **TRAN-2** will ensure that impacts are reduced to a level of less than significant. No additional mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. TRIBAL CULTURAL RESOURCES: Would the project cause a substantial change in the significance of tribal cultural resources, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to the California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: Please refer to the discussion under Section V, Cultural Resources.

The Definition of a Tribal Cultural Resource includes:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following: included or determined to be eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources as defined in subdivision (k) of Section 5020.1;
 - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purpose of this paragraph, the lead agency shall consider the significance of the resources to a California American tribe;
 - A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape;
 - A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “non-unique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal resource if it conforms with the criteria of subdivision (a).
- a. *Less Than Significant With Mitigation Incorporated* – EOCWD has been contacted by two Tribes under Assembly Bill (AB) 52: the Juaneño Band of Mission Indians, Acjachemen Nation and the Gabrieleño Band of Mission Indians — Kizh Nation. The tribes were contacted to initiate the AB-52 process on February 17, 2021 to notify the tribes of the proposed project through mailed letters. During the 30-day consultation period that concluded on March 30, 2021, no response was received from either tribe. Therefore, consultation has concluded with no request from any tribe to be included as a consulting party for this project. Therefore, with no input from any Tribes, the analysis and conclusions under the Cultural Resources Section above shall ensure that no significant impacts to any Tribal Cultural Resources occur. As such, MM **CUL-1** and **CUL-2**, which requires earthmoving or grading activities in the immediate area of any cultural materials to be halted and for an onsite inspection to be performed immediately by a qualified archaeologist, impacts to tribal cultural

resources would be less than significant. No further mitigation is required beyond that which was identified under Section V, Cultural Resources, above.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIX. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

a. Water

Less Than Significant Impact – The proposed project will not develop any housing or human-occupied structures that would require connection to EOCWD's water distribution system. The project proposes to install 7,800 LF of sewer collection pipeline. Therefore, with no connections to EOCWD's water distribution system required, site improvements are not forecast to require or result in the construction of new water facilities or expansion of existing facilities in order to serve the project.

Wastewater

Less Than Significant Impact – The proposed project will construct new wastewater facilities in the form of 7,800 LF of new sewer pipeline within several areas (at Clarissa Lane, Crawford Canyon Rd, Fallen Leaf, 6th Street, and Browning Avenue) to replace underperforming segments of sewer. As demonstrated throughout this Initial Study, the proposed project will not result in any significant impacts from the installation of the new wastewater collection system that will connect to EOCWD's existing wastewater collection system. EOCWD will not require additional capacity to treat the wastewater flow collected by the new sewer pipeline as it will replace or create redundancy in existing sewer alignments to improve reliability. Therefore, while the proposed project would construct new wastewater collection facilities, development of the ID1 Capacity Rehabilitation and Augmentation Project would not result in a significant environmental effect related to the relocation or construction of new or expanded water facilities. Impacts are less than significant.

Stormwater

Less Than Significant Impact – As stated under issue XI(c[i-iii]), implementation the proposed project is not forecast to significantly alter the volume of surface/stormwater runoff that will be generated from the project footprint. The roadways within which the pipeline will be installed will be returned to their original condition upon completion of the placement of each section of sewer pipeline, as will the area of compacted earthwork within which a small portion of the alignment will be installed. The roadways will generate and transport essentially the same amount of stormwater as they do at present because no expansion of roadway or change in drainage patterns are anticipated. Given that no new stormwater collection facilities are required to implement the proposed project, and that the existing stormwater collection facilities will remain in place under the proposed project, development of the project will not require or result in the construction of new or expansion of existing stormwater drainage facilities. Any impacts under this issue are considered less than significant. No mitigation is required.

Electric Power

Less Than Significant Impact – Development of the proposed ID1 Capacity Rehabilitation and Augmentation Project would not require the installation of electrical services or substantial additional energy beyond that which is currently required to operate EOCWD's wastewater collection facilities. The proposed project would install 7,800 LF of sewer pipeline that will be connected to EOCWD's existing wastewater collection system. The project will not require additional energy use at existing transmission facilities to accommodate the replacement wastewater collected within the project footprint. However, this increase in energy use would be able to operate within existing electrical capacities. Therefore, the project would not result in a significant environmental effect related to the relocation or construction of new or expanded electric power facilities. No impacts are anticipated.

Natural Gas

No Impact – Development of the proposed ID1 Capacity Rehabilitation and Augmentation Project would not require installation or use of natural gas. Therefore, the project would not result in a significant environmental effect related to the relocation or construction of new or expanded natural gas facilities. No impacts are anticipated.

Telecommunications

No Impact – Development of the proposed ID1 Capacity Rehabilitation and Augmentation Project would not require installation of wireless internet service or phone serve. Therefore, the project would not result in a significant environmental effect related to the relocation or construction of new or expanded telecommunication facilities. No impacts are anticipated.

- b. *No Impact* – Please refer to the discussion under issues X(b) and XIX(a) above. The proposed project will install sewer conveyance pipelines that will replace or augment existing sewer that is underperforming due to inadequate capacity. Construction of the new sewer conveyance pipeline alignment would require approximately 5,000 gallons of potable water each day for a maximum of about 60 days, which equates to the construction of the conveyance pipeline requiring about 300,000 gallons of water (0.9-acre feet) to support the pipeline installation within existing roadways and otherwise below ground. This amount is considered nominal when compared to the availability of supply from the project proponent, EOCWD based on a review of their 2015 Urban Water Management Plan (UWMP). Once the pipeline has been installed, the roadways will return to their original condition with no new impervious area resulting from this effort that would interfere with groundwater recharge in the area. No above ground features are proposed as part of this project that would require the use of potable water to operate. Thus, implementation of the proposed project will have access to sufficient water supplies available to serve the project from existing entitlements and resources. Any impacts under this issue are considered less than significant. No mitigation is required.
- c. *Less Than Significant Impact* – Please refer to the discussion under X(b) and XIX(a) above. The proposed project will install 7,800 LF of a sewer conveyance pipeline that will replace or augment

existing sewer that is underperforming with inadequate capacity within EOCWD's service area. EOCWD will increase the capacity of the new sewer pipelines, but will not serve a greater service area or population with the proposed new pipeline. As such, EOCWD will operate within their planned collection capacities for these sewer pipelines, and OCWD has available capacity to treat the sewage collected within these sewer pipelines at their existing wastewater treatment plant. Therefore, while the proposed project would construct new and replacement sewer facilities, the proposed ID1 Capacity Rehabilitation and Augmentation Project would not create a new demand of wastewater treatment services that would impact the provider's ability to collect and treat wastewater within their existing commitments. Impacts under this issue are considered less than significant. No mitigation is required.

- d&e. *Less Than Significant With Mitigation Incorporated* – The project will generate construction waste from the removal of asphalt, concrete, and similar materials. The inert wastes can be disposed of at existing municipal or construction solid waste facilities, which have adequate capacity to accept inert wastes generated by this project, or can be recycled onsite. Any construction and demolition (C&D) waste will be recycled to the maximum extent feasible and any residual materials will be delivered to one of several C&D disposal sites in the area surrounding the project site. Many of these C&D materials can be reused or recycled, thus prolonging our supply of natural resources and potentially saving money in the process.

In accordance with CALGreen code 5.408.4, 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing must be reused or recycled. As this is a mandatory requirement, no mitigation is required to ensure compliance by EOCWD for this project.

Because of increased construction recycling efforts resulting from CalGreen and other regulations, opportunities for construction recycling are becoming easier to find, such as one in Santa Ana that accepts a wide range of construction and demolition debris materials: Mixed C&D, Asphalt/Concrete Brick/Masonry/Tile, Cardboard, Wood, Metals, Landscape Debris, Carpet, Green Waste, Dirt, Glass, Drywall, Flooring, Appliances, and Rebar. There are additional facilities that accept C&D materials located in the surrounding areas¹² including facilities in Anaheim, and Huntington Beach, Orange, and other Cities within Orange County that accept a wide range of materials including the above.

The facilities that accept C&D materials, combined with the landfills in the surrounding area, have adequate capacity to serve the proposed project. Solid waste will be disposed of in accordance with existing regulations at an existing licensed landfill. The project will not conflict with any state, federal, or local regulations regarding solid waste. Most waste collected by Waste Management is taken to any of the three landfills in Orange County: Olinda Alpha Landfill in Brea, Frank R. Bowerman Landfill in Irvine, and Prima Deshecha Landfill in San Juan Capistrano. According to CalRecycle (see Table XIX-1 below), each of these facilities has sufficient capacity to serve the Project.

**Table XIX-1
SOLID WASTE DISPOSAL FACILITIES USED BY ORANGE – CAPACITIES**

Facility Name	Permitted Max Disposal (tons/day)	Permitted Capacity (cubic yards)	Remaining Capacity (cubic yards)	Closure Date
Frank R. Bowerman Landfill	11,500	266,000,000	205,000,000	12/31/2053
Olinda Alpha Landfill	8,000	148,800,000	34,200,000	12/31/2021
Prima Deshecha Landfill	4,000	172,100,000	134,300,000	12/31/2102

¹² <https://oclandfills.com/sites/ocwr/files/import/data/files/101775.pdf>

The above landfills permit thousands of tons of waste per day, which is beyond what the expected amount of waste would be generated by the proposed sewer pipeline installation during construction. Furthermore, the proposed project is not anticipated to generate any operational waste as the project will install pipelines below ground. As such, the proposed project would comply with all federal, State, and local statutes related to solid waste disposal.

Any hazardous materials collected within the project footprint during either construction or operation of the project will be transported and disposed of by a permitted and licensed hazardous materials service provider. Therefore, the project is expected to comply with all regulations related to solid waste under federal, state, and local statutes. To further reduce potential impacts to solid waste facilities due to the scale of the materials that may require disposal or recycling, the following mitigation measure will be implemented:

UTIL-1 The contract with demolition and construction contractors shall include the requirement that all materials that can be recycled shall be salvaged and recycled. This includes, but is not limited to, wood, metals, concrete, road base, and asphalt. The contractor shall submit a recycling plan to EOCWD for review and approval prior to the start of demolition/construction activities to accomplish this objective.

Therefore, with the above mitigation measure, the project is expected to comply with all regulations related to solid waste under federal, state, and local statutes and be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs. No further mitigation is necessary.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XX. WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a-d. *No Impact* – The proposed project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zone. The proposed project is located generally within an urbanized area of Orange County and/or the City of Tustin. The nearest Very High Fire Hazard Severity Zone is located in the Santa Ana Mountains to the east (Figure XX-1). However, the project will not construct any above ground or habitable structures. The proposed project will install 7,800 LF of new pipeline within existing roadways, underground. Pipelines are not susceptible to wildfire hazards and the development of the proposed pipeline will not increase or exacerbate the risk of wildland fires to nearby residences and structures. The proposed project area is within an urban, developed area and once installed, the pipeline will be located below ground and will not be susceptible to wildfire risk. Therefore, as the proposed project is not located within or adjacent to a very high fire hazard severity zone, no impacts under these wildfire issues are anticipated.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XXI. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

The analysis in this Initial Study and the findings reached indicate that the proposed project can be implemented without causing any new project specific or cumulatively considerable unavoidable significant adverse environmental impacts. Mitigation is required to control potential environmental impacts of the proposed project to a less than significant impact level. The following findings are based on the detailed analysis of the Initial Study of all environmental topics and the implementation of the mitigation measures identified in the previous text and summarized following this section.

- a. *Less Than Significant With Mitigation Incorporated* – The project has no potential to cause a significant impact any biological or cultural resources. The project has been identified as having no potential to degrade the quality of the natural environment, substantially reduce habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. The project requires mitigation to prevent significant impacts from occurring as a result of implementation of the project. Based on the historic disturbance of the site, and its current disturbed condition, the potential for impacting cultural resources is low. Based on the past disturbance of the project footprint, it has been determined that no cultural resources of importance are anticipated to occur within the pipeline alignment, so it is not anticipated that any resources could be affected by the project because no cultural resources exist. However, because it is not known what could be unearthed upon any excavation activities, contingency mitigation measures are provided to ensure that, in the unlikely event that any resources are found, they are protected from any potential significant adverse impacts. Please see biological and cultural sections of this Initial Study.
- b. *Less Than Significant With Mitigation Incorporated* – Based on the analysis in this Initial Study, the proposed ID1 Capacity Rehabilitation and Augmentation Project has the potential to cause impacts that are individually or cumulatively considerable. There are no other projects in the vicinity to which this project would make a cumulatively considerable impact. Furthermore, the provision of wastewater collection is generally viewed as a benefit to the community. The issues of Air Quality,

Biology, Cultural Resources, Energy, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation, Tribal Cultural Resources, and Utilities and Service Systems require the implementation of mitigation measures to reduce impacts to a less than significant level and ensure that cumulative effects are not cumulatively considerable. All other environmental issues were found to have no significant impacts without implementation of mitigation. The potential cumulative environmental effects of implementing the proposed project have been determined to be less than considerable and thus, less than significant impacts.

