

AGENDA MESA WATER DISTRICT BOARD OF DIRECTORS

Dedicated to
Satisfying our Community's
Water Needs

Thursday, April 11, 2019 1965 Placentia Avenue, Costa Mesa, CA 92627 6:00 p.m. Regular Board Meeting

CALL TO ORDER

PLEDGE OF ALLEGIANCE

PUBLIC COMMENTS

<u>Items Not on the Agenda</u>: Members of the public are invited to address the Board regarding items which are not on the agenda. Each speaker is limited to three minutes. The Board will set aside 30 minutes for public comments.

<u>Items on the Agenda</u>: Members of the public may comment on agenda items before action is taken, or after the Board has discussed the item. Each speaker is limited to three minutes. The Board will set aside 60 minutes for public comments.

ITEMS TO BE ADDED, REMOVED, OR REORDERED ON THE AGENDA

At the discretion of the Board, all items appearing on this agenda, whether or not expressly listed as an Action Item, may be deliberated and may be subject to action by the Board.

CONSENT CALENDAR ITEMS:

Approve all matters under the Consent Calendar by one motion unless a Board member, staff, or a member of the public requests a separate action.

- 1. Approve minutes of adjourned regular Board meeting of March 7, 2019.
- Approve minutes of regular Board meeting of March 14, 2019.
- 3. Approve minutes of special Board meeting of March 19, 2019.
- 4. Approve minutes of special Board meeting of March 25, 2019.
- 5. Approve minutes of special Board meeting of March 25, 2019.
- 6. Approve attendance considerations (additions, changes, deletions).
- 7. Board Schedule:
 - Conferences, Seminars, and Meetings
 - Board Calendar
 - Upcoming Community Outreach Events
- 8. Award a contract to E.J. Meyer Company to provide Construction Services for the OC-44 Pipeline Rehabilitation Project for \$3,133,333 and a 10% contingency for an amount not to exceed \$3,446,666, and authorize execution of the contract.
- 9. Award a 3-year contract to John Robinson Consulting, Inc. for \$124,800 per year with 2-one year renewable options to provide Plan Check Consulting Services.
- 10. Approve a contract extension to White Nelson Diehl Evans LLP to perform annual financial audit services for fiscal years ending June 30, 2019 and June 30, 2020.
- 11. Approve Mesa Water District's positions on active state bills of high priority.



ACTION ITEMS:

12. PUBLIC HEARING – MITIGATED NEGATIVE DECLARATION FOR WELLS No. 12 AND No. 14 AND PIPELINE PROJECT:

Recommendation:

- a. Conduct public hearing;
- b. Review and discuss the Mitigated Negative Declaration; and
- c. Adopt Resolution No. 1522 Mitigated Negative Declaration for Wells No. 12 and No. 14 and Pipeline Project.

PRESENTATION AND DISCUSSION ITEMS:

None

REPORTS:

- 13. REPORT OF THE GENERAL MANAGER:
 - March Key Indicators Report
 - Other (no enclosure)
- 14. DIRECTORS' REPORTS AND COMMENTS

INFORMATION ITEMS:

- 15. DIRECTORS' REPORTS (AB 1234) PER CA GOVERNMENT CODE SECTION 53232.3 (D)
- OTHER (NO ENCLOSURE)

In compliance with California law and the Americans with Disabilities Act, if you need disability-related modifications or accommodations, including auxiliary aids or services in order to participate in the meeting, or if you need the agenda provided in an alternative format, please contact the District Secretary at (949) 631-1206. Notification 48 hours prior to the meeting will enable Mesa Water District (Mesa Water) to make reasonable arrangements to accommodate your requests.

Members of the public desiring to make verbal comments utilizing a translator to present their comments into English shall be provided reasonable time accommodations that are consistent with California law.

Agenda materials that are public records, which have been distributed to a majority of the Mesa Water Board of Directors (Board), will be available for public inspection at the District Boardroom, 1965 Placentia Avenue, Costa Mesa, CA and on Mesa Water's website at **www.MesaWater.org**. If materials are distributed to the Board less than 72 hours prior or during the meeting, the materials will be available at the time of the meeting.

ADJOURN TO AN ADJOURNED REGULAR BOARD MEETING SCHEDULED FOR THURSDAY, MAY 2, 2019 AT 6:00 P.M.



Dedicated to Satisfying our Community's

Water Needs

MINUTES OF THE BOARD OF DIRECTORS MESA WATER DISTRICT

Thursday, March 7, 2019

1965 Placentia Avenue, Costa Mesa, CA 92627 9:00 a.m. Adjourned Regular Board Meeting

CALL TO ORDERThe meeting of the Board of Directors was called to order on

March 7, 2019 at 9:01 a.m. by President Dewane at the District Office Boardroom, located at 1965 Placentia Avenue, Costa

Mesa, California.

PLEDGE OF ALLEGIANCE Director Bockmiller led the Pledge of Allegiance.

Directors Present Shawn Dewane, President

Marice H. DePasquale, Vice President

Fred R. Bockmiller, P.E., Director

James R. Fisler, Director Jim Atkinson, Director

Directors Absent None

Staff Present Paul E. Shoenberger, P.E., General Manager

Phil Lauri, P.E., Assistant General Manager

Denise Garcia, Administrative Services Manager/

District Secretary

Wendy Duncan, Records Management Specialist/

Assistant District Secretary

Marwan Khalifa, CPA, MBA, Chief Financial Officer/

District Treasurer

Stacie Sheek, Customer Services Manager Stacy Taylor, External Affairs Manager Syndie Ly, Human Resources Manager Tracy Manning, Water Operations Manager

Kurt Lind, Business Administrator

Brittany Erdman, Department Assistant Celeste Carrillo, Public Affairs Coordinator

Rob Anslow, Partner, Atkinson, Andelson, Loya, Ruud & Romo

Others Present Kimera A. Hobbs, Senior Consultant, Moran Consulting

Harry Lorick, Principal, LA Consulting, Inc.

Joyce Lorick, Vice President, LA Consulting, Inc.

PUBLIC COMMENTS

President Dewane asked for public comments on items not on the agenda.

There were no comments and President Dewane proceeded with the meeting.

ITEMS TO BE ADDED, REMOVED, OR REORDERED ON THE AGENDA

General Manager Shoenberger offered there were no items to be added, removed, or reordered on the agenda.

ACTION ITEMS:

CUSTOMER SERVICE AUDIT:

Customer Services Manager Sheek introduced Moran Consulting Senior Consultant Kimera Hobbs who proceeded with a presentation, entitled "The Road to Gold: Customer Service Excellence Initiative," that highlighted the following:

- Overview of Customer Service Department Activity
- Service Reinforcement/Realignment Initiative
- Scorecard
- The Road to Excellence: Current Performance
- Recommendations for Improvement
- Next Steps

Ms. Hobbs responded to questions from the Board and they thanked her for the presentation.

President Dewane asked for comments from the public. There were no comments.

MOTION

Motion by Direction Atkinson, second by Vice President DePasquale, to receive and file the Customer Services Audit. Motion passed 4-0-1 with Director Bockmiller absent.

ANNUAL PERFORMANCE MEASURES AND AUDITS:

Business Administrator Lind introduced LA Consulting, Inc.'s Principal Harry Lorick who proceeded with a presentation, entitled "Impact of Organizational and Structural Changes," that highlighted the following:

- Evaluation Identified Opportunities
- Organizational Change
- Process Change
- What Are Some Other Changes?
- Productivity
- Summary of Change
- Results

Mr. Lorick responded to questions from the Board and they thanked him for the presentation.

Mr. Lind provided a brief overview of the Annual Performance Measures and Audits and then proceeded with a presentation that highlighted the following:

- The Vision of Mesa Water
- Business Management Process

- Department Key Performance Indicators
- Performance Audit
- Benefits
- Recommendation

Mr. Lind responded to questions from the Board and they thanked him for the presentation.

President Dewane asked for comments from the public. There were no comments.

MOTION

Motion by Vice President DePasquale, second by Director Fisler, to direct staff to:

- a. include in the proposed Fiscal Year 2020 Budget third-party auditors to conduct the annual performance audits;
- b. promote Mesa Water's Annual Performance Measures and Audits with an outreach program; and
- c. engage an external facilitator at future Board Workshops.

Motion passed 3-2-0, with Director Atkinson and Director Bockmiller voting no.

FORMATION AND DISSOLUTION OF COMMITTEES:

GM Shoenberger provided an overview of the topic.

Discussion ensued amongst the Board.

President Dewane asked for comments from the public. There were no comments.

MOTION

Motion by Vice President DePasquale, second by Director Fisler, to confirm the 2019 Finance and Legislative & Public Affairs Committee (LPAC) regular meetings for the fourth Monday of each month, beginning in March. The Finance Committee meeting will start at 3:30 p.m. and LPAC will start as soon thereafter as the Finance agenda permits. Motion passed 5-0.

RECESS

President Dewane declared a recess at 10:25 a.m.

The Board meeting reconvened at 10:38 a.m.

4. STRATEGIC PLAN:

GM Shoenberger introduced the topic by offering that, each year, the Board provides staff with direction regarding Mesa Water's goals, objectives, and outcomes for the upcoming year. Based on this direction, priorities are established, resources are allocated, and staff works to accomplish the goals and objectives, as directed.

The Strategic Goals were reviewed by the Board and staff; GM Shoenberger responded to questions.

The Board suggested minor modifications.

Discussion ensued amongst the Board.

The Board directed staff to review the upper and lower limits of the AAA rating and also, to explore electronic signature software to improve document signing procedures.

President Dewane asked for comments from the public. There were no comments.

MOTION

Motion by Director Bockmiller, second by Director Fisler, to approve the updated Strategic Plan, with modifications, for 2019 and beyond. Motion passed 5-0.

5. FINANCIAL GOALS AND RESERVES:

Chief Financial Officer Khalifa provided an update on Mesa Water's financial goals and reserves.

No action was taken on this topic.

6. BRANDING COMMUNITY ASSETS:

GM Shoenberger provided an overview of the topic and responded to questions from the Board.

Discussion ensued amongst the Board.

President Dewane asked for comments from the public. There were no comments.

MOTION

Motion by Vice President DePasquale, second by Director Bockmiller, to approve branding Mesa Water District assets. Motion passed 5-0.

NEW CUSTOMER WELCOME PROGRAM:

GM Shoenberger reviewed the topic and responded to questions from the Board.

President Dewane asked for comments from the public. There were no comments.

MOTION

Motion by Director Atkinson, second by Director Bockmiller, to receive and file the New Customer Welcome Program. Motion passed 5-0.

8. REGIONAL WATER ISSUES:

Director DePasquale recused herself from the discussion.

GM Shoenberger provided an overview of the topic and responded to questions from the Board.

No action was taken on this topic.

REPORTS:

- 9. REPORT OF THE GENERAL MANAGER
- 10. DIRECTORS' REPORTS AND COMMENTS

INFORMATION ITEMS:

11. OTHER (NO ENCLOSURE)

President Dewane adjourned the meeting at 12:33 p.m. to a Regular Board Meeting scheduled for Thursday, March 14, 2019 at 6:00 p.m.

Approved:
Shawn Dewane, President
Denise Garcia, District Secretary
Sharon D. Brimer, Recording Secretary



MINUTES OF THE BOARD OF DIRECTORS **MESA WATER DISTRICT**

Thursday, March 14, 2019 1965 Placentia Avenue, Costa Mesa, CA 92627 6:00 p.m. Regular Board Meeting

Dedicated to Satisfying our Community's Water Needs

> **CALL TO ORDER** The meeting of the Board of Directors was called to order on

> > March 14, 2019 at 6:04 p.m. by President Dewane at the District Office Boardroom, located at 1965 Placentia Avenue, Costa

Mesa. California.

PLEDGE OF ALLEGIANCE Vice President DePasquale led the Pledge of Allegiance.

Directors Present Shawn Dewane, President

Marice H. DePasquale, Vice President

Fred R. Bockmiller, P.E., Director

James R. Fisler, Director Jim Atkinson, Director

Directors Absent None

Paul E. Shoenberger, P.E., General Manager Staff Present

Phil Lauri, P.E., Assistant General Manager

Denise Garcia, Administrative Services Manager/

District Secretary

Wendy Duncan, Records Management Specialist/

Assistant District Secretary

Marwan Khalifa, CPA, MBA, Chief Financial Officer/

District Treasurer

Stacie Sheek, Customer Services Manager Stacy Taylor, External Affairs Manager Tracy Manning, Water Operations Manager

Jeff Hoskinson, Partner, Atkinson, Andelson, Loya, Ruud &

Romo

Others Present

Melody McDonald, Executive Committee Member, Association of California Water Agencies/Joint Powers Insurance Authority (ACWA/JPIA)

Robert J. Hunter, General Manager, Municipal Water District of

Orange County (MWDOC)

Nicolle Falcis, Associate, Atkinson, Andelson, Loya, Ruud & Romo

ASSOCIATION OF CALIFORNIA WATER AGENCIES JOINT POWERS INSURANCE AUTHORITY RECOGNITION

President Dewane introduced ACWA/JPIA Executive Committee Member Melody McDonald. Ms. McDonald thanked Mesa Water District for their continuous support of ACWA/JPIA and presented the Board with a check for \$63,222.

Photographs were taken.

PUBLIC COMMENTS

President Dewane asked for public comments on items not on the agenda.

There were no comments and President Dewane proceeded with the meeting.

ITEMS TO BE ADDED, REMOVED OR REORDERED ON THE AGENDA

General Manager Shoenberger recommended reordering the agenda to take Item 9 prior to Item 7. There were no objections.

CONSENT CALENDAR ITEMS:

Approve all matters under the Consent Calendar by one motion unless a Board member, staff, or a member of the public requests a separate action.

- 1. Approve minutes of regular Board meeting of February 14, 2019.
- 2. Approve minutes of special Board meeting of February 19, 2019.
- 3. Approve minutes of special Board meeting of February 21, 2019.
- 4. Approve minutes of special Board meeting of February 25, 2019.
- 5. Approve attendance considerations (additions, changes, deletions).
- Board Schedule:
 - Conferences, Seminars, and Meetings
 - Board Calendar
 - Upcoming Community Outreach Events

President Dewane asked for comments from the public. There were no comments.

MOTION

Motion by Director Bockmiller, second by Director Atkinson, to approve Items 1 - 5 of the Consent Calendar. Motion passed 5-0.

PRESENTATION AND DISCUSSION ITEMS:

ITEM 9 - MUNICIPAL WATER DISTRICT OF ORANGE COUNTY BRIEFING:

GM Shoenberger introduced MWDOC General Manager Robert J. Hunter who proceeded with a presentation that highlighted the following:

- Northern California Accumulated Precipitation
- Snow Water Equivalent
- Lake Oroville 2018-2019

- Current Reservoir Storage Levels
- Lake Mead
- Metropolitan Water District of Southern California (MWD) 2019 Estimated Water Storage
- Current Reservoir Storage Levels
- Drought Contingency Plan Total Lower Basin Contributions
- California WaterFix and OC Reliability Update
- Fiscal Year 2019-20 Budget
- MWD Key Budget Assumptions

Mr. Hunter responded to questions from the Board and the Board thanked him for the presentation.

RECESS

President Dewane declared a recess at 6:50 p.m.

The meeting reconvened at 7:00 p.m.