- c. *Less Than Significant With Mitigation Incorporated* – The proposed project includes activities that have a potential to cause direct substantial adverse effects on humans. The issues of Air Quality, Geology and Soils, Hazards and Hazardous Materials, and Noise require the implementation of mitigation measures to reduce human impacts to a less than significant level. All other environmental issues were found to have no significant impacts on humans without implementation of mitigation. The potential for direct human effects from implementing the proposed project have been determined to be less than significant.

Conclusion

This document evaluated all CEQA issues contained in the Initial Study Checklist form. The evaluation determined that either no impact or less than significant impacts would be associated with the issues of Aesthetics, Agricultural and Forestry Resources, Greenhouse Gas Emissions, Land Use and Planning, Mineral Resources, Population/Housing, Public Services, Recreation, and Wildfire. The issues of Air Quality, Biology, Cultural Resources, Energy, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation, Tribal Cultural Resources, and Utilities and Service Systems require the implementation of mitigation measures to reduce impacts to a less than significant level. The required mitigation has been proposed in this Initial Study to reduce impacts for these issues to a less than significant impact.

Based on the findings in this Initial Study, East Orange County Water District (EOCWD) proposes to adopt a Mitigated Negative Declaration (MND) for the East Orange County Water District ID1 Capacity Rehabilitation and Augmentation Project. A Notice of Intent to Adopt a Mitigated Negative Declaration (NOI) will be issued for this project by the District. The Initial Study and NOI will be circulated for 30 days of public comment because this project does involve state agencies as either a responsible or trustee agency. At the end of the 30-day review period, a final MND package will be prepared and it will be reviewed and considered by the District. East Orange County Water District will hold a future hearing for project adoption at their offices, the date for which has not yet been determined. If you or your agency comments on the MND/NOI for this project, you will be notified about the meeting date in accordance with the requirements in Section 21092.5 of CEQA (statute).

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; *Sundstrom v. County of Mendocino*, (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors*, (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

Revised 2019

Authority: Public Resources Code sections 21083 and 21083.09

Reference: Public Resources Code sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3/ 21084.2 and 21084.3

SUMMARY OF MITIGATION MEASURES

Air Quality

AIR-1 Fugitive Dust Control. The following measures shall be incorporated into project plans and specifications for implementation during construction:

- Apply soil stabilizers to inactive areas.
- Prepare a high wind dust control plan and implement plan elements and terminate soil disturbance when winds exceed 25 mph.
- Stabilize previously disturbed areas if subsequent construction is delayed.
- Apply water to disturbed surfaces 3 times/day.
- Replace ground cover in disturbed areas quickly.
- Reduce speeds on unpaved roads to less than 15 mph.
- Trenches shall be left exposed for as short a time as possible.
- Identify proper compaction for backfilled soils in construction specifications.

This measure shall be implemented during construction, and shall be included in the construction contract as a contract specification.

AIR-2 Exhaust Emissions Control. The following measures shall be incorporated into Project plans and specifications for implementation:

- Utilize off-road construction equipment that has met or exceeded the maker's recommendations for vehicle/equipment maintenance schedule.
- Contactors shall utilize Tier 4 or better heavy equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

Biological Resources

BIO-1 The State of California prohibits the "take" of active bird nests. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal should be conducted outside of the State identified nesting season (typically February 1 through September 1). Alternatively, nesting bird surveys shall be conducted by a qualified avian biologist no more than three (3) days prior to vegetation clearing or ground disturbance activities. Preconstruction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified avian biologist will make every effort to avoid potential nest predation as a result of survey and monitoring efforts. If active nests are found during the preconstruction nesting bird surveys, a Nesting Bird Plan (NBP) shall be prepared and implemented by the qualified avian biologist. At a minimum, the NBP shall include guidelines for addressing active nests, establishing buffers, ongoing monitoring, establishment of avoidance and minimization measures, and reporting. The size and location of all buffer zones, if required, shall be based on the nesting species, individual/pair's behavior, nesting stage, nest location, its sensitivity to disturbance, and intensity and duration of the disturbance activity. To avoid impacts to nesting birds, any grubbing or vegetation removal should occur outside peak breeding season (typically February 1 through September 1).

Cultural Resources

CUL-1 Should any cultural resources be encountered during construction of these sewer facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with EOCWD. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.

- CUL-2 If significant cultural resources, as defined by CEQA, are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to District for review and comment. The archaeologist shall monitor the remainder of that segment of the project and implement the Plan accordingly.
- CUL-3 If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.

Geology and Soils

- GEO-1 Stored backfill material shall be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of stored backfill material. Where covering is not possible, measures such as the use of straw bales or sand bags shall be used to capture and hold eroded material on the Project site for future cleanup such that erosion does not occur.
- GEO-2 Excavated areas shall be backfilled and compacted such that erosion does not occur. Paved areas disturbed by this project shall be repaved in such a manner that roadways and other disturbed areas are returned to the pre-project conditions or better.
- GEO-3 All exposed, disturbed soil (trenches, stored backfill, etc.) will be sprayed with water or soil binders twice a day or more frequently if fugitive dust is observed migrating from the site within which the pipelines are being installed.
- GEO-4 The length of trench which can be left open at any given time will be limited to that needed to reasonably perform construction activities. This will serve to reduce the amount of backfill stored onsite at any given time.
- GEO-5 Should any paleontological resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection should be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with the EOCWD. The paleontological professional shall assess the find, determine its significance, and determine appropriate mitigation measures within the guidelines of the California Environmental Quality Act that shall be implemented to minimize any impacts to a paleontological resource.

Hazards and Hazardous Materials

- HAZ-1 All accidental spills or discharge of hazardous material during construction activities shall be reported to the Certified Unified Program Agency and shall be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately a licensed disposal or treatment facility. This measure shall be incorporated into the SWPPP prepared for the proposed project. Prior to accepting the site as remediated, the area contaminated shall be tested to verify that any residual concentrations meet the standard for future residential or public use of the site.
- HAZ-2 If subsurface hazardous materials, including but not limited to buried trash and debris, UXO, and contaminated media, including soil, soil gas, and/or groundwater are encountered during sewer installation activities, EOCWD shall perform further environmental assessment and, if necessary, perform remediation recommended by a qualified professional. The recommendations of the professional to address the accidental discovery shall be implemented and documented to remove the hazard.

Hydrology and Water Quality

- HYD-1 EOCWD shall require that the construction contractor prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. The SWPPP shall include a Spill Prevention and Cleanup Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented in the SWPPP may include but not be limited to:
- The use of silt fences;
 - The use of temporary stormwater desilting or retention basins;
 - The use of water bars to reduce the velocity of stormwater runoff;
 - The use of wheel washers on construction equipment leaving the site;
 - The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;
 - The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and
 - Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.

Noise

- NOI-1 All construction vehicles and fixed or mobile equipment shall be equipped with operating and maintained mufflers.
- NOI-2 All employees that will be exposed to noise levels greater than 75 dB over an 8-hour period shall be provided adequate hearing protection devices to ensure no hearing damage will result from construction activities.
- NOI-3 Within the City of Tustin (at Fallen Leaf Pl/Royal Oak Rd., Browning Avenue, 6th Street, and Clarissa Lane), no construction activities shall occur during the hours of 6 PM through 7 AM, Monday through Friday, or 5 PM through 9 AM on Saturdays and at no time shall construction activities within the City of Tustin occur on Sundays or holidays, unless a declared emergency exists. Within Orange County (Crawford Canyon Rd), no construction activities shall occur during the hours of 8 PM and 7 AM Monday through Saturday and at no time shall construction activities within Orange County occur on Sundays or holidays, unless a declared emergency exists.
- NOI-4 Equipment not in use for five minutes shall be shut off.
- NOI-5 Equipment shall be maintained and operated such that loads are secured from rattling or banging.
- NOI-6 Construction employees shall be trained in the proper operation and use of equipment consistent with these mitigation measures, including no unnecessary revving of equipment.
- NOI-7 EOCWD will require that all construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by EOCWD.
- NOI-8 Construction staging areas shall be located as far from adjacent sensitive receptor locations as possible, for example north or west of the existing reservoir.
- NOI-9 EOCWD shall require the construction contractor(s) to implement the following measures:

- Ensure that the operation of construction equipment that generates high levels of vibration including, but not limited to, large bulldozers, loaded trucks, pile-drivers, vibratory compactors, and drilling rigs, is minimized to below 72 vibration decibels (VdB), within 45 feet of existing residential structures and 35 feet of institutional structures (e.g., schools) during construction. Use of small rubber-tired bulldozers shall be enforced within these areas during grading operations to reduce vibration effects.
- The construction contractor shall provide signs along the roadway identifying a phone number for adjacent property owners to contact with any complaint. During future construction activities with heavy equipment within 300 feet of occupied residences, vibration field tests shall be conducted at the property line near the nearest occupied residences. If vibrations exceed 72 VdB, the construction activities shall be revised to reduce vibration below this threshold. These measures may include, but are not limited to the following: use different construction methods, slow down construction activity, or other mitigating measures to reduce vibration at the property from where the complaint was received.

Transportation

- TRAN-1 EOCWD shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:
- Develop circulation and detour plans, if necessary, to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.
 - To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.
 - Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.
 - For roadways requiring lane closures that would result in a single open lane, maintain alternate one-way traffic flow and utilize flagger-controls.
 - Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.
- TRAN-2 EOCWD shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable County of Orange or City of Tustin standard design requirements.

Utilities and Service Systems

- UTIL-1 The contract with demolition and construction contractors shall include the requirement that all materials that can be recycled shall be salvaged and recycled. This includes, but is not limited to, wood, metals, concrete, road base, and asphalt. The contractor shall submit a recycling plan to EOCWD for review and approval prior to the start of demolition/construction activities to accomplish this objective.

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FIGURES

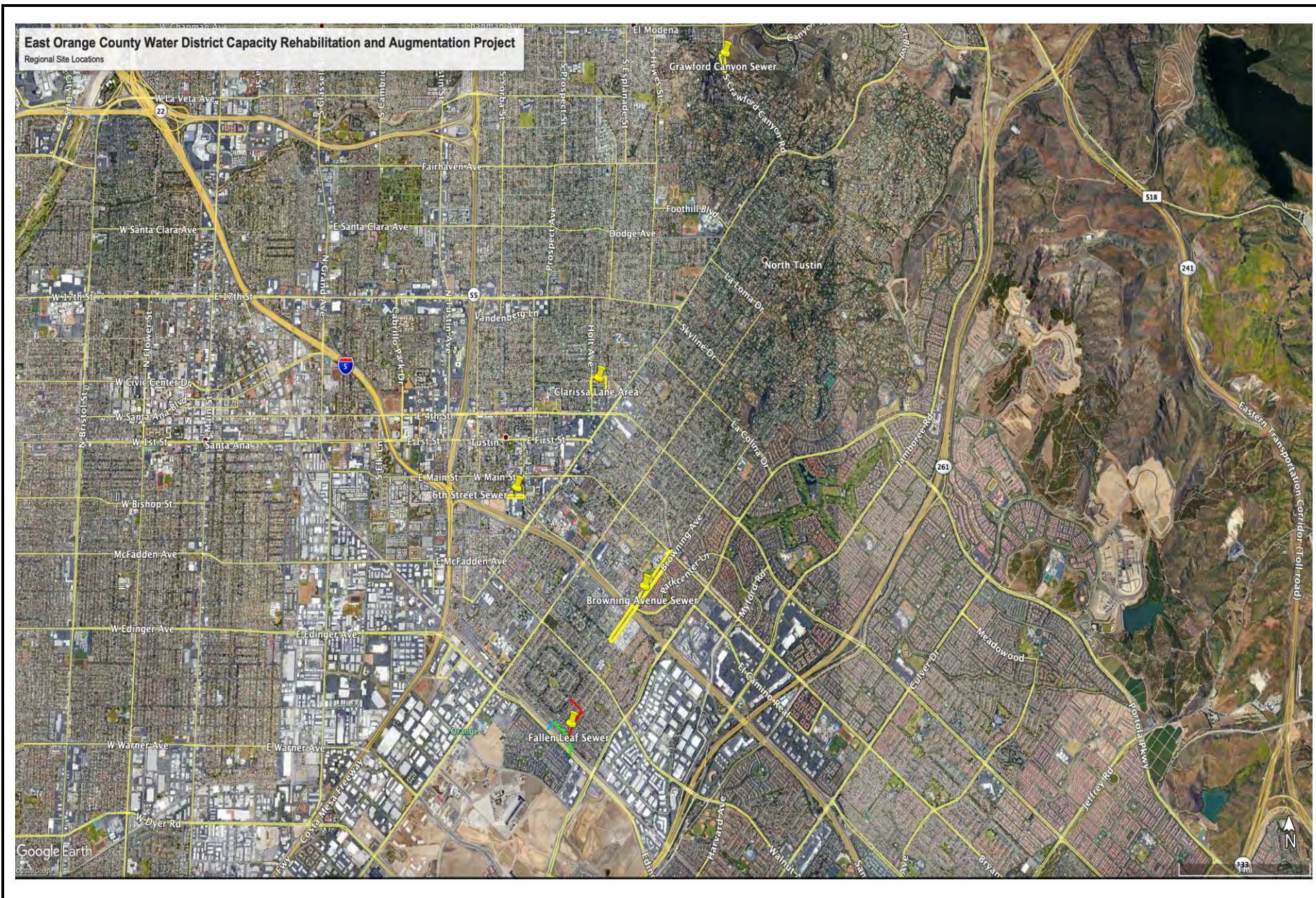


FIGURE 1

Tom Dodson & Associates
Environmental Consultants

**Aerial Depictions of the Regional Locations of the
Proposed Sewer Improvements**

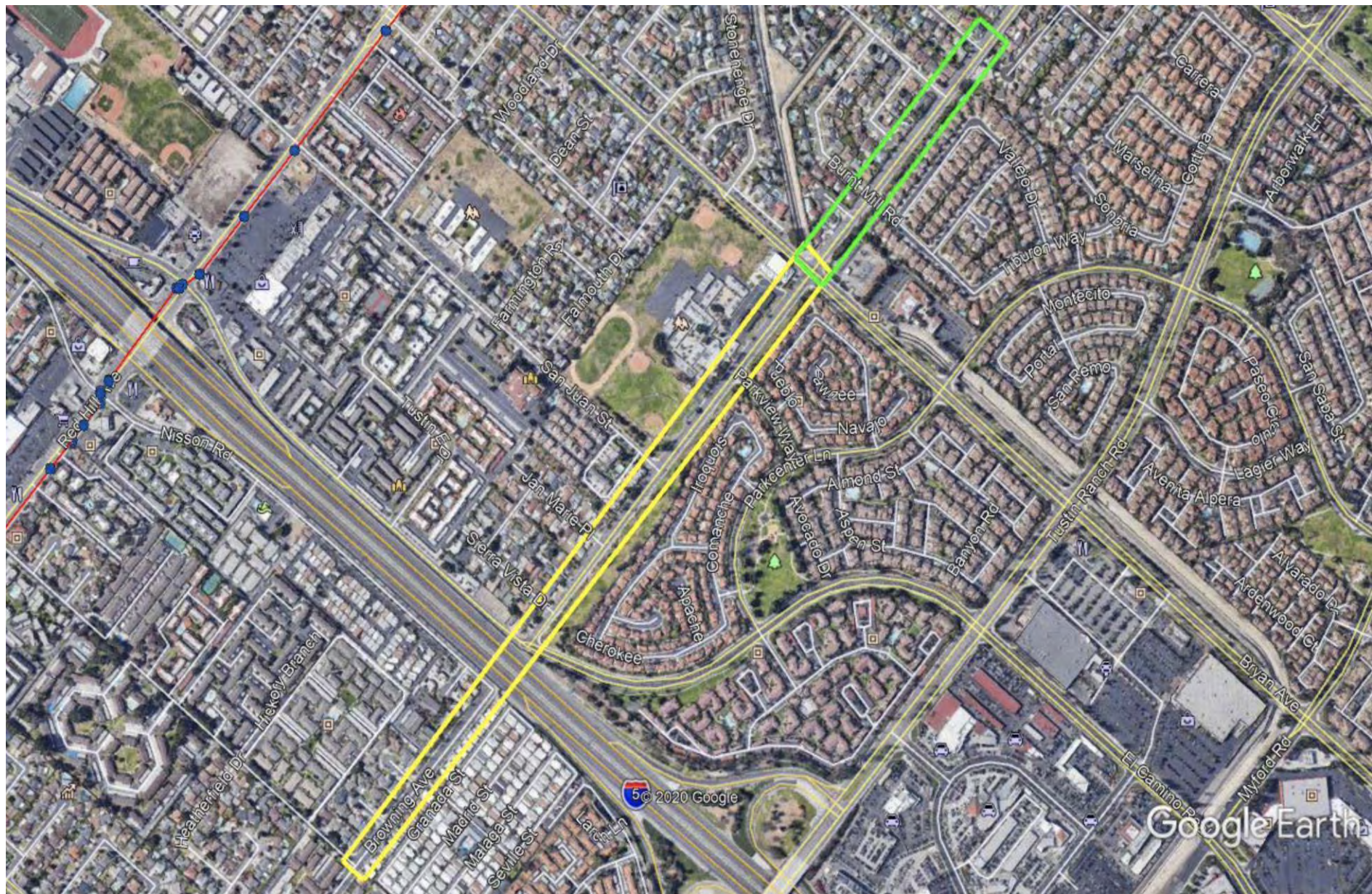


FIGURE 2



FIGURE 3

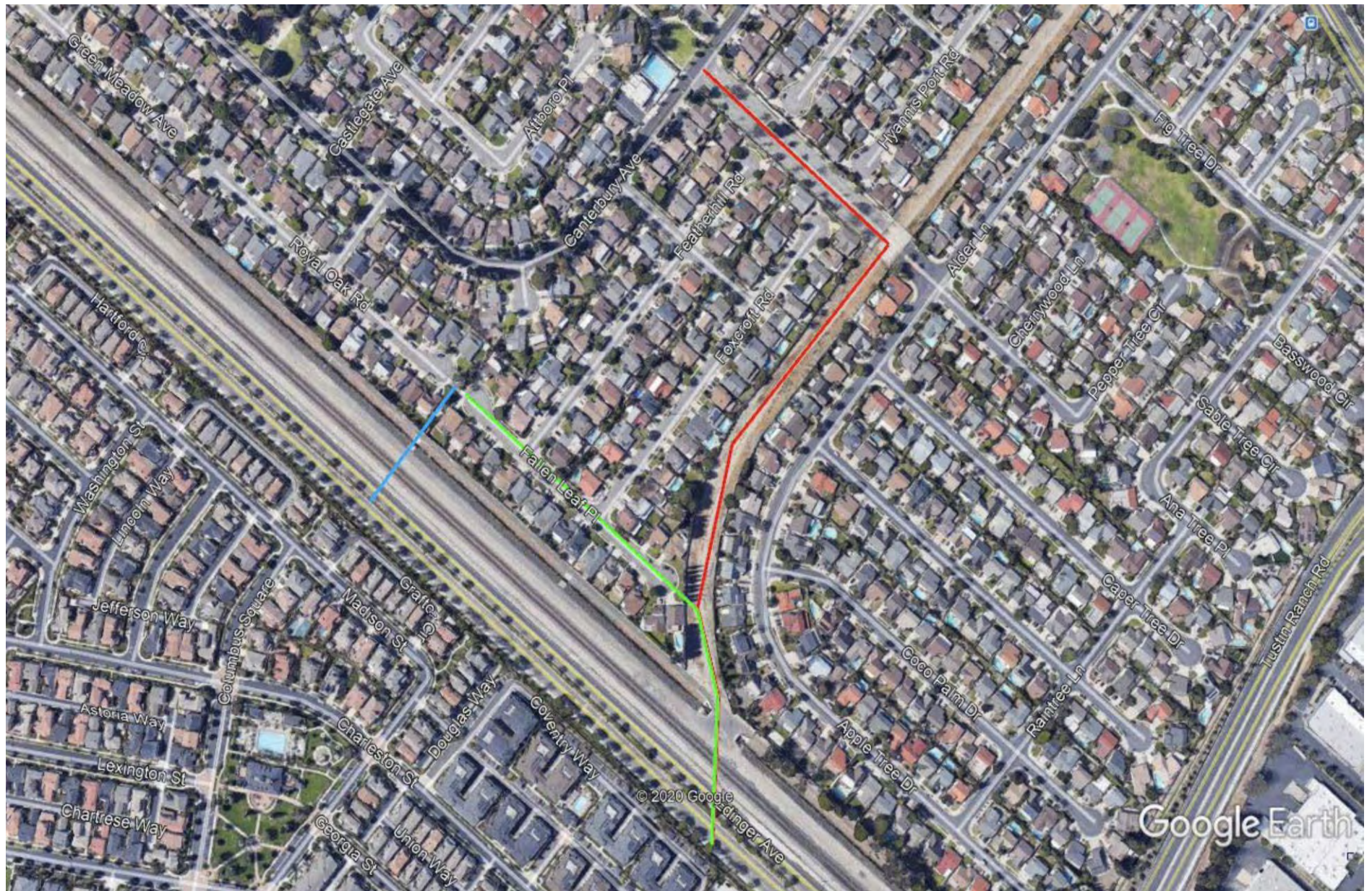


FIGURE 4

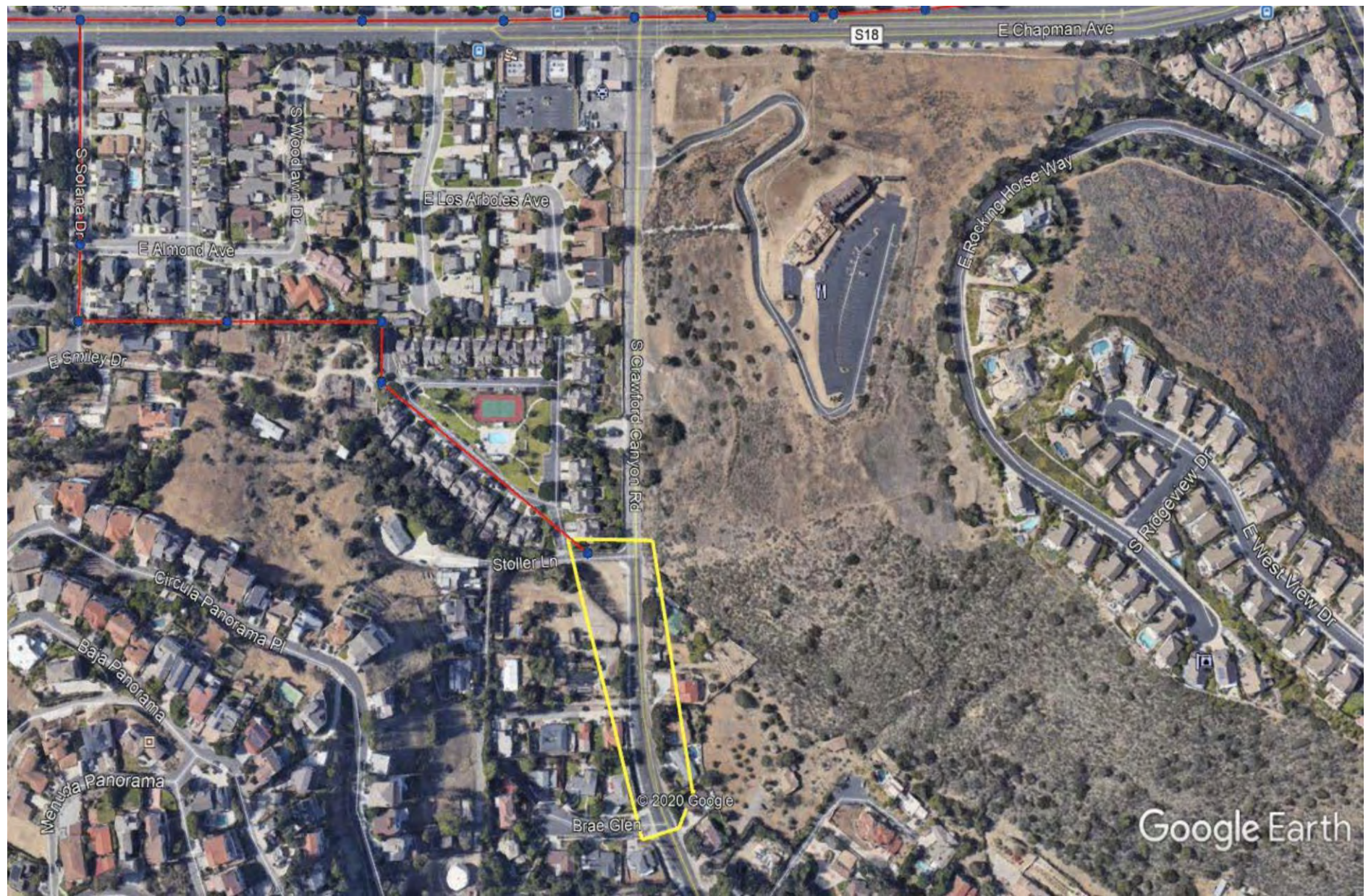


FIGURE 5