ACTION ITEMS:

RESOLUTION NO. 1521 – POLICY FOR PUBLIC RECORDS:

District Secretary Garcia introduced Attorney Hoskinson who provided an overview of the policy.

Discussion ensued amongst the Board.

President Dewane asked for comments from the public. There were no comments.

MOTION

Motion by Director Bockmiller, second by Director Atkinson, to adopt Resolution No. 1521 Amending the Policy for Public Records Superseding Resolution No. 1421. Motion passed 5-0, by the following roll call vote:

AYES: DIRECTORS Atkinson, Bockmiller, Fisler, DePasquale, Dewane

NOES: DIRECTORS None ABSENT: DIRECTORS None ABSTAIN: DIRECTORS None

RECESS

President Dewane declared a recess at 7:04 p.m. in order to conduct the Mesa Consolidated Water District Improvement Corporation Annual Meeting.

8. MESA CONSOLIDATED WATER DISTRICT IMPROVEMENT CORPORATION ANNUAL MEETING:

The Board meeting reconvened at 7:14 p.m.

PRESENTATION AND DISCUSSION ITEMS:

9. MUNICIPAL WATER DISTRICT OF ORANGE COUNTY BRIEFING:

Item taken earlier in the agenda.

REPORTS:

- 10. REPORT OF THE GENERAL MANAGER:
 - February Key Indicators Report
 - Other (no enclosure)
- 11. DIRECTORS' REPORTS AND COMMENTS

INFORMATION ITEMS:

- 12. DIRECTORS' REPORTS (AB 1234) PER CA GOVERNMENT CODE SECTION 53232.3 (D)
- 13. OTHER (NO ENCLOSURE)

President Dewane adjourned the meeting at 7:40 p.m. to a Regular Board Meeting scheduled for Thursday, April 11, 2019 at 6:00 p.m.

Approved:	
Shawn Dewane, President	
Denise Garcia, District Secretary	
Sharon D. Brimer, Recording Secretary	



MINUTES OF THE BOARD OF DIRECTORS MESA WATER DISTRICT

Tuesday, March 19, 2019

1965 Placentia Avenue, Costa Mesa, CA 92627 3:30 p.m. Special Board Meeting

Dedicated to

Satisfying our Community's

Water Needs

ENGINEERING AND OPERATIONS COMMITTEE MEETING

CALL TO ORDERThe meeting of the Board of Directors was called to order on

March 19, 2019 at 3:31 p.m. by Director Atkinson at the District Office Boardroom, located at 1965 Placentia Avenue, Costa

Mesa, California.

PLEDGE OF ALLEGIANCE Director Fisler led the Pledge of Allegiance.

Directors Present Marice H. DePasquale, Vice President

Jim Atkinson, Director, Acting Chair

James R. Fisler, Director

Directors Absent Fred R. Bockmiller, P.E., Chair

Shawn Dewane, President

Staff Present Paul E. Shoenberger, P.E., General Manager

Phil Lauri, P.E., Assistant General Manager

Wendy Duncan, Records Management Specialist/

Acting District Secretary

Tracy Manning, Water Operations Manager

Karyn Igar, Senior Civil Engineer Mark Pelka, Senior Civil Engineer

Others Present None

PUBLIC COMMENTS

There was no public present.

CONSENT CALENDAR ITEMS:

- Developer Project Status Report
- Mesa Water and Other Agency Projects Status Report
- 3. Water Quality Call Report
- Committee Policy & Resolution Review
- Water Operations Status Report

MOTION

Motion by Vice President DePasquale, second by Director Fisler, to approve Items 1 - 5 of the Consent Calendar. Motion passed 3-0-2, with President Dewane and Director Bockmiller absent.

ACTION ITEMS:

6. OC-44 Pipeline Rehabilitation Project

MOTION

Motion by Director Atkinson, second by Vice President DePasquale, to add to the next regular Board meeting Consent Calendar award of a contract to E.J. Meyer Company to provide Construction Services for the OC-44 Pipeline Rehabilitation Project for \$3,133,333 and a 10% contingency for an amount not to exceed \$3,446,666, and authorization to execute the contract. Motion passed 3-0-2, with President Dewane and Director Bockmiller absent.

Plan Check Consulting Services

MOTION

Motion by Vice President DePasquale, second by Director Fisler, to add to the next regular Board meeting Consent Calendar award of a 3-year contract to John Robinson Consulting, Inc. for \$124,800 per year with 2-one year renewable options to provide Plan Check Consulting Services.

PRESENTATION AND DISCUSSION ITEMS:

None.

REPORTS:

- 8. Report of the General Manager
- 9. Directors' Reports and Comments

INFORMATION ITEMS:

None.

Mesa Water Board / Engineering and Operations Committee Meeting March 19, 2019

The Board meeting was adjourned at 4:02 p.m.

Approved:	
Shawn Dewane, President	
Denise Garcia, District Secretary	



MINUTES OF THE BOARD OF DIRECTORS MESA WATER DISTRICT

Monday, March 25, 2019

1965 Placentia Avenue, Costa Mesa, CA 92627 3:30 p.m. Special Board Meeting

Dedicated to

Satisfying our Community's

Water Needs

FINANCE COMMITTEE MEETING

CALL TO ORDERThe meeting of the Board of Directors was called to order on

March 25, 2019 at 3:30 p.m. by Chairman Fisler at the

District Office Boardroom, located at 1965 Placentia Avenue,

Costa Mesa, California.

PLEDGE OF ALLEGIANCE Chief Financial Officer Khalifa led the Pledge of Allegiance.

Directors Present Marice H. DePasquale, Vice President

Jim Atkinson, Director (teleconference) Fred R. Bockmiller, P.E., Director James R. Fisler, Director, Chair

Directors Absent Shawn Dewane, President

Staff Present Paul E. Shoenberger, P.E., General Manager

Denise Garcia, Administrative Services Manager/

District Secretary

Wendy Duncan, Records Management Specialist/

Assistant District Secretary

Marwan Khalifa, CPA, MBA, Chief Financial Officer

Stacy Taylor, External Affairs Manager Kurt Lind, Business Administrator Brittany Erdman, Department Assistant Celeste Carrillo, Public Affairs Coordinator

Others Present John Lewis, President, Lewis Consulting Group

PUBLIC COMMENTS

There were no comments on non-agendized topics.

There were no public members present at the teleconference site.

District Secretary Garcia stated that one Mesa Water Director was attending the meeting via teleconference.

For each action, a roll call vote was taken in accordance with The Brown Act Government Code Section 54953(b)(2) which states, "all votes taken during a teleconference meeting shall be by roll call."

CONSENT CALENDAR ITEMS:

Vice President DePasquale pulled Item 1 for discussion and Director Bockmiller pulled Item 2 for discussion. There were no objections.

- 1. Accounts Paid Listing
- 2. Monthly Financial Reports
- 3. Major Staff Projects
- Committee Policy & Resolution Review

MOTION

Motion by Vice President DePasquale, second by Director Bockmiller, to approve Items 3 and 4 of the Consent Calendar. Motion passed 4-0-1, by the following roll call vote:

AYES: DIRECTORS Atkinson, Bockmiller, Fisler, DePasquale

NOES: DIRECTORS None
ABSENT: DIRECTORS Dewane
ABSTAIN: DIRECTORS None

Staff responded to questions from the Board regarding the Accounts Paid Listing and Monthly Financial Reports.

MOTION

Motion by Director Bockmiller, second by Vice President DePasquale, to approve Items 1 and 2 of the Consent Calendar. Motion passed 4-0-1, by the following roll call vote:

AYES: DIRECTORS Atkinson, Bockmiller, Fisler, DePasquale

NOES: DIRECTORS None ABSENT: DIRECTORS Dewane ABSTAIN: DIRECTORS None

ACTION ITEMS:

5. Financial Auditor Selection

MOTION

Motion by Director Atkinson, second by Director Fisler, to add to the next regular Board meeting Consent Calendar approval of a contract extension to White Nelson Diehl Evans LLP to perform annual financial audit services for fiscal years ending June 30, 2019 and June 30, 2020. Motion passed 4-0-1, by the following roll call vote:

AYES: DIRECTORS Atkinson, Bockmiller, Fisler, DePasquale

NOES: DIRECTORS None ABSENT: DIRECTORS Dewane ABSTAIN: DIRECTORS None

PRESENTATION AND DISCUSSION ITEMS:

6. Electronic Bill Presentation and Payment

General Manager Shoenberger introduced CFO Khalifa and Business Administrator Lind who proceeded with a presentation that highlighted the following:

- Utility Billing & Reconciliation Process
- The Options
- What's Next?
- The Benefits
- Implementation
- Communication
- Customer Service

Mr. Khalifa responded to questions from the Board and they thanked him and Mr. Lind for the presentation.

Denise Garcia, District Secretary

REPORTS:

- 7. Report of the General Manager
- 8. Directors' Reports and Comments

INFORMATION ITEMS:	
None.	
The Board meeting was adjourne	ed at 4:01 p.m.
	Approved:
	Shawn Dewane, President



MINUTES OF THE BOARD OF DIRECTORS MESA WATER DISTRICT

Monday, March 25, 2019 1965 Placentia Avenue, Costa Mesa, CA 92627

3:30 p.m. Special Board Meeting

Dedicated to

Satisfying our Community's

Water Needs

LEGISLATIVE & PUBLIC AFFAIRS COMMITTEE MEETING

CALL TO ORDER The meeting of the Board of Directors was called to order on

March 25, 2019 at 4:07 p.m. by Chairwoman DePasquale at the District Office Boardroom, located at 1965 Placentia

Avenue, Costa Mesa, California.

Directors Present Marice H. DePasquale, Vice President, Chair

Jim Atkinson, Director (teleconference) Fred R. Bockmiller, P.E., Director

James R. Fisler, Director

Directors Absent Shawn Dewane, President

Staff Present Paul E. Shoenberger, General Manager

Denise Garcia, Administrative Services Manager/

District Secretary

Wendy Duncan, Records Management Specialist/

Assistant District Secretary

Marwan Khalifa, CPA, MBA, Chief Financial Officer

Stacy Taylor, External Affairs Manager Celeste Carrillo, Public Affairs Coordinator Brittany Erdman, Department Assistant

Others Present John Lewis, President, Lewis Consulting Group

PUBLIC COMMENTS

There were no comments on non-agendized topics.

There were no public members present at the teleconference site.

District Secretary Garcia stated that one Mesa Water Director was attending the meeting via teleconference.

For each action, a roll call vote was taken in accordance with The Brown Act Government Code Section 54953(b)(2) which states, "all votes taken during a teleconference meeting shall be by roll call."

CONSENT CALENDAR ITEMS:

Director Fisler pulled Item 1 for discussion. There were no objections.

1. State Advocacy Update

General Manager Shoenberger introduced External Affairs Manager Taylor who provided the State Advocacy update.

Ms. Taylor responded to questions from the Board and they thanked her for the update.

MOTION

Motion by Director Fisler, second by Director Bockmiller, to approve Item 1 of the Consent Calendar. Motion passed 4-0-1, by the following roll call vote:

AYES: DIRECTORS Atkinson, Bockmiller, Fisler, DePasquale

NOES: DIRECTORS None ABSENT: DIRECTORS Dewane ABSTAIN: DIRECTORS None

General Manager Shoenberger reordered the agenda to take Item 3 before Item 2. There were no objections.

Item 3 - Orange County Update

External Affairs Manager Taylor introduced Lewis Consulting Group President John Lewis who proceeded with the Orange County Update.

Mr. Lewis responded to questions from the Board and they thanked him for the update.

ACTION ITEMS:

2. State Legislation Positions

MOTION

Motion by Director Bockmiller, second by Director Atkinson, to add to the next regular Board meeting Consent Calendar approval of Mesa Water District's positions on active state bills of high priority. Motion passed 4-0-1, by the following roll call vote:

AYES: DIRECTORS Atkinson, Bockmiller, Fisler, DePasquale

NOES: DIRECTORS None ABSENT: DIRECTORS Dewane ABSTAIN: DIRECTORS None

PRESENTATION AND DISCUSSION ITEMS:

3. Orange County Update

This item was taken earlier in the agenda.

4. Outreach Update

GM Shoenberger introduced Public Affairs Coordinator Carrillo who provided a presentation that highlighted the following:

- Community Outreach Events
- Planned Remaining Fiscal Year 2019 & 2020 Q1 Events
- Media/News
- Special Projects

Discussion ensued amongst the Board.

Ms. Carrillo responded to questions from the Board and the Board thanked her for the update.

REPORTS:

- 5. Report of the General Manager
- 6. Directors' Reports and Comments

INFORMATION ITEMS:

None.

The Board meeting was adjourned at 5:06 p.m.

Approved:	
Shawn Dewane, President	
Denise Garcia District Secretary	

MEMORANDUM



TO: Board of Directors

FROM: Paul E. Shoenberger, P.E., General Manager

Dedicated to DATE: April 11, 2019

Satisfying our Community's SUBJECT: Attendance at Conferences, Seminars, Meetings, and Events

Water Needs

RECOMMENDATION

In accordance with Ordinance No. 29, adopted February 14, 2019, authorize attendance at conferences, seminars, meetings, and events.

STRATEGIC PLAN

Goal #1: Provide a safe, abundant, and reliable water supply.

Goal #2: Practice perpetual infrastructure renewal and improvement.

Goal #3: Be financially responsible and transparent.

Goal #4: Increase public awareness about Mesa Water® and about water.

Goal #5: Attract and retain skilled employees.

Goal #6: Provide outstanding customer service.

Goal #7: Actively participate in regional water issues.

PRIOR BOARD ACTION

At its June 14, 2018 meeting, the Board of Directors (Board) approved Fiscal Year 2019 attendance at Conferences, Seminars, Meetings, and Events.

DISCUSSION

During the discussion of this item, if any, the Board may choose to delete any item from the list and/or may choose to add additional conferences, seminars, meetings, or events for approval, subject to available budget or additional appropriation.

FINANCIAL IMPACT

None.

<u>ATTACHMENTS</u>

None.