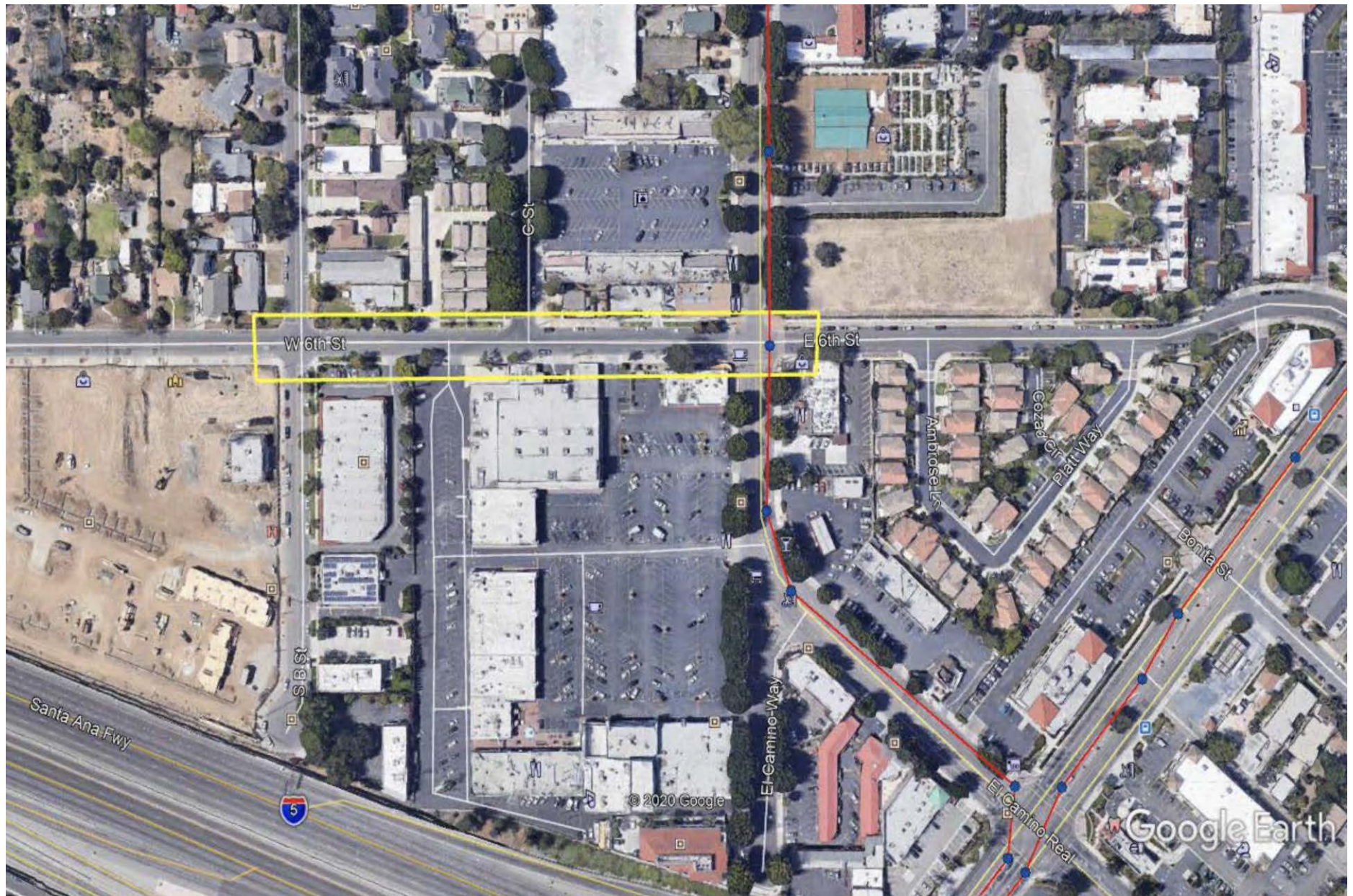
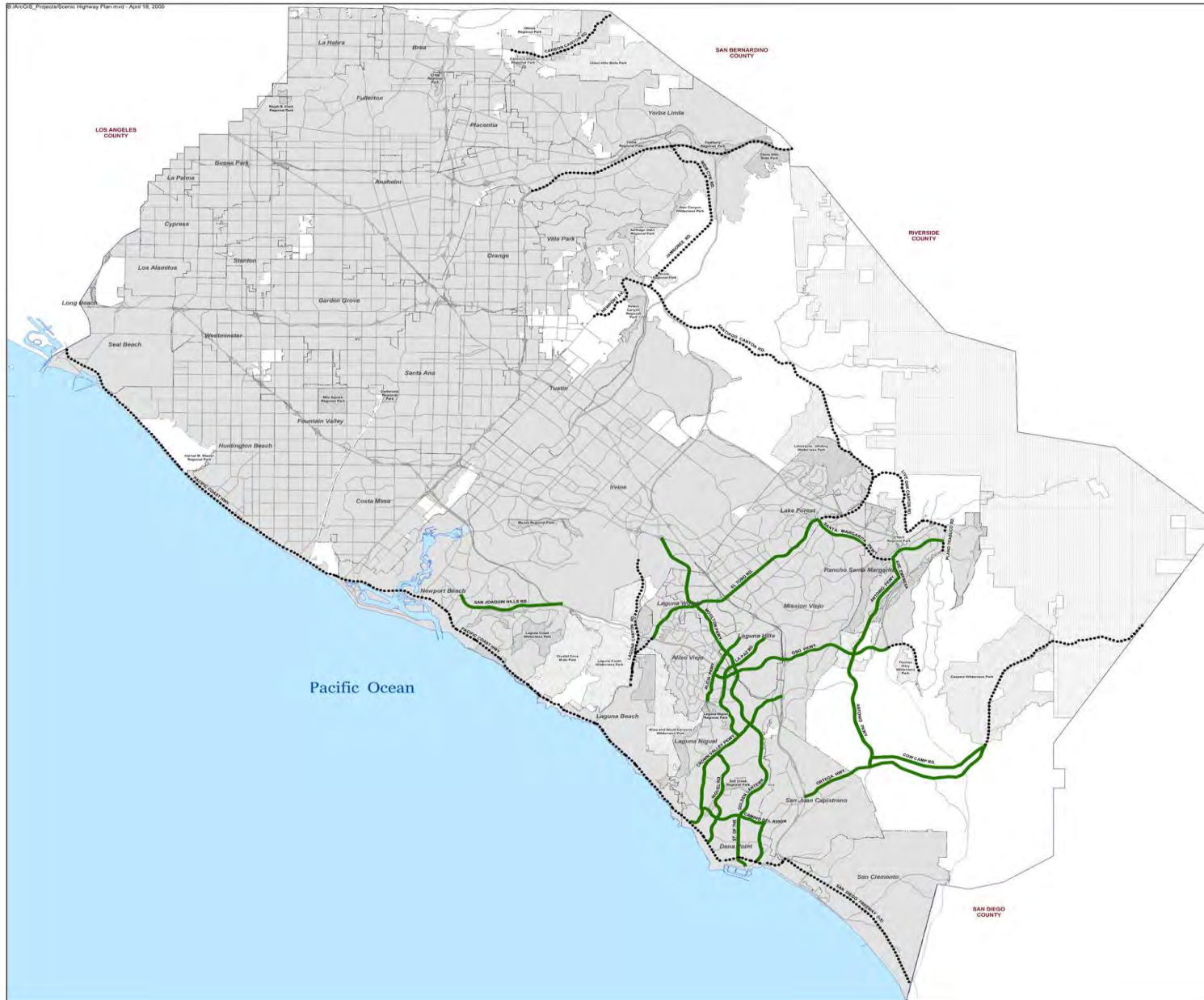


FIGURE 6



Scenic Highway Plan

Orange County, California

- Landscape Corridor
- - - - - Viewshed Corridor
- Existing Parkland
- Cleveland National Forest



Timothy S. Neely, Director
Planning & Development Services
Resources & Development Management Department
Adopted by the Board of Supervisors, November 6, 2007
Repealed by Resolution 2009-01, April 2009