2019 CONFERENCES, SEMINARS, AND MEETINGS:

May 6 - 10, 2019	
ACWA/JPIA Spring Conference	Atkinson, Bockmiller, DePasquale
Monterey, CA	
May 21 - 22, 2019	
CSDA Legislative Days	
Sacramento, CA	
May 31, 2019	
OC Water Summit	
Anaheim, CA	
June 9 - 12, 2019	
AWWA ACE19 Conference	Atkinson
Denver, CO	
August 14- 16, 2019	
Urban Water Institute Annual Conference	
San Diego, CA	
September 25 - 28, 2019	
CSDA Annual Conference	
Anaheim, CA	
December 2 - 6, 2019	
ACWA/JPIA Fall Conference	Bockmiller
San Diego, CA	
December 11 - 13, 2019	
Colorado River Water Users Association Conference	
TBD	

April 2019

April 2019								N	/lay 20	19			
Su	Мо	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
7 14 21 28	1 8 15 22 29	2 9 16 23 30	3 10 17 24	4 11 18 25	5 12 19 26	6 13 20 27	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 22 29	9 16 23 30	3 10 17 24 31	4 11 18 25

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Mar 31	Apr 1 8:30am CANCELLED MWDOC Planning & Operations Committee (Conference Room.101)	2 7:30am ISDOC Executive Committee Meeting (Conference Room.101) 12:00pm Executive Committee Meeting (Panian Conference Room). 5:45pm Costa Mesa City Council Meeting (Costa Mesa Senior Center; 695 W. 19th Street, Costa Mesa, 92626)	Bayday 8:30am Jt. MWDOC/MWD Workshop (MWDOC/OCWD Boardroom) 5:30pm OCWD Board Meeting (OCWD Boardroom)	4 7:15am NB Chamber Event (Newport Beach Public Library (Friends Room) 1000 Avocado Ave. Newport Beach, 92660) 6:00pm MWDOC Elected Officials Forum (MWDOC/OCWD Boardroom)	5 7:30am WACO Meeting (MWDOC/OCWD Boardroom)	6
7	8 S:00pm IRWD Board Meeting (15600 Sand Canyon Avenue, Invine)	9 7:30am OCBC Infrastructure Committee Meeting (OCBC Conference Room at 2 Park Plaza, Suite 125 Invine, 92614)	8:00am OCWD Water Issues Committee (OCWD Boardroom). 8:15am LAFCO Meeting (Hail) of Administration 10 Civic Center Plaza Santa Ana, CA 92701) 8:30am MWDOC Admin & Finance Committee (Conference Room, 101). 11:30am Chamber of Commerce's State of the City Event (MD) (Segerstrom.	11 4:00pm CM Chamber Board Meeting (TBD) 6:00pm Mesa Water Board Meeting (Boardroom)	12 Pay Period Ends	13
14	8:30am MWDOC Public Affairs & Legislation Committee (Conference Room. 101)	7:30am WACO Planning Committee (MWDOC Conference Room.101) 3:30pm Engineering and Operations Committee Meeting (Boardroom) 5:45pm Costa Mesa City Council Meeting (Costa Mesa Senior Center; 695 W. 19th Street, Costa Mesa, 92626)	17 Payday. 8:30am MWDOC Board Meeting (MWDOC Boardroom) 5:30pm OCWD Board Meeting (OCWD Boardroom)	8:30am MWDOC Executive Committee Meeting (Conference Room 102) 11:30am OC WateReuse Meeting (Carollo Engineers, Inc.; 3150 Bristol Street Suite 500 Costa Mesa 92626)	19 8:00am City Districts Liaison Committee Meeting (Newport Mesa Unified School District, 2985 Bear St. Costa Mesa 92626)	20
21	3:30pm Finance/LPAC Meeting (Operations Conference Room). 5:00pm IRWD Board Meeting (15600 Sand Canyon Avenue, Irvine)	23	24 8:30am MWDOC/OCWD Jt. Planning (Conference Room 101)	25 5:30pm Tri Chamber of Commerce Event (3300 Bristol Street Costa Mesa 92626)	26 Pay Period Ends 12:00pm SCWC Quarterly Event (Carson Community Center, 801 E. Carson Street, Carson)	27
28	29	30 12:00pm R/S from S/7 Executive Committee Meeting (Operations Conference Room)	May 1	2	3	4

Kathy Pham

May 2019

 May 2019
 June 2019

 Su
 Mo
 Tu
 We
 Th
 Fr
 Sa
 Su
 Mo
 Tu
 We
 Th
 Fr
 Sa

 5
 6
 7
 1
 2
 3
 4
 5
 6
 7
 1

 12
 13
 14
 15
 16
 17
 18
 9
 10
 11
 12
 13
 14
 15

 19
 20
 21
 22
 23
 24
 25
 16
 17
 18
 19
 20
 21
 22

 26
 27
 28
 29
 30
 31
 23
 24
 25
 26
 27
 28
 29

					30	
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Apr 28	29	30	May 1 Payday 8:30am Jt. MWDOC/MWD Workshop (MWDOC/OCWD. Boardroom) 5:30pm OCWD Board Meeting (OCWD Boardroom)	2 6:00pm R/S from 5/9 Mesa Water Board Meeting (MWRF)	7:30am WACO Meeting (MWDOC/OCWD Boardroom)	4
5	6	7	8 ACWA/JPIA Soring Conference (Monterey, CA)	9	10	11
	8:30am MWDOC Planning & Operations Committee (Conference Room 101) 11:30pm ACWA/IPIA Board of Directors Meeting (F8) (Monterey)	7:30am ISDOC Executive Committee Meeting (Conference Room 101). 10:00am ACWA Groundwater Committee Meeting (Monterey). 12:00pm R/S to 4/30 Executive Committee Meeting. S:45pm Costa Mesa Gity Council Meeting.	8:00am OCWD Water issues Committee (OCWD Boardroom) 8:15am LAFCO Meeting (Hall of Administration 10 Civic Center Plaza Santa Ana, CA 92701) 8:30am MWDDC Admin & Finance Committee (Conference Room.101) 11:30am CM Chamber Event	4:00pm CM Chamber Board Meeting (TBD) 6:00pm R/S to 5/2 Mesa Water Board Meeting	Pay Period Ends	
12	13 5:00pm (RWD Board Meeting (15600 Sand Canyon Avenue, Invine)	7:30am OCBC Infrastructure Committee Meeting (OCBC Conference Room at 2 Park Plaza, Suite 125 Irvine, 92614)	Payday 8.30am MWDOC Board Meeting (MWDOC Boardroom) 5.30pm OCWD Board Meeting (OCWD Boardroom)	8:30am MWDOC Executive Committee Meeting (Conference Room 102)	17 17th Annual Solar Cuo (Lake	18 Skinner in the Temecula Vallevi
19 17th Annual Solar Cup (Lake Skinner in t	20 8:30am MWDOC Public Affairs & Legislation Committee (Conference Room 101)	21 CSDA Lea 7:30am WACO Planning Committee (MWDOC Conference Room. 101) 3:30pm Engineering and Operations Committee Meeting (Operations Conference Room) S:45pm Costa Mesa City Council Meeting	22 slative Days 8:30am MWDOC/OCWD Jt. Planning (MWDOC/OCWD Boardroom)	23 3;30pm R/S from 5/27 Finance/LPAC Meeting (Operations Conference Room)	24 Pay Period Ends	25
26	27 District Holiday 3:30pm R/S to S/23 Finance/LPAC Meeting 5:00pm IRWD Board Meeting (15600 Sand Canyon Avenue, Irvine)	28	29 Payday	30	31 7:30am 12th Annual OC Water Summit, "WATER Under the Microscope" (Anaheim, CA)	Jun 1

June 2019

		Ju	une 20	19					J	uly 201	19		
Su	Мо	Tu	We	Th	Fr	Sa	Su	Мо	Tu	We	Th	Fr	Sa
2 9 16 23 30	3 10 17 24	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 22 29	7 14 21 28	1 8 15 22 29	2 9 16 23 30	3 10 17 24 31	4 11 18 25	5 12 19 26	6 13 20 27

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
May 26	27	28	29	30	31	Jun 1
2	3 8:30em MWDOC Planning & Operations Committee (Conference Room 101)	7:30am ISDOC Executive Committee Meeting (Conference Room 101) 12:00pm Executive Committee Meeting (Upstairs Conference Room) S:45pm Costa Mesa City Council Meeting	5 8:30am Jt. MWDOC/MWD Workshop (MWDOC/OCWD Boardroom) 5:30pm OCWD Board Meeting (OCWD Boardroom)	6	7 Pay Period Ends 7:30am WACO Meeting (MWDOC/OCWD Boardroom)	8
9	AWWA ACE19 Con 5:00pm IRWD Board Meeting (15600 Sand Canyon Avenue, Irvine)	11	Payday 8:00am OCWD Water Issues Committee (OCWD Beardroom). 8:15am LAFCO Meeting (Hall of 8:30am MWDOC Admin & Finance 11:30am CM Chamber Event	13 4:00pm CM Chamber Board Meeting (TBD) 6:00pm Mesa Water Board Meeting (Upstairs Conference Room)	14	15
16	17 8:30am MWDOC Public Affairs & Legislation Committee (Conference Room.101).	18 7:30am WACO Planning Committee (MWDOC Conference Room 101) 3:30pm Engineering and Operations Committee Meeting (Upstains Conference Room) 5:45pm Costa Mesa City Council Meeting	8:30am MWDOC Board Meeting (MWDOC Seardroom) 5:30pm OCWD Board Meeting (OCWD Boardroom)	20 8:30am MWDOC Executive Committee Meeting (Conference Room 102) 11:30am OC WateReuse Meeting (Trabuco Canyon: Water District)	21 Pay Period Ends	22
23	24 3:30pm Finance/LPAC Meeting (Upstairs Conference Room). 5:00pm IRWD Board Meeting (15600 Sand Canyon Avanua, Irvine).	25	26 Payday. 8:30am MWDOC/OCWD Jt. Planning (MWDOC/OCWD Boardroom)	27	28	29
30	Jul 1	2	3	4	5	6

Kathy Pham



MesaWater Upcoming Community Outreach Events

Event:	Date & Time:	Location:
Mesa Water® Water Efficient Landscape Workshop	Saturday, May 4, 2019 8:00 a.m. to 3:00 p.m.	Mesa Water District Office 1965 Placentia Avenue Costa Mesa, CA 92627

MEMORANDUM



TO: Board of Directors

FROM: Phil Lauri, P.E., Assistant General Manager

Dedicated to DATE: April 11, 2019

Satisfying our Community's SUBJECT: OC-44 Pipeline Rehabilitation Project

Water Needs

RECOMMENDATION

Award a contract to E.J. Meyer Company to provide Construction Services for the OC-44 Pipeline Rehabilitation Project for \$3,133,333 and a 10% contingency for an amount not to exceed \$3,446,666, and authorize execution of the contract.

The Engineering and Operations Committee reviewed this item at its March 19, 2019 meeting and recommends Board approval.

STRATEGIC PLAN

Goal #1: Provide a safe, abundant, and reliable water supply.

Goal #2: Practice perpetual infrastructure renewal and improvement.

PRIOR BOARD ACTION/DISCUSSION

At its February 12, 2013 meeting, the Board of Directors (Board) awarded a contract to RBF Consulting for the OC-44 Pipeline Rehabilitation/Replacement Evaluation.

At its December 16, 2013 meeting, the Board authorized execution of a contract change order to RBF Consulting for the design of the OC-44 Pipeline Rehabilitation.

At its April 9, 2015 meeting, the Board reviewed and discussed the Initial Study/Mitigated Negative Declaration (IS/MND), conducted a public hearing, and adopted the IS/MND.

At its March 16, 2016 meeting, the Board was updated on the design and permitting requirements associated with the OC-44 Pipeline Rehabilitation.

At its September 19, 2017 meeting, the Board was updated on the mitigation requirements, permitting status and anticipated project schedule.

At its March 8, 2018 meeting, the Board awarded a contract to Dudek Engineering to provide Construction Management Services for the OC-44 Pipeline Rehabilitation Project in the amount of \$253,720 and a 10% contingency for an amount not to exceed \$279,092, and authorized execution of the contract.

At its January 15, 2019 meeting, the Engineering and Operations (E&O) Committee received information on the OC-44 Pipeline Rehabilitation Project and that staff would be soliciting construction bids to allow for timely procurement of long lead-time materials and equipment.

BACKGROUND

The OC-44 Pipeline was constructed in 1963. The section of the pipe that crosses San Diego



Creek was originally constructed with flexible double gasketed epoxy-coated joints with the concept that it would be temporary until the State of California finalized the alignment for State Route 73, thus, allowing a more permanent installation to be integrated as part of the overpass superstructure. However, due to seismic considerations and the large diameter of OC-44, the flexible joints were replaced with welded steel joints to convert the temporary line to a permanent installation independent of the State Route 73 overpass. The cover over and around the OC-44 Pipeline has been progressively decreasing (e.g., loss of pipeline cover, erosion around the line, etc.) due to increasing storm events, tidal fluctuations, and invasive native plant growth. The OC-44 Pipeline is now situated within the coastal zone and is regulated by the California Coastal Commission, making repairs and maintenance more challenging and costly.

Since 2002, Mesa Water District (Mesa Water®) has had to mitigate three pipeline failures (2002, 2006, and 2011) where the pipeline crosses San Diego Creek. Investigations during these repairs indicate that the pipeline is showing signs of deteriorating support due to scouring from the flow in the creek and the pipeline is subject to adverse corrosion due to the loss of cover over the pipe within the creek. Repair activities indicate the OC-44, where it crosses the San Diego Creek, would benefit from replacement or rehabilitation.

In December 2012, Mesa Water issued a Request for Proposals (RFP) to study the alternatives for the OC-44 Pipeline Rehabilitation and Replacement Evaluation within the environmentally sensitive San Diego Creek crossing. Michael Baker International, Inc. (MBI – formerly RBF) was competitively selected for the project.

On December 16, 2013, the Board of Directors adopted Option DIP-3 as the preferred OC-44 Pipeline Rehabilitation option and authorized a contract change order for the design of the preferred pipeline rehabilitation.

The design and specifications for the OC-44 Pipeline Rehabilitation Project was completed in February 2015. Permitting activities were completed in December 2018.

DISCUSSION

The proposed project will rehabilitate approximately 1,800 linear feet of the existing OC-44 Pipeline by inserting a new pipeline inside the existing pipeline. Due to the biological and hydrologic sensitivity associated with San Diego Creek and Bonita Creek, it is impractical to utilize conventional open trench excavations (disrupting the surface conditions) to replace the existing OC-44 Pipeline. Thus, the project proposes a trenchless rehabilitation technique, termed, slip lining. Through this process, a new pipe is installed inside the existing deteriorating pipe. Rather than conducting open trench improvements in the project area, the project proposes to slip line the existing 42-inch pipeline with a new 30-inch Ductile Iron Pipe (DIP).

In order to accommodate these improvements, a pipe jacking operation will be conducted. Pipe jacking would involve the excavation of fill materials at designated access pits. A hydraulic jack would then be placed in the excavation pit and, using hydraulic pressure, successive 20- and 10-foot long pipe sections would be pushed and pulled into place within the existing pipe. As part of the proposed project, three access pits would be required. Implementation of the proposed project will also require temporary access roads for personnel and equipment to access the proposed pit



locations. Upon completion of construction, the project site would be re-contoured to preconstruction grades and then would be re-vegetated with a native plant mix.

Due to sensitive, native and protected nesting species within the San Diego Creek watershed, construction is only permitted from mid-September to mid-March. In order to achieve successful completion within the aforementioned time-frame, the project has to be bid several months prior to mid-September to allow for contractual approvals, submittals, and review of construction shop drawings and to facilitate material fabrication to allow actual site mobilization and construction to begin in mid-September.

The design and specifications for the OC-44 Pipeline Rehabilitation Project were completed and 11 vendors were invited to participate in the selection process and were requested to submit a bid for the aforementioned project.

On February 21, 2019, staff conducted a pre-bid meeting with eight of the 11 vendors (Charles King Company, Colich Construction, E.J. Meyer Company, Kenndy Pipeline Company, Mladen Buntich Constructio, PSC Primores ARB Industrial, Vido Artukovich and W.A Rasic Construction). From those eight vendors, six bids were received on March 6, 2019. Bid results are as follows:

Vendor	Cost
Colich Construction	\$4,658,850
E.J. Meyer Company	\$3,133,333
PSC Primores ARB Industrial	\$3,686,600
Mike Prlich & Son, Inc.	\$4,186,090
Mladen Buntich Construction	\$3,956,550
W.A. Rasic Construction	\$4,287,145

The proposed project bids have been evaluated and found to be compliant with all the bid package requirements. It was determined that E.J. Meyer Company will provide the best construction services and the firm received excellent reviews on prior projects when staff checked their references. Construction is scheduled to start in September 2019 and end by February 1, 2020. Staff recommends that a contract be awarded to E.J. Meyer Company for \$3,133,333 and a 10% contingency for an amount not to exceed \$3,446,666 to provide construction services for the OC-44 Pipeline Rehabilitation Project.

Per the March 12, 1964 Agreement for Construction and Operation of Water Transmission Facilities signed between City of Huntington Beach and Mesa Water (formerly Costa Mesa County Water District), the allocation of costs for operation and maintenance of the OC-44 Pipeline is as follows: Mesa Water, 58.6% and City of Huntington Beach, 41.4%.



FINANCIAL IMPACT

In Fiscal Year 2019, \$80,000 is budgeted for the OC-44 Pipeline Rehabilitation Project; requested funding of \$2,100,000 will be added to the proposed Fiscal Year 2020 Budget.

	Pro	ject			
	Estir	Estimate		Project Cost	
	Amo	unts	Amo	unts (58.6%)	
Pipeline Installation	\$ 3,13	33,333	\$ 1	,836,133	
Construction Management	\$ 25	53,720	\$	148,680	
Revised Project Estimate			<u>\$ 1</u>	<u>,984,813</u>	

ATTACHMENTS

None.

MEMORANDUM



TO: Board of Directors

FROM: Phil Lauri, P.E., Assistant General Manager

Dedicated to DATE: April 11, 2019

Satisfying our Community's SUBJECT: Plan Check Consulting Services

Water Needs

RECOMMENDATION

Award a 3-year contract to John Robinson Consulting, Inc. for \$124,800 per year with 2-one year renewable options to provide Plan Check Consulting Services.

The Engineering and Operations Committee reviewed this item at its March 19, 2019 meeting and recommends Board approval.

STRATEGIC PLAN

Goal #1: Provide a safe, abundant, and reliable water supply.

Goal #3: Be financially responsible and transparent.

PRIOR BOARD ACTION/DISCUSSION

At its January 15, 2019 meeting, the Engineering and Operations (E&O) Committee received information that staff was developing a Request for Proposals for a plan check consultant to review proposed development work.

BACKGROUND

Mesa Water District's (Mesa Water®) Engineering Department oversees plan check review responsibilities for proposed development work implemented throughout its service area. While Mesa Water staff works closely with the City of Costa Mesa's (City) Building Department, Mesa Water's plan check process and requirements are independent of the City's building approval process. Plan check duties generally consist of the following activities:

- Review of proposed development plans and specifications;
- Utility coordination;
- Process plan check permits, cost estimates, service agreements, and payment vouchers;
- Easement review and County of Orange recording coordination;
- Coordination with City of Costa Mesa Building and Fire Departments:
- Fire flow analysis and system pressure inquiries;
- Respond to customer plan check inquiries regarding District standards;
- Coordinate and analyze hydraulic modeling results; and
- Oversee construction inspection compliance.

DISCUSSION

Historically, Mesa Water's plan check workload spans between 0.25 full-time equivalent (FTE) to 0.4 FTE. The plan check work load is largely driven by economic conditions and City building policies. Because the plan checking role typically averages approximately 0.32 FTE, it is a



challenge to hire a part-time dedicated plan check engineer with the appropriate experience. In order to provide plan check services with the expertise on all of the aforementioned plan check activities, staff recommends hiring a plan check consultant. This approach will provide better customer service to Mesa Water's customers and relieve Mesa Water's Senior Civil Engineer from plan checking to work on a higher project management level overseeing the District's capital improvement program.

Mesa Water developed a Request for Proposals (RFP) with the aforementioned plan check duties as the core scope of work.

Mesa Water solicited proposals from three firms to provide the required scope of work. The firms included John Robinson (JR) Consulting, Inc., Michael Baker International (MBI) and SA Associates. Three proposals were received on January 2, 2019. Proposals were reviewed and evaluated by a Selection Panel comprised of Mesa Water and City of Costa Mesa staff. Each proposal was evaluated based on qualifications, experience, staff availability, project understanding, scope of work approach, and proposal quality. The results of each cost proposal are as follows:

Rank	Proposer	Submitted Cost	Average Hourly Rate (\$/Hr)	Score
1	JR Consulting, Inc.	\$124,800/year	\$150.00	4.84
2	MBI	\$136,323/year	\$163.85	4.30
3	SA Associates	\$162,240/year	\$195.00	3.25

Although all three firms provided a unique and solid approach to the required scope of work and are well qualified to perform the work effort, it was determined that JR Consulting provides the best approach to performing plan check services and providing the timely service necessary to serve Mesa Water's customers. Therefore, staff recommends that the Board consider awarding a 3-year contract to JR Consulting, Inc. with 2-one year renewable options for \$124,800 per year to provide Plan Check Services.

FINANCIAL IMPACT

In Fiscal Year 2019, no funds were budgeted for Plan Check Consulting Services; requested funding of \$124,800 will be added to the proposed Fiscal Year 2020 Budget.

ATTACHMENTS

Attachment A: John Robinson Consulting, Inc. Proposal



December 26, 2018

Mr. Phil Lauri Assistant General Manager Mesa Water District 1965 Placentia Avenue Costa Mesa, CA 92627

Subject: Letter Proposal –Plan Checking Services

Dear Mr. Lauri:

John Robinson Consulting, Inc. (JR Consulting) is pleased to submit this letter proposal to Mesa Water District (Mesa Water) based upon our conversation on December 20th. Our firm is a California S Corporation, is a certified Small Business Enterprise (SBE) with the State of California Department of General Services and is located locally in Pasadena. This letter proposal outlines our scope of services, schedule and fee estimate to provide plan checking support services to Mesa Water.

SCOPE OF SERVICES

A. Project Administration

- 1. **Project Meetings:** JR Consulting shall attend meetings to update Project Manager on the status of projects, to address project coordination issues, review upcoming work and review project billings. Project Meetings are to be at the request of the Project Manager.
- **2. Invoicing:** JR Consulting shall provide monthly invoices to Mesa Water with detailed back up of charges by review discipline, amount of time expended per task and by project.
- **B. Plan Check Activities:** JR Consulting shall perform the following general plan check tasks:
 - **1. Weekly Meetings:** JR Consulting shall be onsite (Monday and Thursday) for the Mesa Water Plan Checking meetings as required.
 - 2. **General Plan Review:** It is the intent to have JR Consulting to complete required reviews, internal and external coordination, administration activities and site visits as part of this contract but not intended to complete the scope of work at Mesa Water District's headquarters. JR Consulting shall review the plan set for completeness and project understanding relative to providing review of the proposed water development project (WDP) development. JR Consulting shall also review the necessary architectural, civil and grading plans as necessary to familiarize them with the project and to provide a comprehensive WDP review.

- 3. **Site Visit:** JR Consulting may visit proposed development site if the WDP is of sufficient size to merit a dedicated site visit. Large projects shall include projects requiring dedicated main line construction, more than 6 meters, or special circumstances as approved by Mesa Water's District Engineer. Visits shall be documented with digital photos and necessary measurements and submitted to Mesa Water upon final project completion.
- **4. Mesa Water Standards:** JR Consulting shall review proposed customer development plans in accordance with the following standards:
 - A. Plan Check Policy
 - B. Water Rules and Regulations
 - C. Standard Specifications and Drawings (via Mesa Water website)
 - D. City of Costa Mesa Standards (i.e. trench backfill, paving, & street standards via City of Costa Mesa website
 - E. Mesa Water Cross Connection Policy
 - F. County of Orange Standards (for John Wayne Airport)
- **5. Design Calculations:** JR Consulting shall perform necessary engineering design calculations relative to the proposed WDP and /or provide consulting engineering review services of submitted calculations as follows:
 - **a.** Water System Plan Review: JR Consulting shall evaluate the proposed development water system plans in accordance with the aforementioned standards. Plan review shall include, but not be limited to, the following parameters:
 - Type of development (i.e., residential, commercial, etc.)
 - Fixture unit counts and demand projections;
 - Landscaping and irrigation needs;
 - Development density (i.e., single family, multi-family, etc.)
 - Impact to Mesa Water's water distribution system, service connections and infrastructure hydraulic sufficiency (when applicable)
 - b. Water Service & Meter Sizing: JR Consulting shall review submitted plans and calculated required water service connection and meter sizing per information herein:
 - **c. Fire Code Requirement:** JR Consulting's review shall ensure that the proposed water service and meter size provide adequate fire flow protection per the local and state fire protection requirements. JR Consulting shall ensure that the appropriate approval has been received from the City of Costa Mesa Fire Department prior to approving final WDP plans.
 - **d. Landscaping & Irrigation Requirements:** JR Consulting shall review proposed water development project landscaping plans to determine if a separate irrigation meter shall be required per Mesa Water Rules and Regulations
 - e. Cross Connection Protection: JR Consulting shall review proposed WDP for compliance with Mesa Water's, Orange County Healthcare Agency (OCHCA) and

State Water Resources Control Board Division of Drinking Water requirements for cross connection protection and backflow prevention.

- **6. Utility Coordination:** JR Consulting shall provide a review of other proposed and existing utilities identified on the proposed WDP plans to ensure that the proposed water service design and appurtenances do not interfere with other utilities. Review shall ensure accuracy of design and fit with existing improvements and underground utilities. JR Consulting shall also coordinate external utility request received from perspective developers and other utility companies.
- **7. Easements:** JR Consulting shall review improvement plans against easement documents, record maps and right-of-way documents and identify the need for permanent easements, additional right-of-way or temporary easements.
- 8. **Plan Set Review:** JR Consulting shall review all proposed WDP general notes, standards, details, title-blocks, plans and profiles, and other pertinent information necessary to provide a comprehensive review. JR Consulting shall add the required comments to enhance the proposed WDP to ensure compliance with the aforementioned standards.
- 9. **Hydraulic Model Analysis:** JR Consulting shall determine if Mesa Water's surrounding distribution and production system will be impacted by the proposed WDP. Should JR Consulting determine that an impact may occur, JR Consulting shall coordinate the hydraulic model analysis parameters with Mesa Water's GIS consultant to provide the required hydraulic model analysis run and results. JR Consulting shall review the hydraulic analysis report results and incorporate any required improvements on the proposed WDP. JR Consulting shall coordinate with Mesa Water's Project Manager for approval prior to initiating the hydraulic model analysis.
- **10. Mesa Water Coordination:** JR Consulting shall coordinate proposed WDP plan check process with designated Mesa Water Project Manager. Coordination activities may include, but not be limited to, operational inquiries, requests for as-built documents, customer inquiries, site coordination needs, equipment questions, and other requirements as necessary.
- 11. Customer Coordination: JR Consulting shall communicate with customers (or their designated design professionals) and Mesa Water staff as necessary to clarify questions related to the proposed WDP. JR Consulting shall return phone calls within one business day of inquiry.
- **C. Outside Agency Coordination:** JR Consulting shall coordinate review of proposed WDP with outside agencies as requested by Mesa Water. Outside agency coordination may include but not be limited to, the City of Costa Mesa Fire Department, OCHCA, Costa Mesa Sanitary District and other agencies as required.

D. Plan Check Review Process & Coordination: Mesa Water's Plan check process includes an internal review process that includes reviews by Operations, Inspector, Cross Connection Specialists, Customer Service and District Engineer. JR Consulting shall assist with Mesa Water's internal review process as follows:

1st Review: The 1st review process is as follows:

- 1. **Application Receipt:** On days that JR Consulting is not on-site, the Mesa Water Project Manager shall receive the application, accepts review fees, and gathers other required information. When JR Consulting is on-site, these duties shall be performed by JR Consulting.
- 2. **WDP Review:** JR Consulting shall review the proposed WDP per the aforementioned requirements and provide written review comments back to Mesa Water on the plan set within 5 working days.
- 3. **Mesa Water Review:** JR Consulting shall route for internal review and obtain approval from each Department (i.e. Operations, Inspector, Cross Connection Specialists, Customer Service and District Engineer). Each department shall provide a sign-off of the proposed WDP signature stamp on the original proposed WDP plan set. JR Consulting shall assist in answering questions of Mesa Water Staff during the internal review process.
- 4. **Plan Set Return:** JR Consulting shall return generated review comments within 10 calendar days of initial receipt.

2nd/3rd Reviews: The 2nd and 3rd review process is as follows:

- 1. WDP Review: JR Consulting shall review the proposed WDP per 1st plan check submittals, other aforementioned requirements and provide written review comments back to Mesa Water on the plan set within 3 working days.
- 2. Mesa Water Review: JR Consulting shall route for internal review and obtain approval from each Department (i.e. Operations, Inspector, Cross Connection Specialists, Customer Service and District Engineer). Each department shall provide a sign-off of the proposed WDP signature stamp on the original proposed WDP plan set. JR Consulting shall assist in answering questions of Mesa Water Staff during the internal review process.
- 3. Plan Set Return: JR Consulting shall return generated review comments within 10 calendar days of initial receipt.

Final Review: If, after the 2nd check or the 3rd check, the customer has adequately addressed the previous plan check comments the following procedure shall be followed:

- 1. Mylar Request: JR Consulting shall request that the customer submit final plans on mylar and final reports be submitted.
- 2. Consultant Signature: JR Consulting shall initial and date the title block on the final plans title sheet and associated report(s) and route the final plans on mylar and associated reports to the District Engineer for signature.
- 3. Project Costing: JR Consulting shall also provide a rough-order of magnitude cost estimate of the proposed WDP to Mesa Water's Project Manager with the signed mylars.

E. Other Support Services: JR Consulting may be requested to participate in person at the following meetings:

- 1. **Development Review Committee (DRC) Meeting:** Attend City of Costa Mesa's DRC bi-weekly meeting at City Hall to review upcoming projects being considered by the City. JR Consulting shall provide written plan check comments to the City staff with Mesa Water's approval on upcoming plan checks to ensure plans are reviewed by Mesa Water. JR Consulting shall provide a written review documenting the events that occurred and upcoming projects.
- 2. **Counter Appointments:** JR Consulting shall schedule meetings to be conducted at Mesa Water during weekly meeting work days to meet with customers on proposed WDPs. JR Consulting shall arrange meetings for customer and Mesa Water Project Manager a minimum of one week in advance.
- 3. **Easement Review Need:** JR Consulting shall review the need for proposed WDP easements and make an overall recommendation to the Mesa Water Project Manager as to the final approach to accommodating the proposed WDP. JR Consulting shall review all recommended easements with the Project Manager prior to finalizing the recommendation for an easement.
 - 4. **Easement Development:** JR Consulting shall review submitted proposed easements. Easement shall be reviewed for conformity with legal descriptions and accompanying exhibits. JR Consulting shall also coordinate review of proposed easements with Mesa Water's legal counsel.

TIME SCHEDULE

JR Consulting will commence with the proposed scope of services after the Professional Services Agreement (PSA) has fully been executed. Plan checking review will be completed on a scheduled established by the Mesa Water Project Manager and per the Mesa Water Plan Check Handbook.