FIGURE I-1

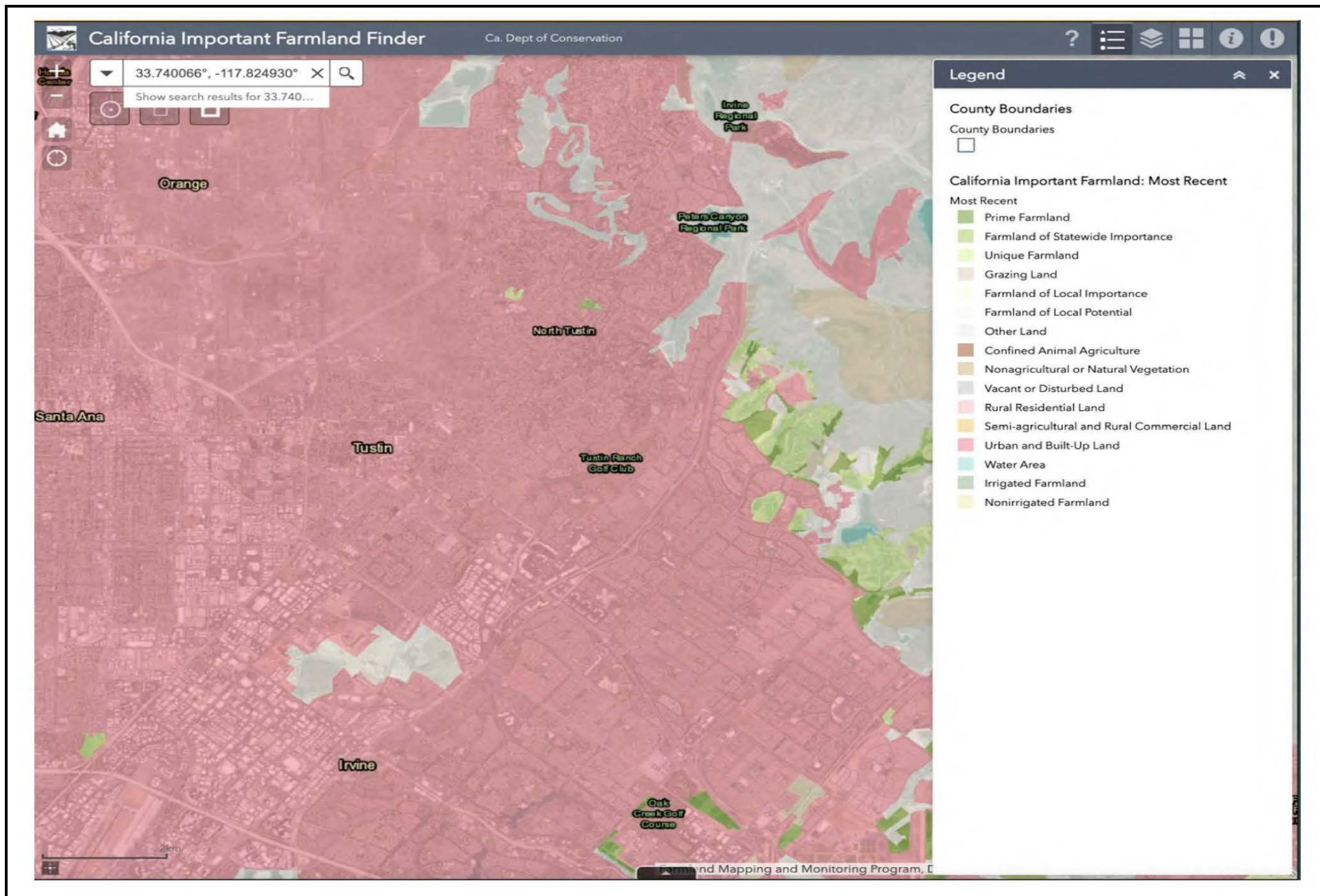


FIGURE II-1

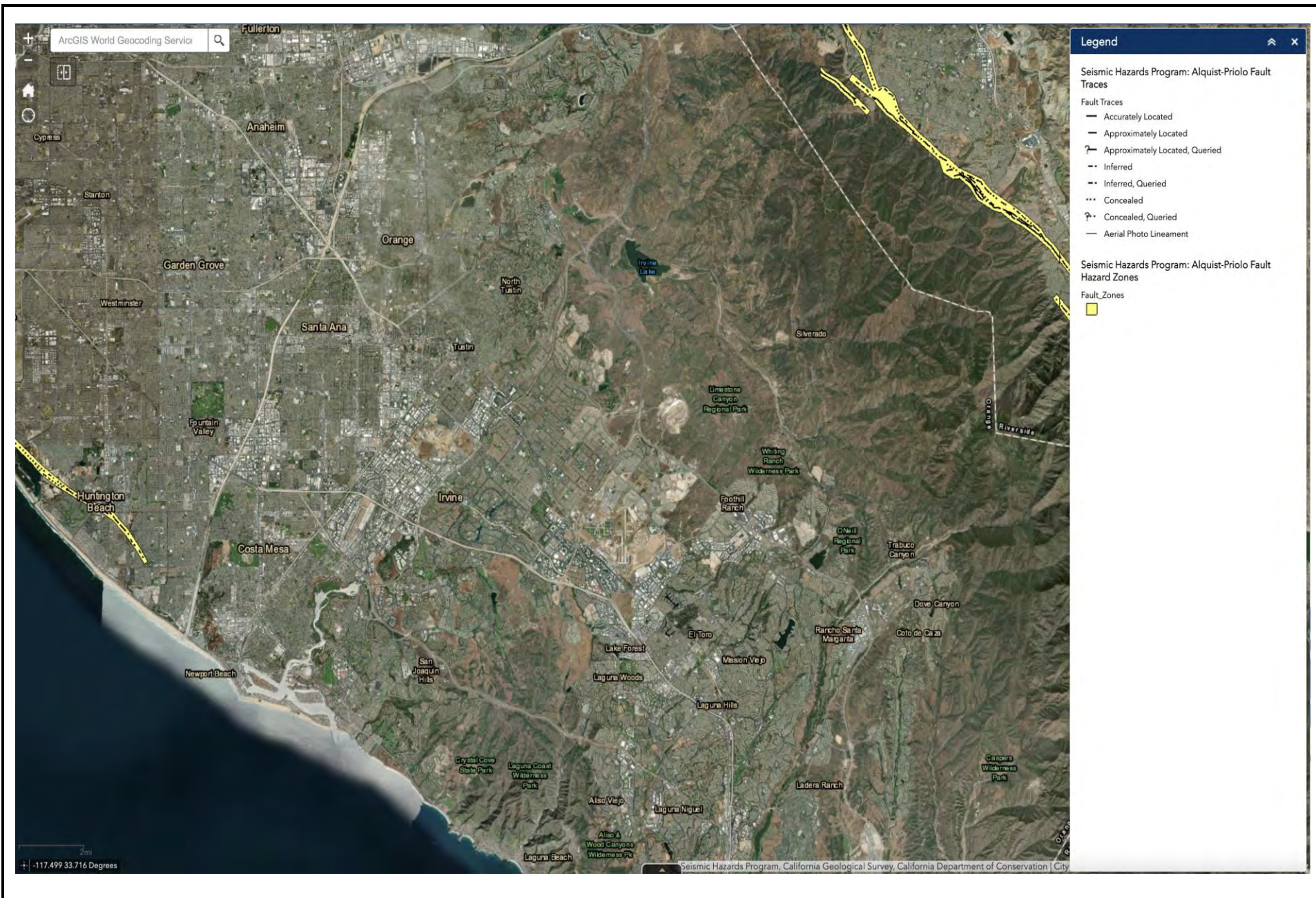


FIGURE VII-1

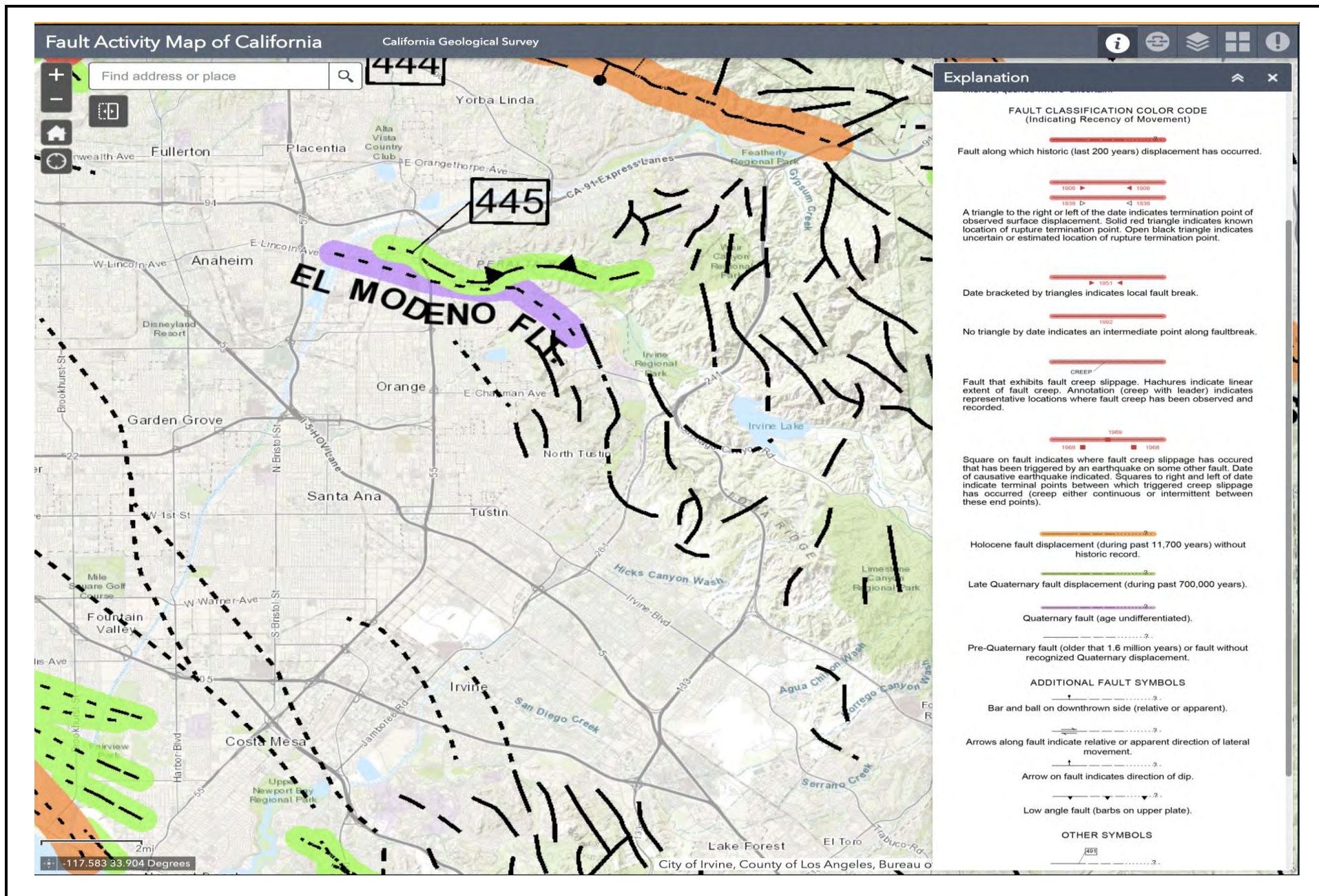


FIGURE VII-2

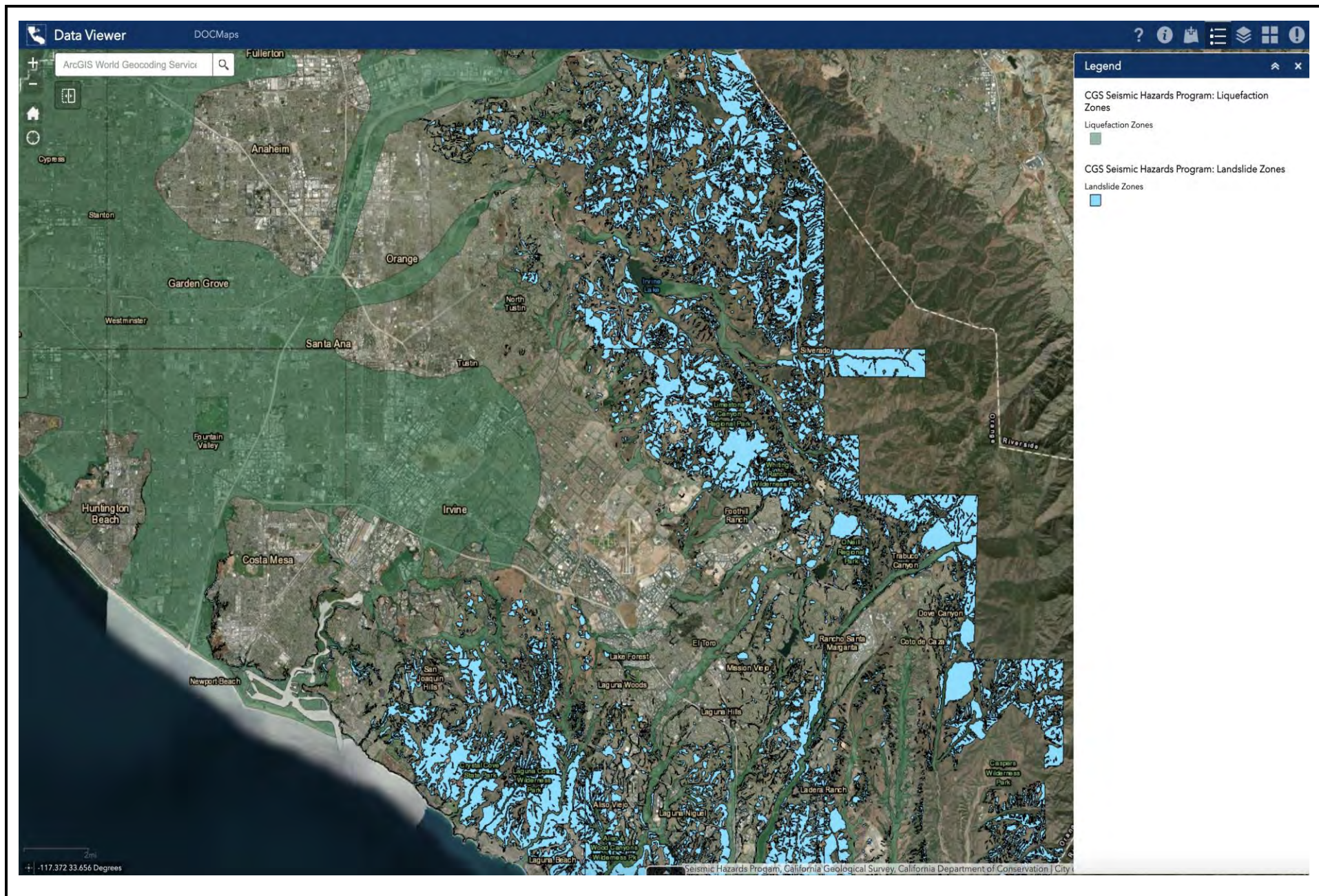
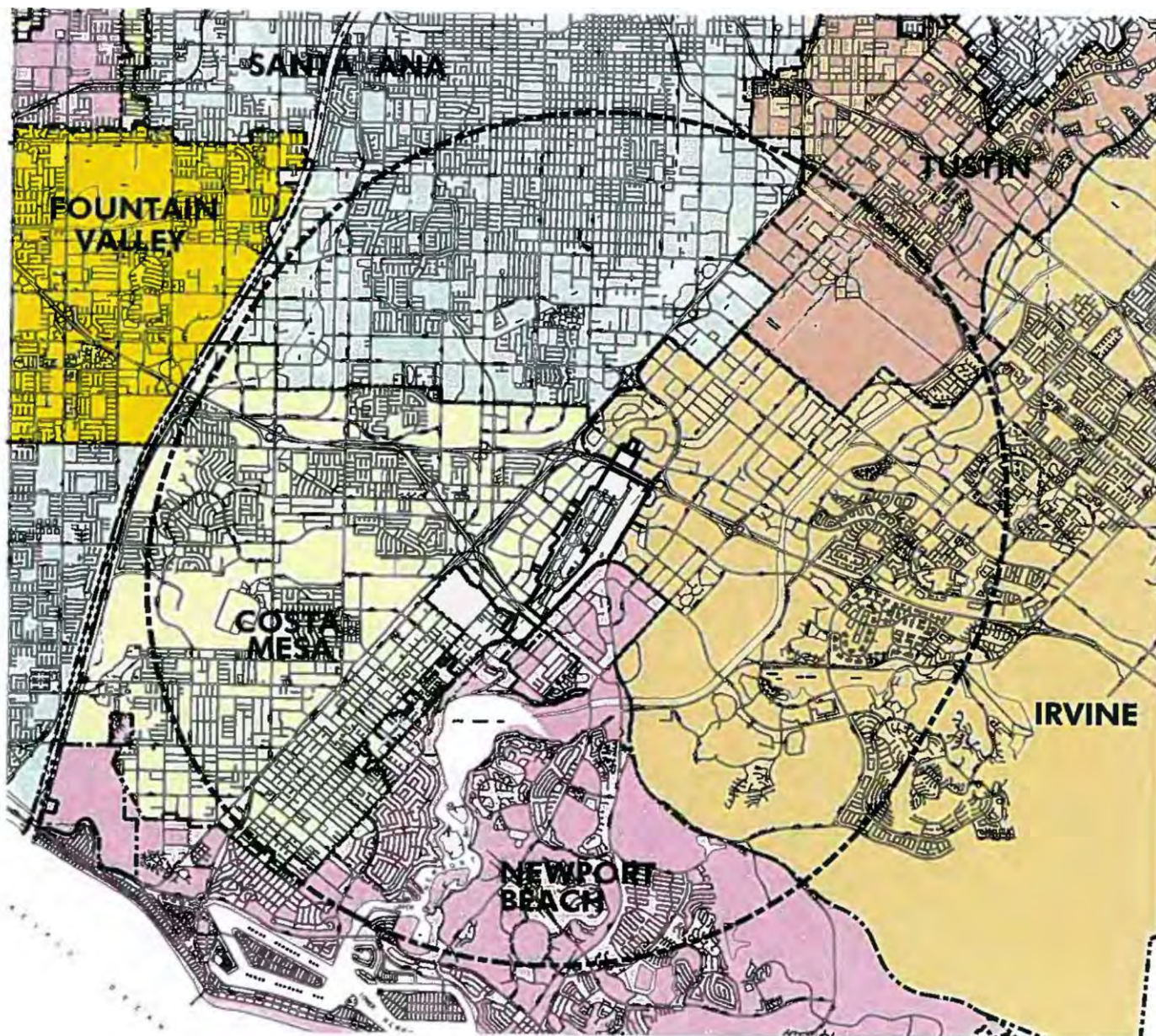


FIGURE VII-3



Note: County Unincorporated areas are shown in white.