COMPENSATION

Based on JR Consulting's present knowledge of the services described above, we are proposing a not-to-exceed budget per year of \$124,800 (\$249,600 for 2 years) be budgeted for Tasks A through E. This not-to-exceed budget is based upon an hourly rate of \$150 per hour for an estimated 16 hours per week and does not include any other direct costs (mileage, reproduction, etc.). We have reviewed Mesa Water's Professional Service Agreement and can comply with the insurance requirements.

JR Consulting commits to timely, responsive services, and to deliver excellence in the offered services. We are eager and enthusiastic to begin supporting Mesa Water with plan checking services.

If there are any questions, please feel free to contact me at (626) 375-9389 or jrobinson@johnrobinsonconsulting.com

Very truly yours,

John Robinson Consulting, Inc.

John Robinson, Principal

MEMORANDUM



TO: Board of Directors

FROM: Marwan Khalifa, CPA, MBA, Chief Financial Officer

Dedicated to DATE: April 11, 2019

Satisfying our Community's SUBJECT: Financial Auditor Selection

Water Needs

RECOMMENDATION

Approve a contract extension to White Nelson Diehl Evans LLP to perform annual financial audit services for fiscal years ending June 30, 2019 and June 30, 2020.

The Finance Committee reviewed this item at its March 25, 2019 meeting and recommends Board approval.

STRATEGIC PLAN

Goal #3: Be financially responsible and transparent.

PRIOR BOARD ACTION/DISCUSSION

At its October 12, 2004 meeting, the Board of Directors (Board) adopted Resolution No. 1307 Establishing a Policy to Solicit Proposals for Outside Auditing Services Superseding Resolution No. 1226. Under Resolution No. 1307, at the discretion of the Board and upon conclusion of the initial three-year term, the Board may authorize up to two additional one-year renewals with the current firm. In addition, the policy imposed a limit of five consecutive annual audits by the same firm.

In April 2011, Mesa Water District (Mesa Water®) issued a financial audit Request for Proposals (RFP) and received proposals from three firms: Diehl Evans & Company, Mayer Hoffman McCann, and Lance, Soll & Lunghard. The Board selected Mayer Hoffman McCann (now Davis Farr) to perform annual financial audits from Fiscal Year (FY) 2011 to FY 2013 with options to renew for FY 2014 and FY 2015, which were exercised. Davis Farr completed five financial audits; the cost of the final year's financial audit was \$25,700.

At its March 21, 2016 meeting, the Finance Committee reviewed Professional Auditing Services proposals from four firms and directed staff to agendize "Financial Auditor Selection" at the next Board Meeting.

At its April 14, 2016 meeting, the Board awarded a contract to White Nelson Diehl Evans LLP (WNDE) to perform annual financial audit services for fiscal years ending June 30, 2016, June 30, 2017 and June 30, 2018 with two optional one-year extensions.

At its April 18, 2016 workshop, the Board directed staff to agendize "Financial Auditor Selection" at a future Board meeting to reconsider the approved motion from the April 14, 2016 meeting.

At its May 19, 2016 meeting, the Board deferred "Financial Auditor Selection" to a future Finance Committee for further discussion.

At its June 20, 2016 meeting, the Finance Committee approved the scope of work within the



existing Professional Auditing Services RFPs, developed a scope of work and budget to conduct a Fraud Audit, and awarded a contract to WNDE to perform annual financial audit services for fiscal years ending June 30, 2016, June 30, 2017 and June 30, 2018 with two optional one-year extensions.

At its June 8, 2017 meeting, the Board adopted Resolution No. 1501 Establishing a Policy for the Selection Process for the Appointment of General Legal Counsel and Independent Auditor, Superseding Resolution No. 1307.

DISCUSSION

WDNE has completed the last three annual financial audits and preparation of the Comprehensive Annual Financial Report (CAFR) for fiscal years ending June 30, 2016, June 30, 2017, and June 30, 2018.

In accordance with Resolution No. 1501, the Board may authorize up to two additional one-year renewals with WNDE or direct staff to solicit Request for Proposals for an Independent Auditor. The table below shows the maximum fees for the two fiscal years ending June 30, 2019 and June 30, 2020:

Services	Option Periods	
	FY2019	FY2020
Audit	\$28,462	\$29,174
Preparation of the CAFR	\$ 3,824	\$ 3,939
Total	\$32,286	\$33,113

Staff recommends that the Board approve a contract extension to WNDE to perform annual financial audit services for fiscal years ending June 30, 2019 and June 30, 2020.

FINANCIAL IMPACT

In Fiscal Year 2019, \$32,000 is budgeted for Auditing Services; \$22,000 has been spent to date; \$33,000 will be budgeted in the proposed Fiscal Year 2020 Budget and \$34,000 will be budgeted in the proposed Fiscal Year 2021 Budget.

ATTACHMENTS

Attachment A: WNDE Professional Auditing Services Proposal



February 8, 2019

Mr. Marwan Khalifa Chief Financial Officer Mesa Water District 1965 Placentia Avenue Costa Mesa, CA 92627

Dear Marwan:

Our professional services contract dated June 20, 2016 to provide audit services to Mesa Water District (District) allows the District to extend our agreement by written amendment for the two fiscal years 2018-19 and 2019-20. White Nelson Diehl Evans LLP specializes in audits of special districts and has an extensive government services staff, which will enable us to continue to provide the same level of services we have provided in the three years. We are pleased to present our proposal to continue to provide audit services to the City for next two fiscal years. The proposed fees shown in the enclosed attachment are the same as those presented in our original proposal.

If you have questions on the proposed fees, please contact me at (714) 979-1300 or by email at npatel@wndecpa.com.

Very truly yours,

WHITE NELSON DIEHL EVANS, LLP

N. P. Patel

Nitin P. Patel, CPA Engagement Partner

MESA CONSOLIDATED WATER DISTRICT

MAXIMUM PRICE SUMMARY

Our maximum fees for the two years ending June 30, 2020 will be as follows:

	Fiscal Year			
		Option Periods		S
Service	2	018-19	2	2019-20
Mesa Consolidated Water District:				
Audit	\$	28,462	\$	29,174
Preparation of the CAFR		3,824		3,939
	\$	32,286	\$	33,113

MEMORANDUM



TO: Board of Directors

FROM: Stacy Taylor, External Affairs Manager

Dedicated to DATE: April 11, 2019

Satisfying our Community's SUBJECT: State Legislation Positions

Water Needs

RECOMMENDATION

Approve Mesa Water District's positions on active state bills of high priority.

The Legislative and Public Affairs Committee reviewed this item at its March 25, 2019 meeting and recommends Board approval.

STRATEGIC PLAN

Goal #1: Provide a safe, reliable, and abundant water supply.

Goal #2: Practice perpetual infrastructure renewal and improvement.

Goal #3: Be financially responsible and transparent.

Goal #4: Increase public awareness about Mesa Water and about water.

Goal #5: Attract and retain skilled employees.

Goal #6: Provide outstanding customer service.

Goal #7: Actively participate in regional water issues.

PRIOR BOARD ACTION/DISCUSSION

None.

DISCUSSION

The first three months of the 2019 legislative session has been quite active in Sacramento with Mesa Water District (Mesa Water®) consultants and staff engaged in advocacy related to several high-priority bill proposals, including newly introduced legislation and reintroduced legislation from prior sessions. Listed below is information about key bill proposals that would greatly impact Mesa Water and, thus, are high priority for our state legislative affairs.

Bill Number	Topic	Recommendation	
SB 204 Dodd	State Water Project: Contracts	Support Coalition Efforts to Oppose Unless Amended	
SB 332 Hertzberg & Wiener	Wastewater Treatment: Recycled Water	Support Coalition Efforts to Oppose Unless Amended	
SB 414 Caballero	Small System Water Authority Act of 2019	Support	
AB 510 Cooley	Local Government Records: Destruction of Records	Support	



Bill Number	Topic	Recommendation
AB 533 Holden	Income Tax Exclusion: Water Conservation/Efficiency Programs: Water Runoff Management Improvement Program	Support Coalition Efforts to Support
AB 533 Holden	Income Tax Exclusion: Water Conservation/Efficiency Programs: Water Runoff Management Improvement Program	Support Coalition Efforts to Support
AB 1204 Rubio	Public Water Systems: Primary Drinking Water Standards: Implementation Date	Support
AB 1253 Rivas	LAFCOs: Grant Program	Support Coalition Efforts to Oppose Unless Amended
AB 1588 Gloria & Gray	Drinking Water & Wastewater Operator Certification Programs	Support

Senate Bill (SB) 204 (Dodd, D - Napa) - State Water Project: Contracts

Introduced in the interest of furthering transparency and information-sharing regarding future State Water Project (SWP) contract amendments, <u>SB 204</u> would significantly delay action on finding a Delta conveyance solution or modifying the SWP contracts in a way that meets the needs of our people, economy, environment, and farms.

Specifically, SB 204 would add a section to the Government Code requiring that the Delta Conveyance Design and Construction Authority (DCA) submit the terms and conditions of any contract for planning, design, and construction 60 days in advance to the Joint Legislative Budget Committee (JLBC) and relevant policy and fiscal committees. Additionally, the measure states that if the JLBC or relevant policy committees hold a hearing to review a contract, then the contract cannot be approved for 90 days until after the first review hearing is scheduled. If no hearing is held, there is no language to determine the course of action.

This addition to the Government Code would significantly and unnecessarily delay any action to move California WaterFix forward, and would increase costs to implement the project by creating excessive delays in the contracting process. While Mesa Water supports efforts to bring further transparency to any future amendments to the SWP contracts and California WaterFix construction, this can be done by providing information and testimony during informational hearings...not by creating open-ended processes that could create unnecessary delays and increased costs.

Based on Mesa Water's legislative platform to support efforts to achieve a long-term Delta solution, it is appropriate for Mesa Water to participate in the coalition led by Metropolitan Water District of Southern California (MWD) along with the Municipal Water District of Orange County (MWDOC) to **Oppose SB 204 Unless Amended** (see Attachment A for the Coalition Letter).



SB 332 (Hertzberg, D - Van Nuys & Wiener, D - San Francisco) – Wastewater Treatment: Recycled Water

SB 332 is a reintroduction of a concept similar to SB 163 (Hertzberg, 2015) which would have declared that the discharge of treated water through ocean outfalls constitutes a waste and unreasonable use of water under Section 2 of Article X of California's Constitution (see Attachment B for a SB 332 Summary and Comparison with SB 163).

With no funding provided for agency compliance, SB 163 ignored huge cost concerns associated with complying with the bill's requirements that ocean dischargers would have needed to undergo massive treatment facility upgrades, imposing costs in the billions of dollars on local ratepayers. Mesa Water was part of a SB 163 opposition coalition led by the Association of California Water Agencies (ACWA), California Association of Sanitation Agencies (CASA), WateReuse CA, and their member agencies. Ultimately, SB163 died.

Proponents of SB 332, sponsored by the Natural Resources Defense Council (NRDC) and supported by the California Coastkeeper Alliance, believe that recycling wastewater from coastal outfalls is a good solution to creating new water supplies without causing harm to the environment from the desalination process.

SB 332 would require a 50% reduction of baseline volume of ocean outfall wastewater discharge by January 1, 2030, and a 95% reduction by January 1, 2040 (baseline would be the average annual volume of ocean outfall wastewater discharge for calendar years 2010-2020). Additionally, SB 332 requires the submission of plans and reports, and includes the following enforcement penalties with all penalties applying to National Pollutant Discharge Elimination System (NPDES) permittees for ocean outfalls and all affiliated water suppliers:

- \$2,000 per acre foot discharged above reduction requirement;
- \$10,000 for failure to submit reports by deadlines; and,
- Ineligibility for state grants or loans until delinquent reports are submitted.

Both ACWA and CASA have oppose positions on SB 332, and WateReuse CA will most likely take the lead on this bill with an Oppose Unless Amended position. Staff recommends that Mesa Water support the WateReuse CA efforts to **Oppose SB 332 Unless Amended**.

SB 414 (Caballero, D - Salinas) – Small System Water Authority Act of 2019

Co-sponsored by California Municipal Utilities Association (CMUA) and Eastern Municipal Water District (EMWD), <u>SB 414</u> would create a sustainable approach that can help provide all Californians with access to safe and reliable drinking water, now and into the future (see Attachment C for the Legislative Fact Sheet). SB 414 is similar to last year's Assembly Bill (AB) 2050 -- authored by Caballero when she was in the Assembly, and co-sponsored by CMUA and Eastern MWD -- which Mesa Water supported.

SB 414 proposes to merge multiple, chronically non-compliant water systems -- that are close in general proximity but do not have to share boundaries -- into larger and more robust systems that can benefit from improved economies of scale, streamlined operational functions, and enhanced technical, managerial, and financial capacities. The newly formed special district would then have better financing opportunities due to a larger customer base. The collective customer base provides increased access to state grants and municipal bonds, or other funding mechanisms, historically used by larger public agencies. These newly created special districts would be held to public



agency accountability standards to ensure funds are appropriately used to develop necessary infrastructure for treating contamination issues so that customers receive safe and affordable water.

The overall concept of SB 414 is similar to and improves upon AB 2050 (see Attachment D for a Summary of Language Changes between SB 414 and AB 2050). SB 414 is a governance solution, paired with the funding solution proposed in SB 669 (authored by Caballero and co-sponsored by ACWA and CMUA) as an alternative to the statewide water tax.

Specifically, SB 414 would allow the consolidation of community water systems, private water companies, and mutual water companies that:

- have less than 3,000 service connections or serve under 10,000 people; and,
- are noncompliant from July 1, 2018 to December 31, 2019 with one or more state or federal primary drinking water standard maximum contaminant levels.

Based on Mesa Water's support of AB 2050 in 2018, and support of SB 669, it is appropriate for Mesa Water to <u>Support SB 414</u> (see Attachment E for a Sample Support Letter).

AB 510 (Cooley, D - Rancho Cordova) – Local Government Records: Destruction of Records

At the request of the California Special Districts Association (CSDA), <u>AB 510</u> was introduced to modernize the Government Code by allowing local public agencies to adopt records retention policies designed for modern digital recording technologies, while ensuring the proper retention of any records wherein an incident may have occurred. This legislation does not affect video monitoring or retention policies related to law enforcement activities or open and public meetings.

Since 1998, public agencies have been required to retain routine video monitoring for one year, as well as radio and telephone recordings for 100 days. For video monitoring, legislative history shows the original intent was to store videotapes. However, since that time, technology has advanced significantly while the law has remained unchanged, and the vast majority of video monitoring is now done using digital cameras that record onto DVRs, agency servers, and cloud-based servers.

Public agencies are installing an ever-increasing number of cameras that are recording in significantly higher resolution -- 4k in some instances -- making the recordings increasingly more useful and effective. However, with the increased number of cameras and higher picture quality, the amount of data that must be stored to comply with the current mandated retention requirements is astronomical and is costing local public agencies enormous sums of taxpayer dollars.

Additionally, while the higher picture quality of digital cameras is more useful than video tape, most of the routine video monitoring is of no value to the public because it is surveillance footage of nothing happening. For example, 24-hour footage from a camera facing the back entrance to an office building where zero incidents have occurred must still be maintained for one year. AB 510 modernizes existing law to catch up with the technology of today and allows flexibility for public agencies to adapt to future technological advances.

AB 510 requires public agencies to maintain routine monitoring records where incidents may have occurred until the incident is fully resolved. The bill also allows agencies to diligently manage their financial and equipment resources by setting their own records retention policies based on the needs and the use of their cameras, radios, and telephones. Furthermore, in the absence of an agency adopting their own records retention policies in a public forum, the current one-year (video recordings) and 100-day (radio and telephone recordings) retention policies would remain in effect. This change in law allows agencies to retain important records while deleting useless ones, thus saving a significant amount of taxpayer dollars on unnecessary data storage costs.



Mesa Water consultants and staff participated in CSDA's workgroup for AB 510 language drafting and editing. Based on workgroup participation and strategic plan goals, staff recommends that Mesa Water **Support AB 510** (see Attachment F for a Sample Support Letter).

AB 533 (Holden, D - San Gabriel Valley) – Income Tax Exclusion: Water Conservation or Efficiency Programs: Water Runoff Management Improvement Program

<u>AB 533</u> would exclude from gross income -- under personal income and corporation tax laws -- amounts received as a rebate, voucher, or other financial incentive issued by a local water agency for participation in water efficiency or stormwater runoff improvement programs.

In 2014, then Assemblyman Jimmy Gomez authored AB 2324 that excluded from gross income -- under both the personal income and corporation tax laws -- amounts received as a rebate, voucher, or other financial incentive issued by a local water agency for participation in a turf removal water conservation program. The measure went into effect immediately after being signed into law by then Governor Brown, and applied to taxable years beginning on or after January 1, 2014 and before January 1, 2019. Last year, Assemblyman Holden introduced AB 2283 that would have extended the sunset date of AB 2324 for another five years. Approved unanimously by the Assembly Revenue and Taxation Committee, AB 2283 was held on Suspense in the Assembly Appropriations Committee and did not move forward.

When California is not faced with drought and water use restrictions, added financial incentives can help to maintain public participation in conservation measures. Consumer rebates and subsidies are a cost-effective tool for increasing participation in conservation and stormwater management programs. Treating consumer rebates as taxable income could undermine their success and taxing consumer rebates could be a major disincentive for households and businesses.

MWD/MWDOC are leading a coalition of member agencies and water industry associations to support AB 533, and staff recommends that Mesa Water join the coalition's efforts to **Support AB** 533 (see Attachment G for the Coalition Letter).

AB 1204 (Rubio, D - Baldwin Park) – Public Water Systems: Primary Drinking Water Standards: Implementation Date

Sponsored by ACWA, <u>AB 1204</u> would allow water agencies time to come into compliance with a newly established Maximum Contaminant level (MCL) for a drinking water contaminant.

This bill would apply when a primary drinking water standard is adopted or amended for a drinking water contaminant, with an MCL that is either more stringent than a federal primary drinking water standard or that is not regulated by a federal primary drinking water standard. AB 1204 would provide that the new standard would take effect three years after the date when the State Water Resources Control Board (SWRCB) adopts or amends the primary drinking water standard.

AB 1204 would also authorize the SWRCB to delay the effective date of the primary drinking water standard adoption or amendment by no more than two additional years as necessary for capital improvements to comply with a MCL or treatment technique.

Based on Mesa Water's legislative platform and Board's strategic plan goal related to water quality, staff recommends that Mesa Water **Support AB 1204**.

AB 1253 (Rivas, D - Hollister) – Local Agency Formation Commissions: Grant Programs AB 1253 is a reintroduction of AB 2258 (Caballero) from 2018 and would provide additional



resources to Local Agency Formation Commissions (LAFCOs) for the dissolution and consolidation of special districts. Further, this bill would provide LAFCOs with financial resources of \$1.5 million (financed from the State General Fund) -- in the form of a competitive grant program, established and administered by California's Strategic Growth Council -- for LAFCOs to do this and other work.

Last year, Mesa Water opposed AB 2258 because it would have altered LAFCOs' protest provisions to make it more difficult for citizens to protest a LAFCO-initiated action. Additionally, it was unclear as to how the Strategic Growth Council would structure the grant criteria and eligibility, and whether this would be done via a public process that allowed for stakeholder input. Similar issues exist with AB 1253, which proposes to alter LAFCOs' protest provisions by cross-referencing California Elections Code Section 11221, which allows a tiered, by population, protest threshold.

AB 1253, like AB 2258, is an end-round the Cortese Knox Hertzberg Act. For these reasons, staff recommends Mesa Water join ACWA's efforts to **Oppose AB 1253 Unless Amended**.

AB 1588 (Gloria, D - San Diego & Gray, D - Merced) – Drinking Water & Wastewater Operator Certification Programs

Sponsored by the San Diego County Water Authority, <u>AB 1588</u> seeks to create a path of reciprocity for military veterans transitioning out of military service and into civilian water and wastewater treatment occupations (see Attachment H for the Legislative Fact Sheet).

At this time, there are inadequate equivalency standards and a lack of appropriate crediting toward California certifications for experiences and education that may have been gained in these water and wastewater treatment operator occupational fields during military service. AB 1558 is absolutely not trying to create any short-circuit of the California testing and certification process; rather, the bill attempts to create a path by which the SWRCB applies crediting and recognizes work experiences and education derived during military service.

Based on the Board's strategic plan goal related to human resources, staff recommends that Mesa Water **Support AB 1588** (see Attachment I for a Sample Support Letter).

FINANCIAL IMPACT

None.

ATTACHMENTS

Attachment A: SB 204: Delta Conveyance: Oppose Unless Amended Coalition Letter

Attachment B: SB 332 Summary and Comparison with SB 163 (2015)

Attachment C: SB 414 Legislative Fact Sheet

Attachment D: SB 414 Summary of Language Changes from AB 2050 (2018)

Attachment E: SB 414 Sample Support Letter Attachment F: AB 510 Sample Support Letter Attachment G: AB 533 Support Coalition Letter Attachment H: AB 1588 Legislative Fact Sheet Attachment I: AB 1588 Sample Support Letter

















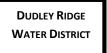


































SB 204 (Dodd): Delta Conveyance
OPPOSE UNLESS AMENDED

Senate Natural Resources and Water Committee

Date of Hearing: March 12, 2019

March 1, 2019

The Honorable Bill Dodd California State Senate State Capitol, Room 4032 Sacramento, CA 95814

Re: SB 204: Delta Conveyance: **OPPOSE UNLESS AMENDED**

Senate Natural Resources and Water Committee - March 12, 2019

Dear Senator Dodd:

On behalf of the signatories noted below, we respectfully oppose your bill, SB 204, unless amended to address the concerns identified below. While we understand your interest in further transparency and sharing of information regarding future State Water Project contract amendments, some sections of the bill would significantly delay action to find a conveyance solution in the Delta or in modifying the SWP contracts in a way that meets the needs of our people, economy, environment, and farms.

SB 204 would add a section to the Government Code requiring that the Delta Conveyance Design and Construction Authority (DCA) submit 60 days in advance the terms and conditions of any contract for planning, design, and construction to the Joint Legislative Budget Committee (JLBC) and relevant policy and fiscal committees. Furthermore, the measure states IF_the JLBC or relevant policy committees hold a hearing to review a contract, the contract may not be approved for 90 days until after the first review hearing is scheduled. There is no specific language to determine the course of action if a hearing is not held.

This addition to the Government Code would significantly and unnecessarily delay any action on California WaterFix moving forward and would increase costs to implement the project by creating excessive delays in the contracting process. Governor Newsom, in his State of the State, expressed his administration's support for a one-tunnel project, and work is beginning on a refined project that will meet the objectives of water supply reliability and ecosystem restoration. Sections 6255.5 (b) and (c) would compromise efforts to move forward with the project in an efficient manner by making competitive bids of a construction contract essentially impossible, as it would require contractors to keep bid prices viable for a minimum of 150 days. A contractor could decide to inflate prices to compensate for the delay and uncertainty in the process, thereby undermining state contracting practices to hire the most qualified contractor and negotiate a competitive price. Furthermore, if no hearings are scheduled, it is unclear if the contracts could be approved, thus delaying or preventing implementation of California WaterFix.

Last year, the Joint Legislative Budget Committee sought to bring greater transparency to the State Water Project's long-term contract extensions, and an informational hearing was held on September 11, 2018. We support efforts to bring further transparency to any future amendments to the State Water Project contracts and construction of California WaterFix. That can be done by providing information and testimony during informational hearings, not by creating open-ended processes that could create unnecessary delays and increased costs.

Opposition Letter to SB 204 (Dodd) March 1, 2108

There is overwhelming scientific and policy evidence, developed over the course of more than a dozen years of study and analysis by state and federal agencies that California needs to move rapidly to modernize its water conveyance system to ensure water reliability for millions of Californians, farmers, and the environment. SB 204 is not the answer.

If you have any questions regarding our position on the measure, please do not hesitate to contact Kathy Viatella at The Metropolitan Water District of Southern California at kviatella@mwdh2o.com or by phone at (916) 650-2614.

Thank you for your consideration.

Sincerely,

Jeff Kightlinger General Manager Metropolitan Water District of Southern California	Nina Jazmadarian General Manager Foothill Municipal Water District	David W. Pedersen, P.E. General Manager Las Virgenes Municipal Water District	Susan Mulligan, P.E. General Manager Calleguas Municipal Water District
Paul Jones, II General Manager Eastern Municipal Water District	Kirby Brill Interim General Manager Inland Empire Utilities Agency	John D. Vega General Manager Elsinore Valley Municipal Water District	Paul E. Shoenberger, P.E., <i>General Manager</i> Mesa Water District
Tom A. Love General Manager Upper San Gabriel Valley Municipal Water District	Jessica Lall President & CEO Central City Association of Los Angeles	Matthew Litchfield General Manager Three Valleys Municipal Water District	Curtis Creel General Manager Kern County Water Agency
Dwayne Chisam General Manager Antelope Valley-East Kern Water Agency	Dale K. Melville Manager-Engineer Dudley Ridge Water District	Jennifer Pierre General Manager State Water Contractors, Inc.	Ray Stokes Executive Director Central Coast Water Authority
Jim Barrett General Manager Coachella Valley Water District	Douglas Headrick General Manager San Bernardino Valley Municipal Water District	Darin Kasamoto General Manager San Gabriel Valley Municipal Water District	Matt Stone General Manager Santa Clarita Valley Water Agency

Mark S. Krause General Manager Desert Water Agency	Robert Shaver General Manager Alameda County Water District	Tom McCarthy General Manager Mojave Water Agency	Craig Miller General Manager Western Municipal Water District
Steve Popelar Director of Finance & Administration Jurupa Community Services District	Gene Wunderlich Vice President of Government Affairs Southwest Riverside County Association of Realtors®	Valerie Nera Policy Advocate Cal Chamber	Robert Reeb Executive Director Valley Ag Water Coalition
Norma Camacho Chief Executive Officer Santa Clara Valley Water District	Brian A. Dickinson General Manager Water Department City of Compton	Gail Delihant Director Western Growers Association	Stuart Waldman President Valley Industry & Commerce Association
Alice Sullivan President & CEO Temecula Valley Chamber of Commerce	Tony Stafford General Manager Camrosa Water District	Tom Flavin Chief Executive Officer Burbank Chamber of Commerce	Michele Newell Board Chair VCEDA
Samantha Shapiro Executive Assistant/ Government Relations Coordinator Simi Valley Chamber of Commerce	John Bosler General Manager Cucamonga Valley Water District	Peggi Hazlett President/CEO Ontario Business Council	

cc: Members of the Senate Natural Resources and Water Committee
Dennis O'Connor, Principal Consultant, Senate Natural Resources and Water Committee
Todd Moffitt, Policy Consultant, Senate Republican Caucus

SUMMARY OF SB No. 332 (HERTZBERG AND WIENER)

AS INTRODUCED FEBRUARY 19, 2019

General:

- Declaration of discharge from ocean outfalls as waste and unreasonable use.
- Ocean outfalls consist of point source discharges to saline waters, including oceans, bays and estuaries.
- Applies to both NPDES permitholders (owner/operator of wastewater treatment facility) and affiliated water suppliers.
- Affiliated water suppliers defined broadly as all water suppliers that provide water disposed of in the collection system tributary to wastewater treatment facility.
- Baseline volume is average annual volume of wastewater discharged through ocean outfall for calendar years 2010 through 2020.
- No mention of the need for brine disposal or wet-weather discharges.

Reduction Requirements:

- 50% reduction of baseline volume by January 1, 2030.
- 95% reduction of baseline volume by January 1, 2040.

Plans:

- By July 1, 2022, a plan is required of NPDES permitholders, prepared "in conjunction with affiliated water suppliers," including specific information on facilities, cost, financing and schedule for meeting reduction requirements.
- By January 1, 2026, an updated plan is required to include refinements or changes and a written statement that the plan is current and accurate.

Reports:

- Reports to be submitted by NPDES permitholder <u>and</u> affiliated water suppliers to SWRCB every five years, including specific information on progress toward meeting reduction requirements.
 - First report due on January 1, 2024.
 - Subsequent reports due on January 1st of 2029, 2034 and 2039.

Penalties:

- All penalties apply to both NPDES permitholder and affiliated water suppliers.
- \$2,000/acre-foot of water discharged above reduction requirement.
- \$10,000 for failing to submit report by deadline.
- Ineligibility for state loans or grants until delinquent report is submitted.

COMPARISON OF SB No. 332 (2019) AND SB No. 163 (2015)

Bill No.	Applies to	Numerical Requirements	Exemptions	Plans	Reports	Penalties
SB No. 332 (2019)	NPDES permittees for ocean outfalls and affiliated water suppliers.	 50% reduction by 01/01/30. 95% reduction by 01/01/40. Baseline = avg. annual for CY 2010 to 2020, inclusive. 	None.	 By 07/01/22, a plan is required of NPDES permittees, prepared in conjunction with affiliated water suppliers. By 01/01/26, an updated plan is required with a written statement that it is current and accurate. 	 By 01/01/24, first report required of NPDES permittees and affiliated water suppliers. Subsequent reports due on Jan. 1st every five years. 	 \$2,000/AF discharged above reduction requirement. \$10,000 for failure to submit report by deadline. Ineligibility for state grants or loans until delinquent report is submitted. All penalties apply to both NPDES permittee and affiliated water suppliers.
SB No. 163 (2015)	NPDES permittees for ocean outfalls.	 50% reuse by 01/01/26. 100% reuse by 01/01/36, and no discharge except as a backup discharge. Backup discharge is during periods of low recycled water demand such as wet-weather. Baseline = avg. annual for CY 2009 to 2014, inclusive. 	 On or after 01/01/22, permittees may petition SWRCB for partial exemption if they can demonstrate inability to meet req'ts for one of three specified reasons. Partial exemptions last for five years, upon which time permittee may reapply. Permittees with partial exemptions ineligible for state grants and loans, except those specifically for compliance with req'ts. 	 By 07/01/20, a plan is required of NPDES permittees. By 01/01/24, an updated is plan is required with a written statement that it is current and accurate. 	 By 01/01/17, first report required of NPDES permittees. Subsequent reports due on Jan. 1st every five years. 	None.





SB 414 (Caballero) The Small System Water Authority Act of 2019

A Solution to Providing Safe Drinking Water to Communities Served by Chronically Non-Compliant Systems

Background

In 2012, Governor Jerry Brown signed into law Assembly Bill 685 (Eng), establishing the Human Right to Water—declaring that it is the policy of the state that every Californian has a human right to safe, clean, affordable, and accessible drinking water.