FAR PART 77

Notification Area for John Wayne Airport: 20,000' Radius at 100:1 Slope

LEGEND

- 20,000' Radius
- CITY BOUNDARIES
- AIRPORT BOUNDARIES



Scale in Feet
0 1000 2000 3000 4000 5000 7500

CERTIFICATION

Adopted by the Airport Land Use Commission for Orange County

Kari A. Rigoni April 17, 2008
Kari A. Rigoni, Executive Officer Date

FIGURE IX-1



Note: County Unincorporated areas are shown in white.

FAR PART 77

John Wayne Airport Obstruction Imaginary Surfaces



LEGEND

- CITY BOUNDARIES
- AIRPORT BOUNDARIES

CERTIFICATION

Adopted by the Airport Land Use Commission for Orange County

Kari A. Rigoni April 17, 2008
 Kari A. Rigoni, Executive Officer Date

FIGURE IX-2

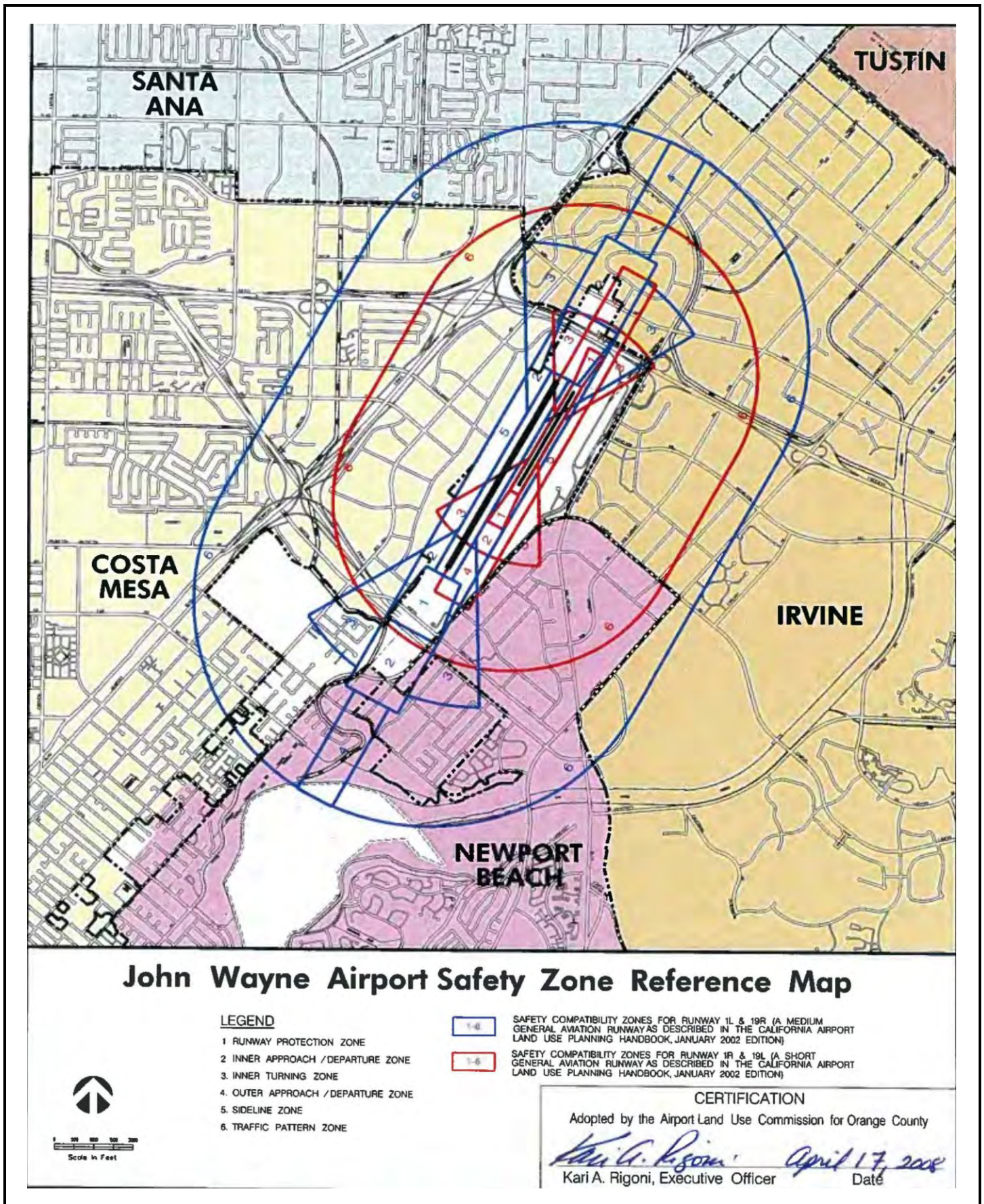


FIGURE IX-3

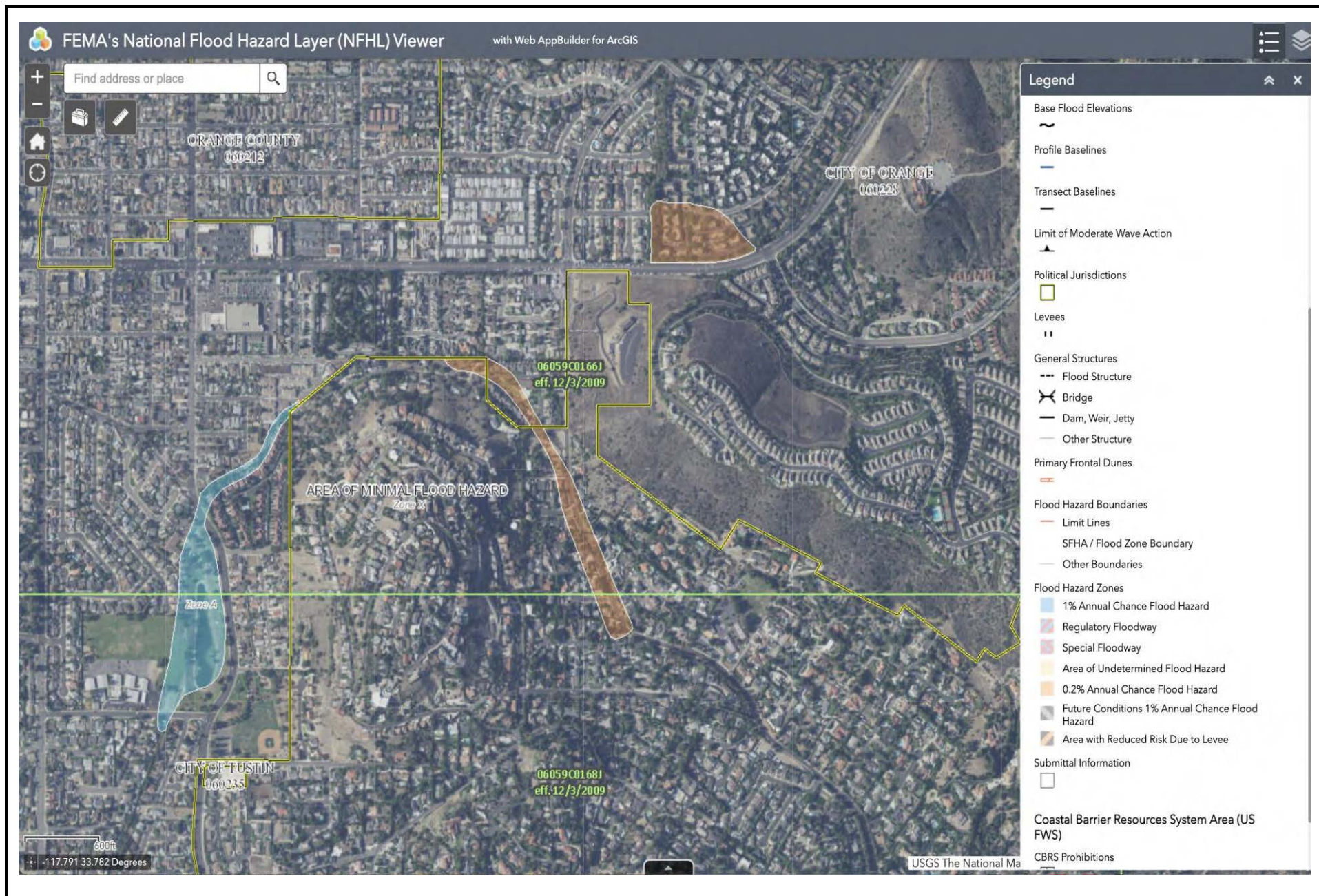


FIGURE X-1

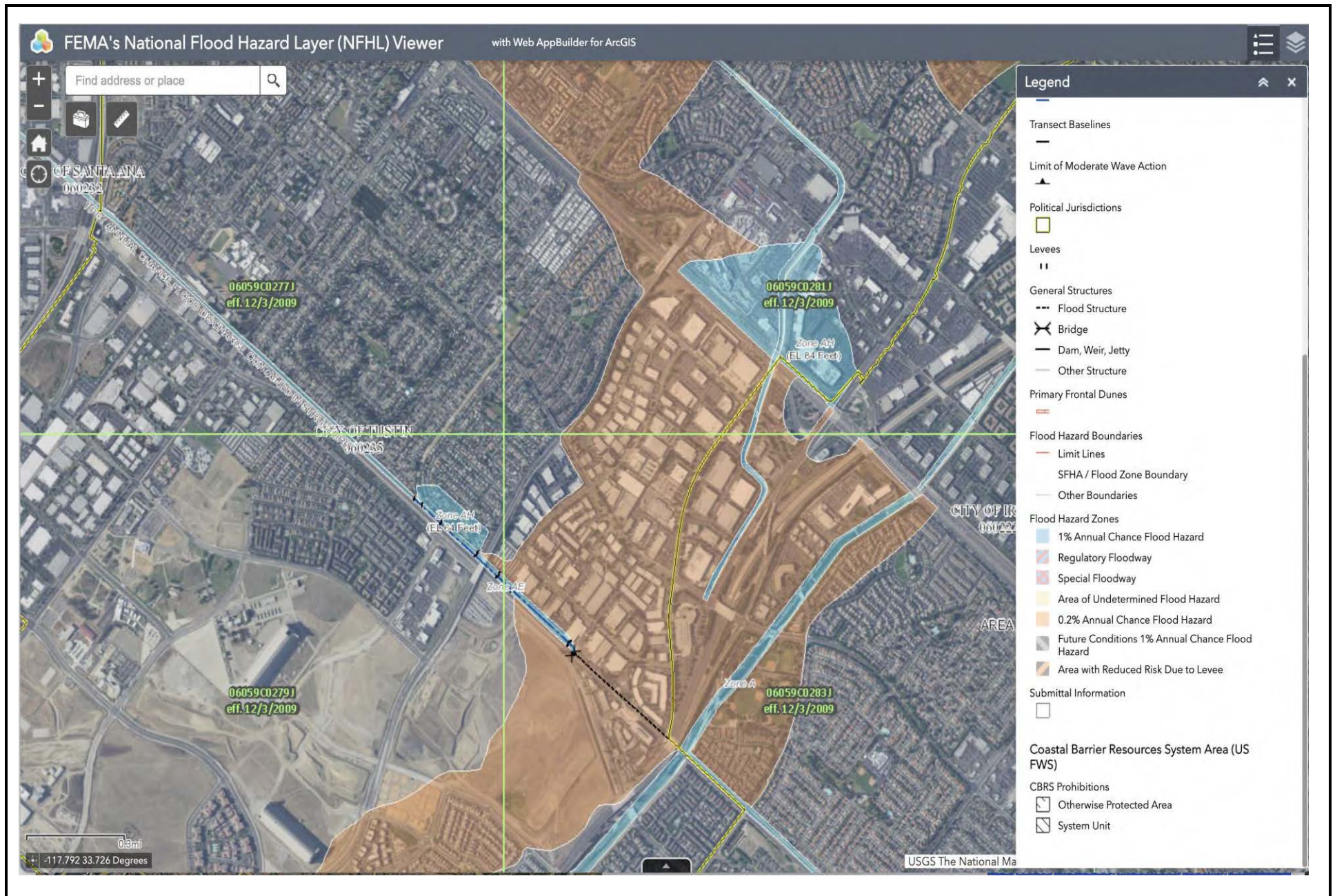


FIGURE X-2

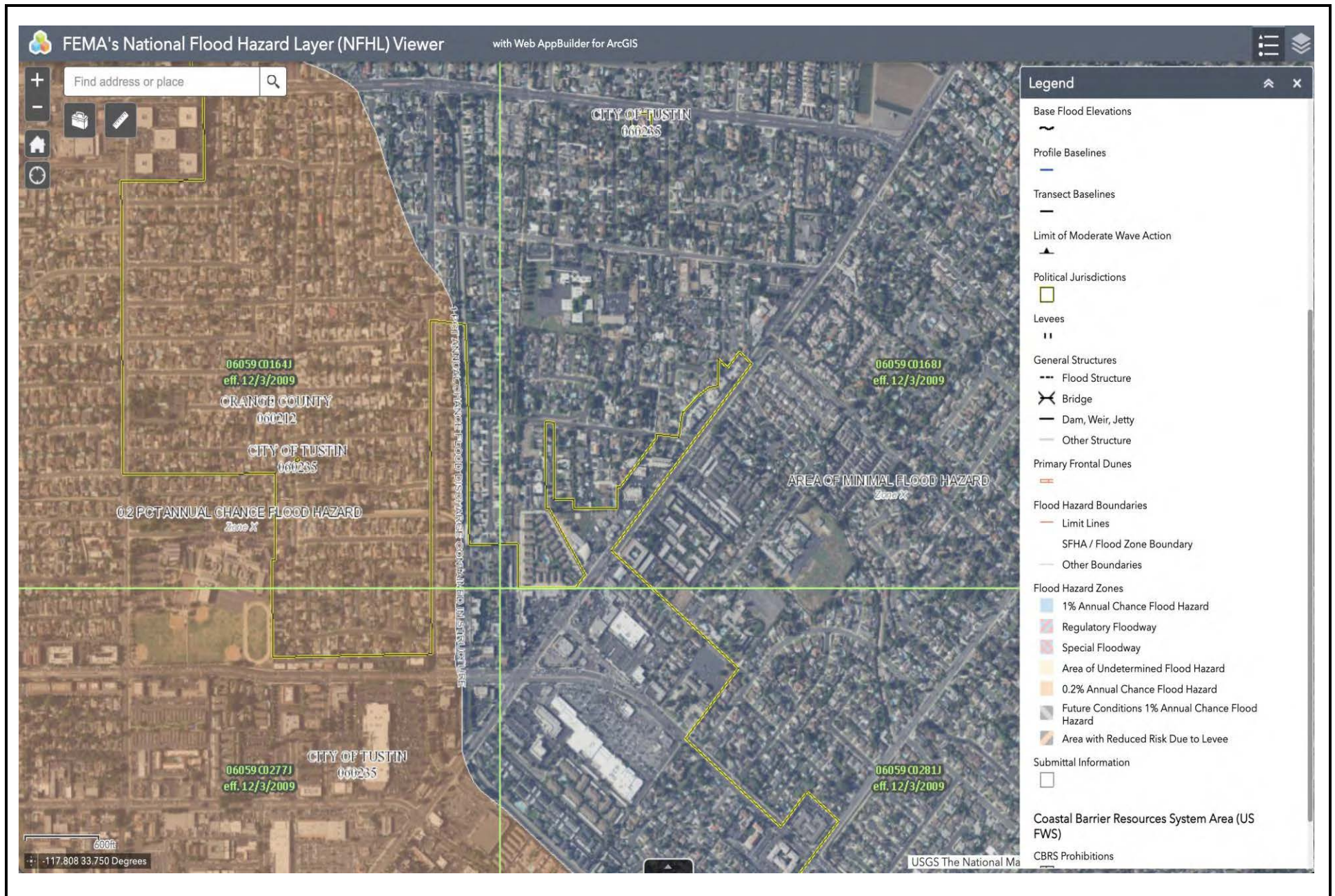


FIGURE X-3

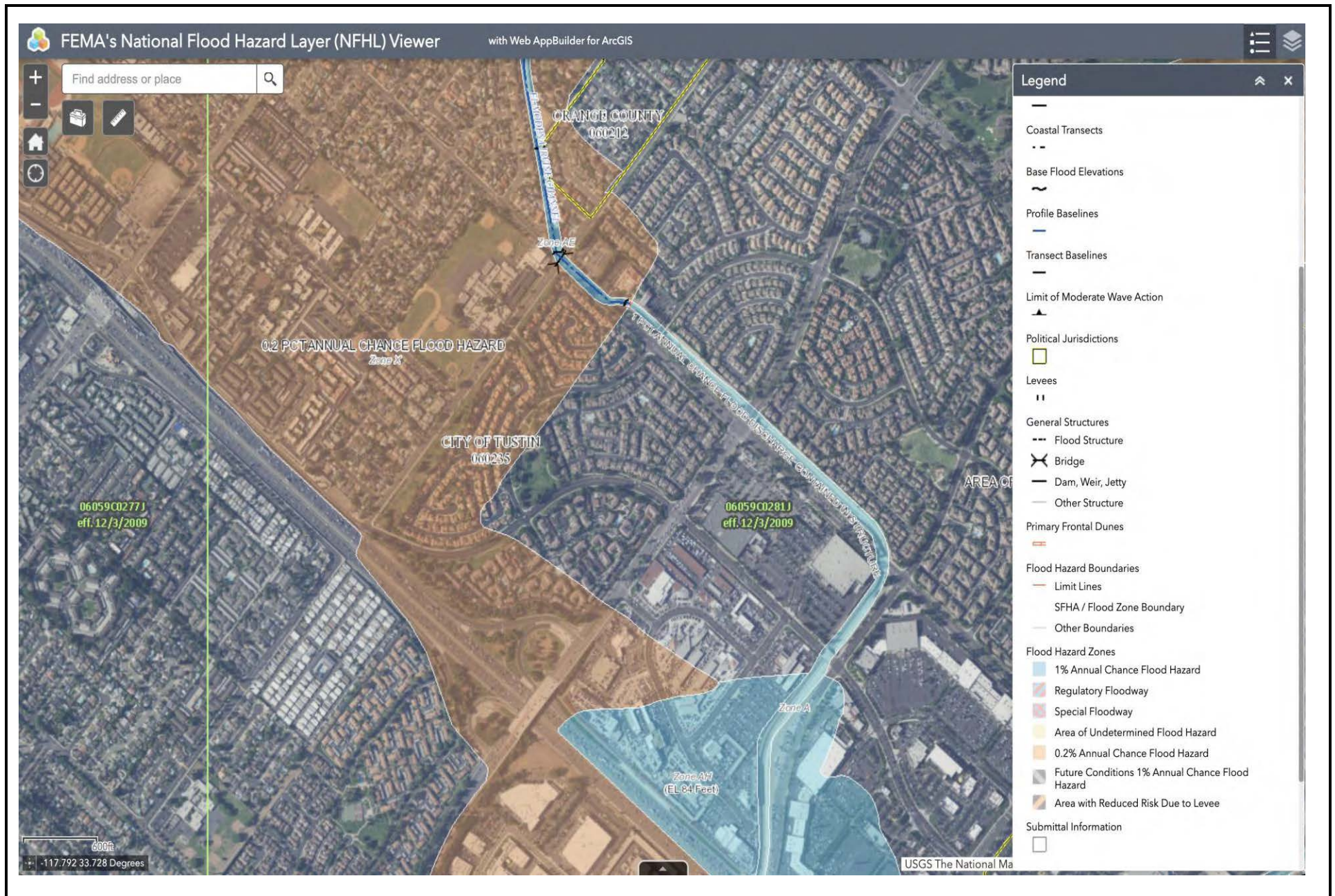


FIGURE X-4

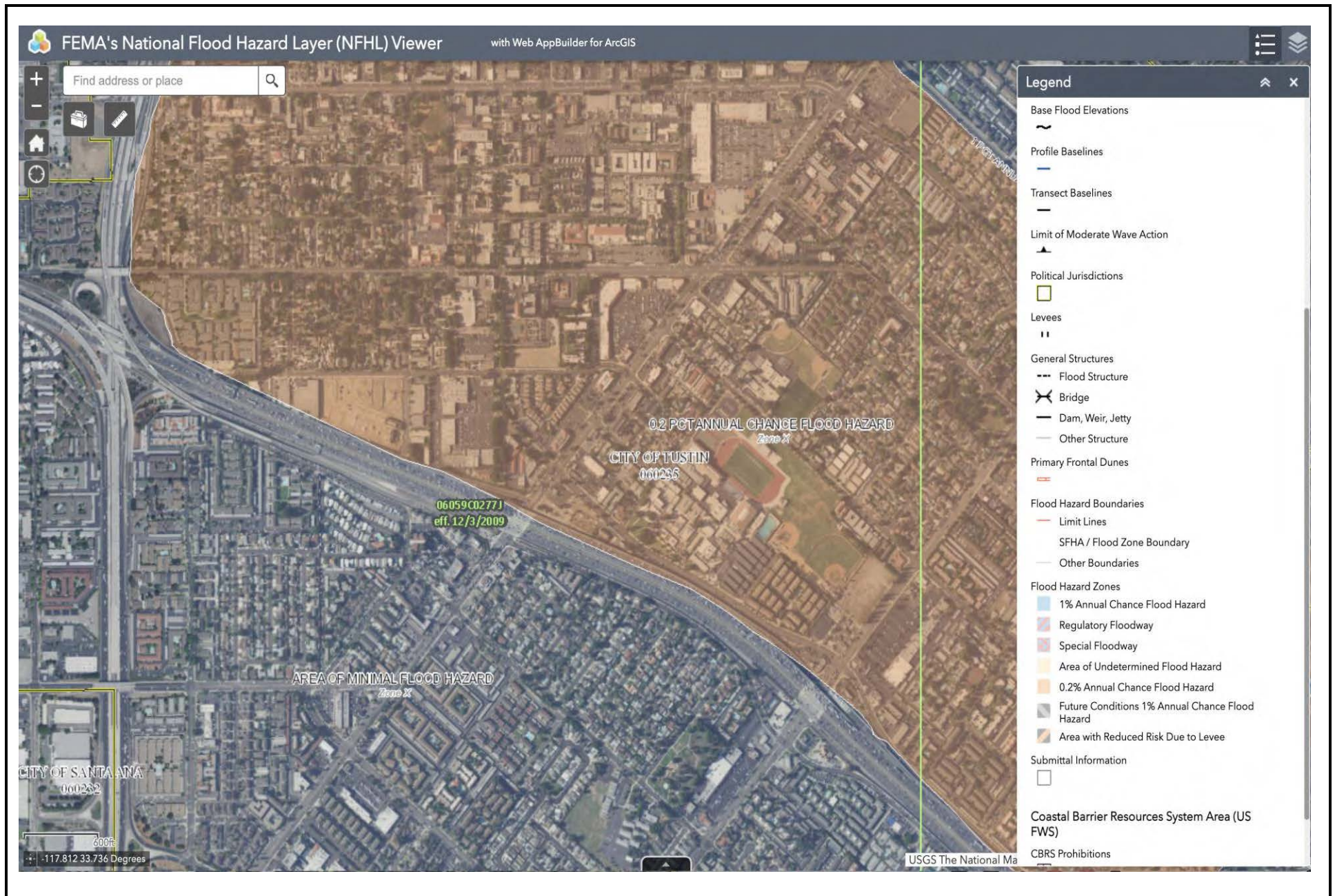


FIGURE X-5

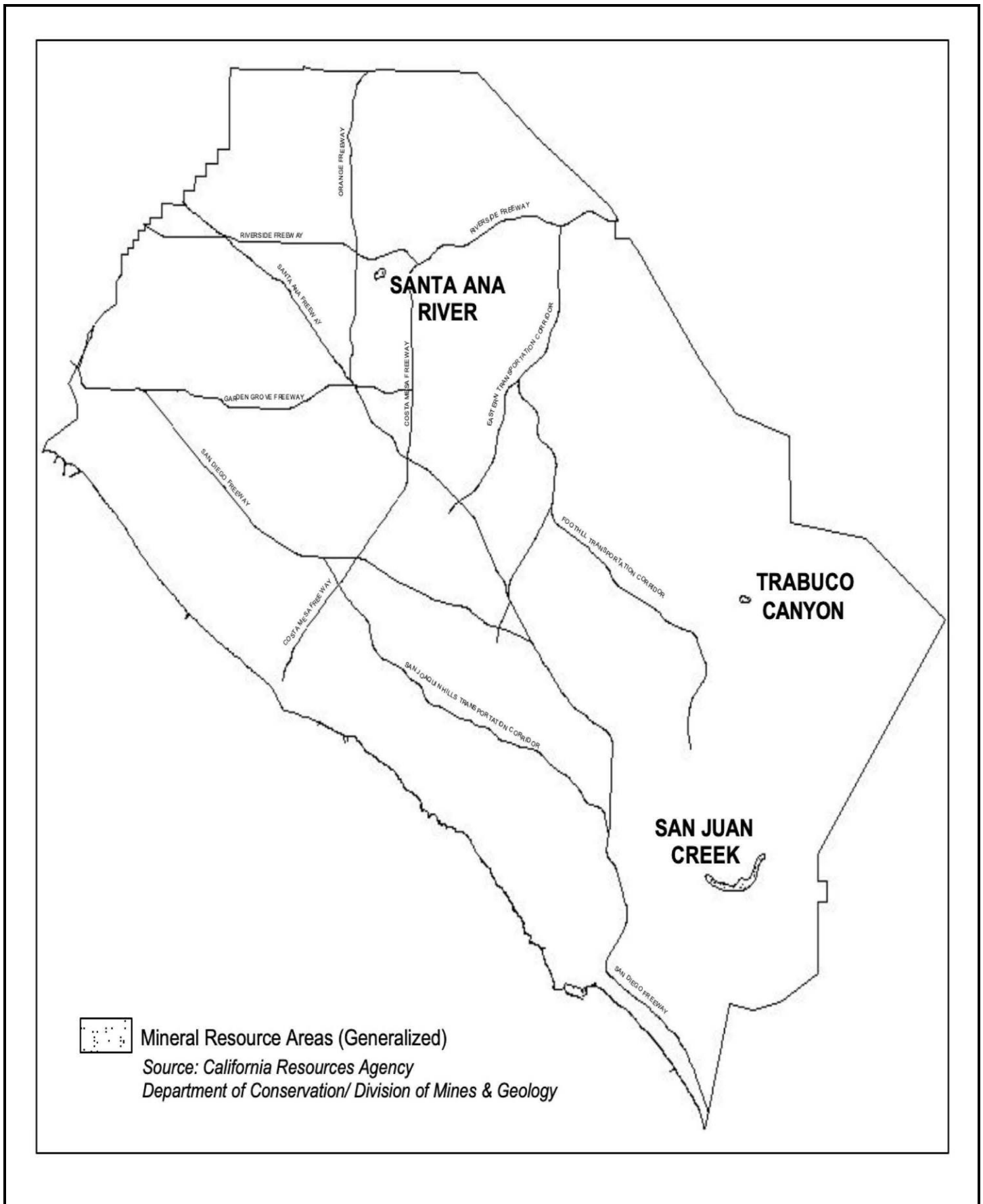


FIGURE XII-1

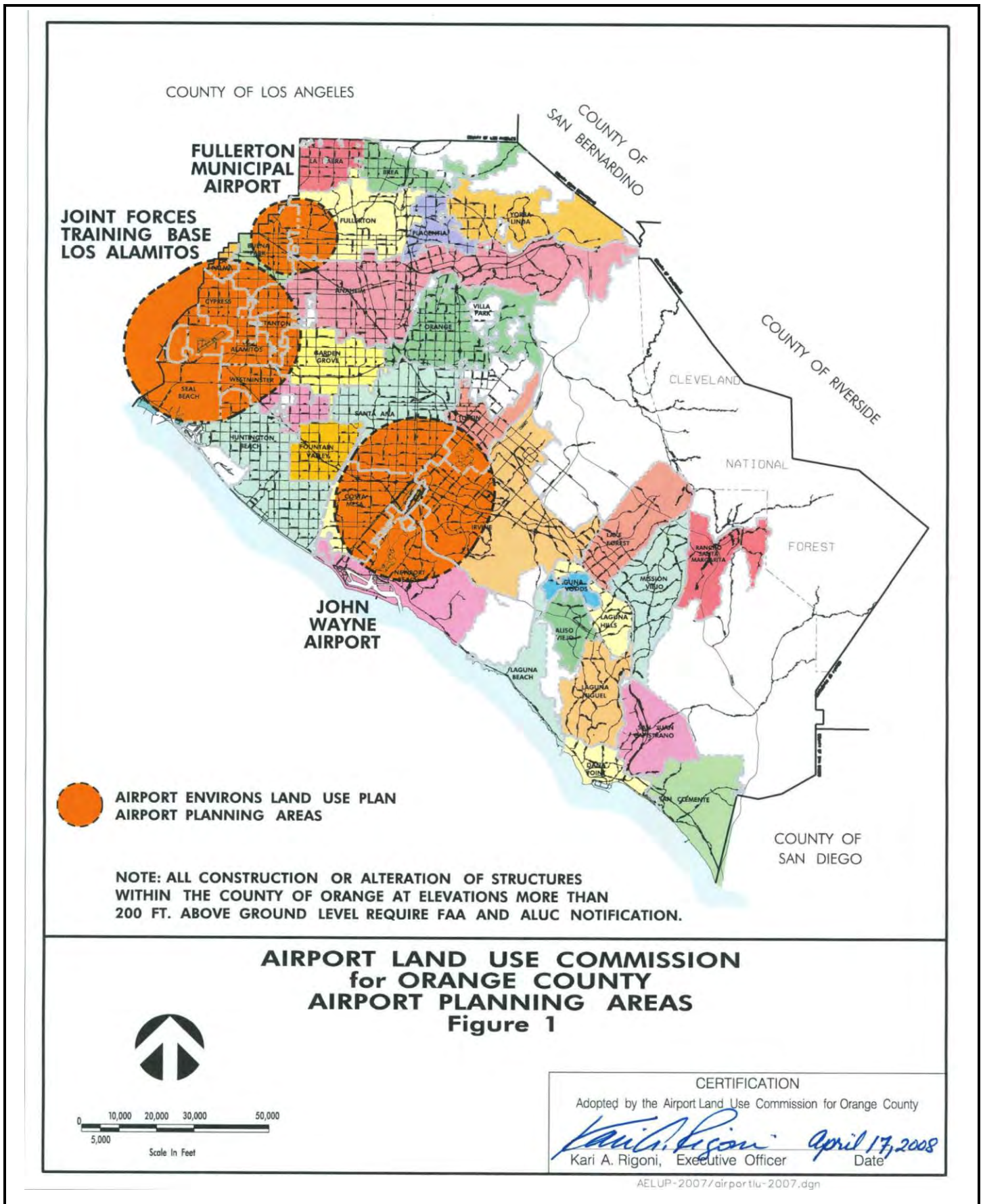