Water Accessibility and Safety Concerns in California

Nearly 800,000 people in California lack access to safe and reliable drinking water on a daily basis. The State Water Resources Control Board (State Board) has identified 329 (as of November 2017) systems statewide that chronically serve

San Francisco
San Hose

Las Vegas

Las Vegas

Las Vegas

San Diego

Tijuana Mexicali

contaminated drinking water or cannot provide reliable water service due to unsound infrastructure or because they lack the

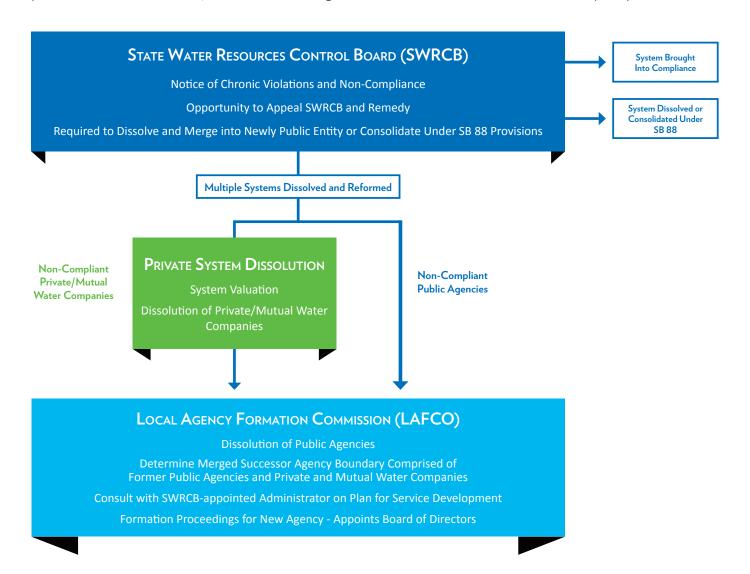


local financial, managerial, and technical resources to do so. The vast majority of these systems are small, rural systems that typically serve less than 10,000 people. A sustainable solution is necessary to address this drastic health and safety crisis.

To date, laws have been passed that address various elements of the water accessibility issue including voluntary and forced consolidations, supplying resources and technical support, and limiting the development of new unsustainable water systems. While these efforts have created a portfolio of options to address this critical issue of water accessibility in California, immediate and lasting changes to the governance structure of chronically noncompliant small systems are still needed to protect public health and safety.

The Small System Water Authority Act of 2019

SB 414 would create the Small System Water Authority Act of 2019, providing yet another valuable tool to prevent chronically non-compliant water systems from serving contaminated water to Californians. SB 414 proposes to merge non-compliant water systems into a larger and more robust public water system that can take advantage of improved economies of scale, streamlined managerial functions and enhanced financial capacity.



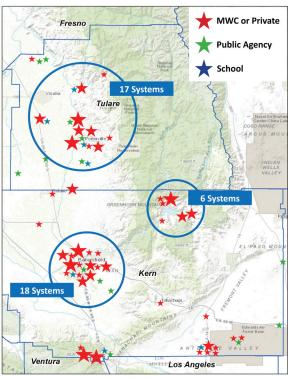
This bill authorizes the State Board to notify chronically non-compliant systems that they are in violation of public health and safety. Each system is then provided with an opportunity to develop a compliance plan within a given time period. If a system is unable to develop an approved plan, the State Board will then notify the county local agency formation commission (LAFCO) that it has determined the chronically non-compliant system needs to be dissolved and consolidated into an authority. Private and mutual water companies will be dissolved and will receive compensation through a distressed business valuation process, if there is remaining value on the system. At this time any existing water systems also will have an opportunity to voluntarily consolidate with a new authority.

The State Board will appoint an Administrator in regions that have five or more chronically non-compliant systems. In regions that have less than five systems, the State Board will be directed to use existing consolidation authorities and funding to bring those systems into compliance. The LAFCO will then form the new Small System Water Authority (Authority), which will have the unique powers to absorb, improve, and consolidate currently non-compliant public water systems with either contiguous or noncontiguous boundaries. Each Authority will be

required to submit a conceptual formation plan to the State Board. The Administrator will identify and hire critical staff and will ultimately complete a Final Plan for Service that will be approved, through a local public hearing process, at the LAFCO.

The new system will be formed as an independent special district, provided with new internal and external financing opportunities, increased transparency including an elected Board of Directors, and the system will be scaled to a size to develop, coordinate, or contract through regional agreements, the necessary infrastructure to treat contamination issues. This in turn will lead to more sustainable water systems that can effectively deliver safe and affordable drinking water to its residents.

SAMPLE Grouping of Non-Compliant Systems For demonstration purposes only.



Larger stars denote proportionately larger populations of small systems noted as "Out of Compliance" in State Water Board Database.

For more information regarding the Small System Water Authority Act of 2019

OFFICE OF SENATOR ANNA M. CABALLERO

Peter Ansel, Senior Policy Advisor 916.651.4012 peter.ansel@sen.ca.gov

NIEMELA PAPPAS & ASSOC

Erin Niemela Emily Pappas Jaime Minor 916.661.5365

CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION

Danielle Blacet 916.326.5802 dblacet@cmua.org

Small System Water Authority Act of 2019 Support/Opposition

SUPPORT

California Municipal Utilities Association (Co-Sponsor)
Eastern Municipal Water District (Co-Sponsor)
Calleguas Municipal Water District
Independent Special Districts of Orange County
Three Valleys Municipal Water District
Valley Center Municipal Water District
Western Municipal Water District

OPPOSITION

None on file

The Small System Water Authority Act of 2019

Summary of Language Changes (Changes reflect differences from AB 2050 [2018])

Part 4. Formation

- Amended Section 78030(a)(2) identifying that a system is deemed out of compliance if they are in violation of one or more state or federal primary drinking water standard maximum contaminant levels based on a running average for the period from July 1, 2018 through December 31, 2019. AB 2050 had identified a term of four consecutive quarters before March 1, 2019. This has since been deleted. This change was made to be more consistent with the regulatory community requirements.
- Section 78032 (c)(2)(C) added the word "reasonable" as, "there is no other *reasonable* alternative that would protect the public drinking water supplies of the public water system..."
- Section 78032(c)(3) added language that directed the state board to remedy the water quality violations if they are unable to make the prescribed findings through the application of their existing authority to order consolidations or through the application of existing funding sources to remedy the failure.
- Added Section 78033(a)(2) identifying that the customers of a failing water system may submit a petition
 that their public water system be included in a proposed small system water authority by filing a petition
 comprised of either a specific number of customers or by a specific percentage of the service
 connections.
- Added Section 78035(6) which identified that the conceptual formation plan must include the
 identification of interim safe drinking water supplies sufficient to serve the customers of the system from
 submission of the conceptual plan until the date upon which all infrastructure repairs, construction,
 rehabilitation or reconstruction are complete.
- Added language to Section 78038(a) that provided flexibility for the system administrator to determine that an authority would be financially and operationally viable with less than five public water systems.
- Added subsection (4) to Section 78038 which outlines systems that may voluntarily opt-in, this subsection clarifies that those systems where the residents petition to be part of the system, may be included as an opt-in system.
- Added Section 78038(b)(1)(D) which ensures that interim water supplies are identified in the plan for service that is submitted to LAFCO.
- Added 78038(b)(2)(G) identifying that where a special district is to be dissolved a successor who will assume responsibility also must identify an interim water supply.
- Added 78038(c)(1) accelerates the period for notification by the Administrator to the State Board that formation of a small system water authority is not feasible.
- Added 78038(c)(2) which requires the State Board develop findings that even though a small system water authority could not be formed that continued operations of the system is still a threat to public health and safety.

- Added 78038(c)(3) specifying that if the previously identified findings have been made then the State Board will either exercise existing consolidation authorities under SB 88 [2015], or use existing funding sources to remedy the failure to meet applicable water quality standards.
- Amended Section 78040(a) which now identifies that both the LAFCO and the State Board (AB 2050 had
 only identified LAFCO) must receive a report annually for the first three years after formation describing
 the prior year's operation, any violations of drinking water standards, actions taken, etc.
- Amended Section 78040(b) where previous versions of the bill had identified that the LAFCO may order the authority to remedy any failure to comply with conditions imposed in either the conceptual formation plan or the plan for service, this version identifies the State Board as the entity responsible.
- Added the requested language from the State Controller in section 78041(a) stating that the Controller (instead of a consultant hired by the Controller) shall prepare a report to the Legislature reviewing startup operations, fiscal health, and identifies any supplemental state funding. Further outlines that the Controller <u>may</u> consult with any other individual or organization they deem appropriate including but not limited to a list of identified associations.
- Deleted former description for the qualifications and procedure for hiring an administrator and instead cross referenced the State Board's current authority to hire a system administrator (per the State Board's request).
- Added new Sections 78042(a) and (b) requiring the State Board to prepare a report to the Legislature no later than January 1, 2026 specifying the number of public water systems that, at any time between July 1, 2018 and January 1, 2025 were out of compliance with one or more state or federal primary drinking water standard maximum contaminant levels on a running annual average. The report shall identify public water systems that were a) brought into compliance through the formation of an authority, b) were brought into compliance with consolidations under SB 88 [2015], or c) those systems that remain out of compliance. For those systems that remain out of compliance the report shall further propose one or more plans that will, using financial and other resources available, bring those systems into compliance by January 1, 2029.

Part 8. Financial Provisions: Chapter 3: Fiscal provisions

- Section 78115(a)(1) (5) removed the reference to specific dollar figures for LAFCO and each of the
 prescribed state agencies. We are in the process of refining the numbers and will likely be identifying
 Safe Drinking Water Trust as the method for funding.
- Added Sections 78115(c), (A) and (B) identifying sources of additional funding should the previously identified funding sources be insufficient. At a future date this may be linked to the Safe Drinking Water Trust Funding.

General Changes

• Changes to the timeline in terms of both calendar dates and a reference to a specific number of days have been made throughout the document.

[Date]

The Honorable Anna Caballero 12th Senate District State Capitol, Room 5052 Sacramento, CA 95814

Subject: SB 414 (Caballero): The Small System Water Authority Act of 2019 – Support

Dear Senator Caballero:

[District/Agency/Association Name] is pleased to support SB XX - The Small System Water Authority Act of 2019, and we thank you for addressing this complex and critical issue. SB 414 seeks to establish a new category of public water agency by way of merging formerly non-compliant drinking water systems in order to sustainably provide the technical, managerial, and financial capabilities necessary to ensure the consistent delivery of safe drinking water.

[District/Agency/Association Name] recognizes that water accessibility is truly a concern in a number of regions throughout the state. The State Water Resource Control Board has identified approximately 264 (as of February 6, 2019) public water systems that are chronically serving contaminated water to customers and are in violation of primary state and federal drinking water standards. A great percentage of these failing systems are primarily located in economically distressed or rural counties. Systems that fail to provide access to clean, reliable, drinking water must be held accountable and have a plan to mitigate natural contaminants, and/or manmade contaminants, or fix their under-maintained water systems.

This bill authorizes the creation of a Small System Water Authority that will be authorized to absorb, improve, and competently operate currently non-compliant public water systems with either contiguous or non-contiguous boundaries. By establishing lasting changes to the governance structures of failing water systems, the state of California will take substantial steps toward achieving the goal of making safe, clean and reliable drinking water a reality for all Californians.

[District/Agency/Association] thanks you for your support in addressing water accessibility issues. If [District/Agency/Association] could be of assistance to you in the future please contact me at [Contact Information].

Sincerely,

c: Eastern Municipal Water District California Municipal Utilities Association

[Letterhead]

[Date]

The Honorable Ken Cooley California State Assembly State Capitol, Room 3013 Sacramento, CA 95814

RE: Assembly Bill 510 (Cooley) – Support [As Introduce February 13, 2019]

Dear Assembly Member Cooley:

The [District Name], is pleased to support Assembly Bill 510, which allows public agencies to diligently manage their financial and equipment resources by setting their own records retention policies for recordings related to routine video monitoring, radios, and telephones. [Brief description of your district and services provided]

AB 510 modernizes the Government Code to allow local public agencies, including special districts, to adopt records retention policies designed for modern digital recording technologies, while ensuring the proper retention of any records in which an incident may have occurred. This change in law will allow agencies to retain important records while deleting useless ones, thus saving a significant amount of taxpayer dollars on unnecessary data storage costs.

[If possible, describe the type of routine video monitoring your district does, the number of cameras you have, and the current cost to store the data for a year]

AB 510 modernizes existing law to catch up with the technology of today and will allow flexibility for our district to adapt to future technological advances, allowing our district to diligently manage our financial and equipment resources by setting our own records retention policies based on the needs and the use of our cameras, radios, and telephones.

For these reasons, [District name] is pleased to support Assembly Bill 510. Please feel free to contact me if you have any questions.

Sincerely,



cc: Dillon Gibbons, Senior Legislative Representative, California Special Districts Association {advocacy@csda.net}



[DATE]

The Honorable Chris Holden California State Assembly State Capitol, Room 5132 Sacramento, CA 95814

Re: AB 533 (Holden): Income Tax Exemption for Water Rebates - SUPPORT

Dear Assembly Member Holden:

On behalf of the signatories noted below, we support your bill, AB 533, to exclude from gross income, under personal income and corporation tax laws, amounts received as a rebate, voucher, or other financial incentive issued by a local water agency for participation in water efficiency or storm water runoff improvement programs.

In May 2018, SB 606 (Hertzberg) and AB 1668 (Friedman) were signed into law as part of then-Governor Brown's initiative to make "Water Conservation a California Way of Life" in response to

California's longest drought in history. Utility-sponsored financial incentives, including consumer rebates, are among the most important and cost-effective tools available to local water providers to achieve water use efficiency objectives, particularly for turf replacement, irrigation controllers, leak detection devices, and other high cost water-saving options. However, over a certain amount, the rebate funds that individuals and businesses receive in connection with these programs may be deemed to be taxable under state law.

The consistent experience of California's water utilities shows that fewer individuals and corporations will avail themselves of financial incentives if they are deemed to be taxable income. If rebates from water efficiency and <u>storm water</u> improvement programs are considered taxable income in California, cities <u>and</u> water agencies are required to send tax documents, <u>i.e.</u> 1099s, to each program participant. <u>This</u> creates an unnecessary administrative burden on water agencies.

It is well documented that consumer rebates and subsidies substantially increase adoption of water use efficiency and storm water management strategies. Rebates provide a much-needed financial incentive to implement these measures year-round. We applaud your leadership in introducing this vitally important measure ensuring that rebates, vouchers, and other incentives for turf replacement and storm water programs exempt from state income and corporate tax. This is a necessary step to incentivize homeowners and businesses to make important investments in water conservation and storm water capture projects to protect our critical water resources.