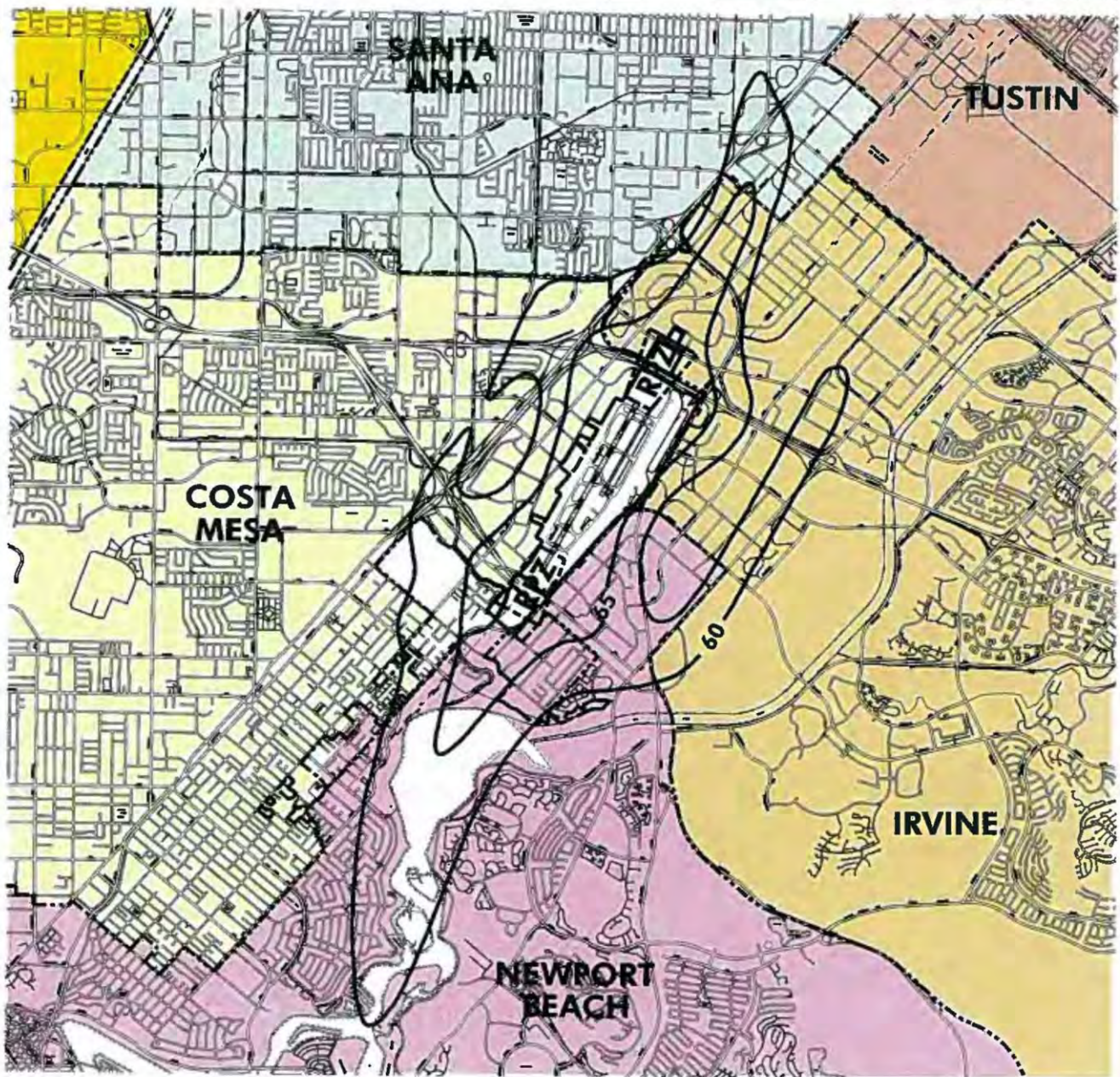


FIGURE XIII-1



Note: County Unincorporated areas are shown in white.

John Wayne Airport Impact Zones

LEGEND

- 60 — CNEL CONTOUR
- RUNWAY PROTECTION ZONE
- CITY BOUNDARIES
- AIRPORT BOUNDARIES



Composite contour from
John Wayne Airport Project
Case-1990 and 2005
(see section 2.2.1)

CERTIFICATION

Adopted by the Airport Land Use Commission for Orange County

Kari A. Rigoni
Kari A. Rigoni, Executive Officer

April 17, 2008
Date

FIGURE XIII-2

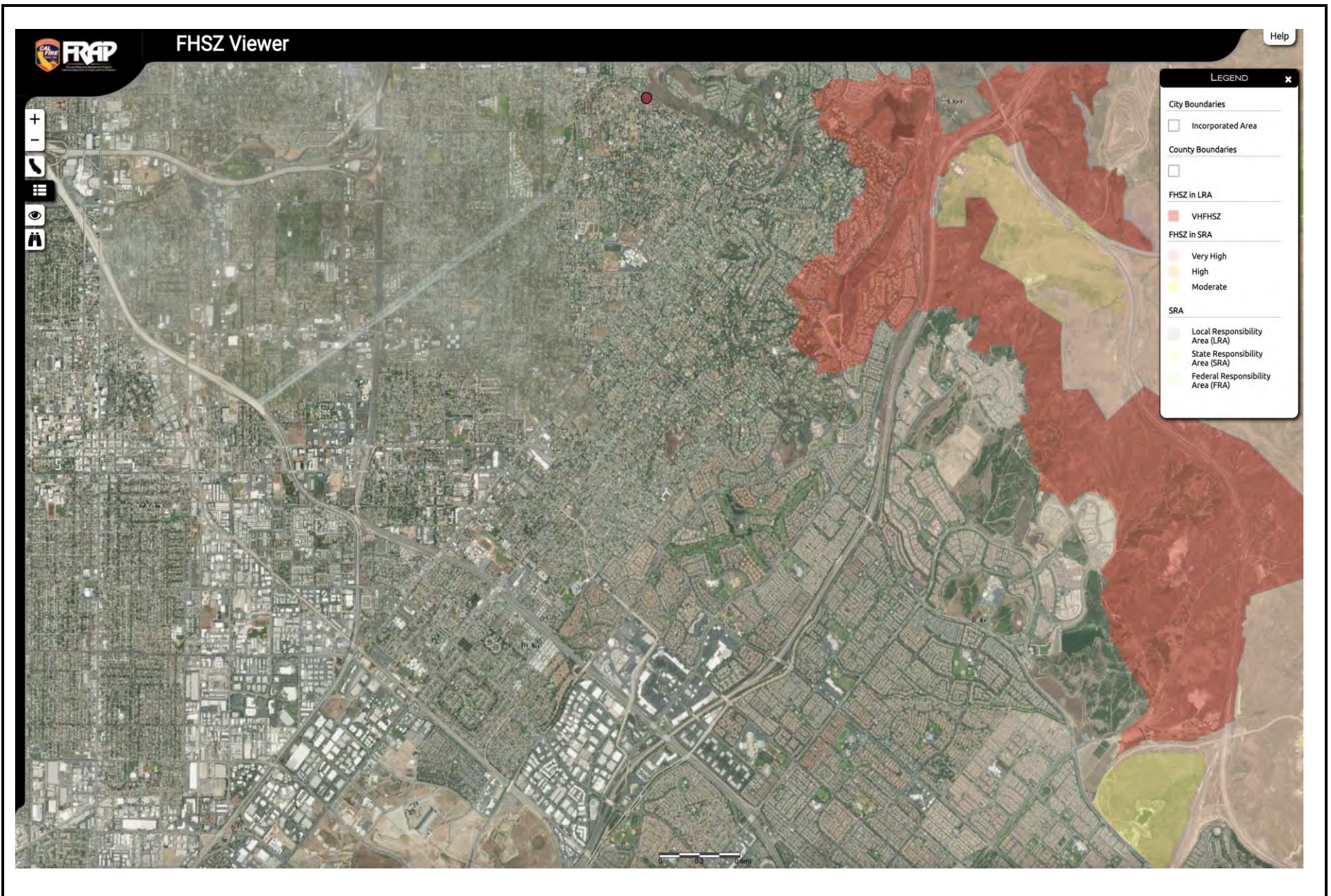


FIGURE XX-1