For all of the above reasons, we support AB 533 and will work together to ensure its passage. Sincerely,

Jeff Kightlinger General Manager Metropolitan Water District of Southern California	Charley Wilson Executive Director & CEO Southern California Water Coalition	Susan Mulligan, P.E. General Manager Calleguas Municipal Water District	Brian A. Dickinson General Manager Water Department City of Compton
David W. Pedersen, P.E. General Manager Las Virgenes Municipal Water District	Paul Jones, II General Manager Eastern Municipal Water District	Craig Miller General Manager Western Municipal Water District	Nina Jazmadarian General Manager Foothill Municipal Water District
Matthew Litchfield General Manager Three Valleys Municipal Water District	LAX Coastal Chamber of Commerce	Bill Manis CEO San Gabriel Valley Economic Partnership	Christopher J. Garner General Manager Long Beach Water Department

Gene Wunderlich
Vice President of
Government Affairs
Southwest Riverside
County Association of
Realtors®

Danielle Blacet

Director for Water

California Municipal

Utilities Association

cc: Members of the Assembly Revenue and Taxation Committee
M. David Ruff, Consultant, Assembly Revenue and Taxation Committee
Julia King, Policy Consultant, Assembly Republican Caucus





AB 1588 (Gloria/Gray)

Objective: Ensure military veterans transitioning into civilian water and wastewater operator occupations receive appropriate crediting for experience and education gained during military service.



Support:

- Irvine Ranch Water District
- Otay Water District
- San Diego County
 Water Authority

AB 1588

AB 1588 would:

- Provide a path of reciprocity to military veterans to apply their advanced skills and experience toward state and industry-supplied certifications, or positions within the public or private sectors that specify certifications, within the water and wastewater treatment and distribution operator fields.
- Ensure that advanced water treatment operators and recycled distribution system operators of potable reuse and recycled water facilities have a career advancement path as certified water and/or wastewater treatment plant operators.

BACKGROUND

In 1971, laws and regulations governing the certification of potable water treatment facility operations were enacted. The regulations estbablish at what level water treatment facilities should be staffed, the minimum qualifications for testing at each of the five grade levels of water treatment system operator, and the criteria for the renewal and revocation of operator certificates. The Drinking Water



Operator Certification Program, under the State Water Resources Control Board (SWRCB), is responsible for the testing and certification of approximately 35,000 water treatment and water distribution operators throughout the state of California. The SWRCB also administers the Wastewater Operator Certification program, which provides for Wastewater Treatment Plant Certification examinations, certifications, and certification renewals. There are approximately 6,000 active certified wastewater treatment plant operators in California.

Water and wastewater treatment is an essential and well-established industry with an aging infrastructure and workforce. Replacement of critical infrastructure components, like 100-year-old pipes and pumps, while maintaining service to customers, is one of the greatest challenges in the industry today. In addition, the high level of retirements, new technologies, and increased demand for safe drinking water also contribute to the pressure on the industry to adapt.

At the same time that the water and wastewater industries are experiencing an aging and retiring workforce, more than 250,000 U.S. military members leave military service each year,

AB 1588 (Gloria/Gray)

according to the Department of Defense. Dozens of offices and agencies and thousands of private organizations are focused on assisting service members, veterans, and their families to successfully reintegrate after military service. Despite the abundance of available resources, there continue to be missed opportunities – particularly within the water and wastewater treatment operator field – to find, educate, certify, and employ veterans transitioning to civilian employment.

Projections of demand for water operators are fueled by a high level of expected retirements among the experienced workforce and the continued increase in demand for water by both residential and commercial customers. According to recent industry reports, thousands of water workers are aging and expected to retire from their positions in coming years, leading to a huge gap to fill for utilities and other water employers. New entrants to the industry need education and training to obtain state certification and incumbent workers need additional credits when they seek a higher level of state certification.

Several states – including Washington, Texas, North Carolina, and Pennsylvania – provide paths for military veterans to navigate the civilian water system operator certification process and allow the application of equivalency standards to credit military experiences toward state or industry certifications in the water and wastewater treatment and distribution fields. However, there is no similar pathway or equivalency standard process for military veterans in California. The California water industry and other similar skilled trade industries would have a much larger pool of highly skilled, motivated, and talented individuals eager to continue their service to the public and the community at large if military veterans were offered experience credit toward state or industry certifications.

CONTACTS

CO-SPONSORS

Glenn Farrel

San Diego County Water Authority
Office: (916) 840-5634
Cell: (916) 216-1747
gfarrel@sdcwa.org

Ivy Ridderbusch

San Diego County Water Authority (916) 840-5631 iridderbusch@sdcwa.org

Steve Cruz

Cruz Strategies (916) 307-7741 steve@cruzstrategies.com

Audrey Ratajczak

Cruz Strategies (530) 300-5953 audrey@cruzstrategies.com

Bob Giroux

Lang, Hansen, O'Malley & Miller (916) 441-6222 bgiroux@lhom.com

Mark Watton, General Manager

Otay Water District
Office: (619) 670-2280
mwatton@otaywater.gov

Tenille Otero, Communications Officer

Otay Water District Office: (619) 670-2256 totero@otaywater.gov

Rosanna Carvacho

Brownstein, Hyatt, Farber & Schreck (916) 594-9700 rcarvacho@bhfs.com



sdcwa.org



otaywater.gov











March ___, 2019

Honorable Todd Gloria California State Assembly State Capitol, Room 2176 Sacramento, CA 95814 Honorable Adam Gray California State Assembly State Capitol, Room 3152 Sacramento, CA 95814

SUBJECT: AB 1588 (Gloria/Gray) – SUPPORT

Dear Assemblymembers Gloria and Gray:

On behalf of ________, I am pleased to inform you that we support your bill, AB 1588, which would ensure that military veterans transitioning from military service into civilian water and wastewater treatment operator occupations receive appropriate and satisfactory credit towards California certifications for the work experience, education, skills, and knowledge

gained while working on water and wastewater treatment systems in military service.

Water and wastewater treatment are essential and well-established industries with an aging infrastructure and workforce. Replacing critical infrastructure components, like 100-year-old pipes and pumps, while maintaining service to customers, is one of the greatest challenges in the industry today. Additionally, the high level of employee retirements, new technologies, and the increased demand for safe drinking water contribute significantly to the pressure on the industry to adapt to these ever-changing needs.

As water and wastewater industries are experiencing an aging and retiring workforce, more than 250,000 U.S. military members leave service each year, according to the Department of Defense. Dozens of state offices and agencies and thousands of private organizations are focused on assisting service members, veterans, and their families to successfully reintegrate after military service, yet, despite the abundance of available resources, there continue to be missed opportunities to find, educate, certify, and employ veterans transitioning to civilian employment – particularly within the water and wastewater treatment operator field.

Projections of the demand for water operators are fueled by a high level of expected retirements among the experienced workforce and the continued increase in the demand on water by both residential and commercial customers. According to recent industry reports, thousands of water employees are aging and expected to retire from their positions in coming years, which will lead to a huge workforce gap to fill for utilities and other water employers. New entrants to the industry need to have demonstrated education and training to obtain state certification and incumbent workers need additional credits when they seek higher levels of state certification.

Several states – including Washington, Texas, North Carolina, and Pennsylvania – already provide paths for military veterans to navigate the civilian water system operator certification process and allow the application of equivalency standards to credit military experiences toward

state or industry certifications in the water and wastewater treatment and distribution fields.

However, there is no similar pathway or equivalency standard process for military veterans in California. AB 1588 seeks to provide this critical pathway. The California water industry and other similar skilled trade industries would have a much larger pool of highly skilled, motivated, and talented individuals eager to continue their service to the public and the community at large if military veterans were offered experience credit toward state or industry certifications.

,	is pleased to support AB 1588. Please do not hesitate to contast regarding our position.	act me if
Sincerely,		

MEMORANDUM



Water Needs

TO: Board of Directors

FROM: Phil Lauri, P.E., Assistant General Manager

Dedicated to DATE: April 11, 2019

Satisfying our Community's SUBJECT: Public Hearing: Chandler & Croddy Wells and Pipeline Project

California Environmental Quality Act

RECOMMENDATION

a. Conduct public hearing;

b. Review and discuss the Mitigated Negative Declaration; and

c. Adopt Resolution No. 1522 Mitigated Negative Declaration for Wells No. 12 and No. 14 and Pipeline Project.

STRATEGIC PLAN

Goal #1: Provide a safe, abundant, and reliable water supply.

Goal #2: Practice perpetual infrastructure renewal and improvement.

PRIOR BOARD ACTION/DISCUSSION

At its August 10, 2017 meeting, the Board of Directors (Board) awarded a contract to Tetra Tech, Inc. (TetraTech) for \$920,000 and a 10% contingency for an amount not to exceed \$1,012,000 to provide professional engineering design and permitting services for the West Chandler Avenue Well, the South Croddy Way Well, and the Pipeline Project.

At its September 19, 2017 meeting, the Engineering and Operations (E&O) Committee received information that a Request for Proposals for Construction Management Services was being solicited.

At its December 14, 2017 meeting, the Board authorized staff to proceed with Layout Scenario No. 3 Well Site design.

At its February 8, 2018 meeting, the Board awarded a contract with Butier Engineering, Inc. in the amount of \$972,480 and a 10% contingency for an amount not to exceed \$1,069,728 to provide professional Construction Management Services for the Chandler & Croddy Wells and Pipeline Project.

At is October 9, 2018 Board workshop, the Board received information regarding the design of the Chandler & Croddy Wells and Pipeline Project.

At its January 15, 2019 meeting, the E&O Committee received an update on the Chandler & Croddy Wells and Pipeline Project and information on the preparation of the Mitigated Negative Declaration (MND) in compliance with the California Environmental Quality Act (CEQA).

At its February 19, 2019 meeting, the E&O Committee received an update that the draft MND was prepared in accordance with CEQA guidelines and that the 30-day public review and comment period was to begin.



BACKGROUND

As part of the 2014 Master Plan, the Board adopted a policy for Mesa Water District's (Mesa Water®) local water supply reliability to be at least 115% of water demand. This requirement will provide Mesa Water with the additional assurance to meet its demands with local groundwater supplies during peak demand periods and when water production facilities are undergoing routine maintenance.

In March 2017, Mesa Water purchased a 0.42-acre lot containing a 10,000 square-foot industrial/commercial building at 4011 West Chandler Avenue in the City of Santa Ana. The lot is located approximately 0.6 miles outside of Mesa Water's service area and is intended to house a new well that will provide additional water supply and reliability to the District. In August 2017, Mesa Water purchased an additional property at 3120 South Croddy Way in the City of Santa Ana. This property is 0.5 acres and contains a 6,700 square foot industrial/commercial building. This new well site is approximately 0.2 miles outside the District service area.

Each well is expected to be 18-inches in diameter and drilled to approximately 850 to 1,000 feet deep and cased with stainless steel. Production is expected to be 3,000 to 4,000 gallons per minute. Well pump design will be based on pump testing once the wells are drilled. The well pumps will be driven by efficient electric motors with variable frequency drives. The sites will include dedicated chemical handling facilities for disinfection chemicals and automated control of the pump speeds and disinfection process through Mesa Water's SCADA system. Back-up electric power will be provided at each site using diesel generators. The Class 4 construction cost estimate of the wells and equipment is approximately \$12M.

A pipeline to transport the produced water to Mesa Water's distribution system is also in the preliminary (50%) design phase. The pipeline is expected to be 18-inch ductile iron pipe from the Chandler site to the Croddy site, and 30-inch steel pipe from the Croddy site to the Mesa Water service area. The connection point to the Mesa Water distribution system will be at the Hyland and MacArthur intersection. The Class 4 pipeline construction cost estimate of the approximately 4,500 feet of pipeline is approximately \$2.7M.

The Chandler & Croddy Wells and Pipeline Project is currently in final design, with four bid packages expected to be released near the end of Fiscal Year 2019. Phased bid packages are expected to include the following:

- 1. Demolition of existing facilities at both sites
- 2. Well drilling and pump testing of wells at both sites
- 3. Equipping and site work at both sites
- 4. Pipeline construction

Demolition and drilling are expected to start in mid-Fiscal Year 2020, with all construction expected to take 20 months to complete.

DISCUSSION

Following initial review of the proposed project, it was determined that the Chandler & Croddy Wells and Pipeline Project is subject to the guidelines and regulations of CEQA. Pursuant to Section 15070 of the Guidelines for Implementation of the California Environmental Quality Act (14



California Code of Regulations §§ 15070-15075), a public agency shall prepare a Negative Declaration (ND) or Mitigated Negative Declaration (MND) for a project subject to CEQA when:

- (a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or
- (b) The initial study identifies potentially significant effects, but:
 - (1) Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and
 - (2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment

A MND was prepared by TetraTech for the project in accordance with CEQA Guidelines Section 15071, including:

- (a) A brief description of the project, including a commonly used name for the project, if any;
- (b) The location of the project, preferably shown on a map, and the name of the project proponent;
- (c) A proposed finding that the project will not have a significant effect on the environment;
- (d) An attached copy of the Initial Study documenting reasons to support the finding; and
- (e) Mitigation measures, if any, included in the project to avoid potentially significant effects.

In the Draft MND, all of the potential impacts were found to be Less than Significant, or Less than Significant with Mitigation Incorporated.

The Draft MND was made available for public comment by way of distribution to the State Clearinghouse, County Clerk, and through notice to the public consistent with the CEQA Guidelines. This action started the 30-day public review and comment period on February 20, 2019. Comment letters from the following four (4) agencies were received:

- Orange County Fire Authority;
- South Coast Air Quality Management District;
- State of California Fish and Wildlife; and
- State of California Water Quality Control Board.

Mesa Water responded in writing to the comments received on April 8, 2019. The comment letters, responses to comments, Mitigation Monitoring and Reporting Program (MMRP), and Draft MND are included in Attachment B. Resolution No. 1522 has been drafted to facilitate adoption of the Final MND. Resolution No. 1522 includes the following in compliance with CEQA:

- 1. The Board finds that:
 - a. It has considered the proposed MND together with any comments received;
 - b. Finds on the basis of the whole record before it (including the initial study and any comments received) that there is no substantial evidence that the project will have a significant effect on the environment;
 - c. That the MND reflects Mesa Water's independent judgment and analysis.
- 2. The Board specifies the location of the documents and other material that constitute the record of proceedings upon which the decision is in the custody of the Custodian of Records;



- 3. The Board adopts the Mitigation Monitoring and Reporting Program (MMRP) for reporting on or monitoring the changes it has either required in the project or made a condition of approval to mitigate or avoid significant environmental impacts;
- 4. The Board adopts the MND; and
- 5. The Board approves the project for the purposes of CEQA.

Staff recommends that the Board consider the adoption of Resolution No. 1522.

FINANCIAL IMPACT

In Fiscal Year 2019, \$625,000 is budgeted for the Chandler & Croddy Wells and Pipeline Project Design; \$581,302 has been spent to date.

Initial Project Estimate (FY 2017)	Project Estimate <u>Amounts</u> \$ 920,000		Project Cost <u>Amounts</u>	
Original Contracts Change Orders Requested Funding Revised Contracts	Ť	,	\$ \$ \$ \$	920,000 0 0 NA
Actual Spent to Date Revised Project Estimate	\$	920,000	\$	581,302

<u>ATTACHMENTS</u>

Attachment A: Resolution No. 1522

Attachment B: Mesa Water District Wells No. 12 and No. 14 and Pipeline Project Final Initial Study/ Mitigated Negative Declaration (IS/MND) for Consideration, including:

- 1. Response to Comments Received
- 2. Comments on the IS/MND
- 3. Mitigation Monitoring and Reporting Program
- 4. Draft IS/MND

RESOLUTION NO. 1522

RESOLUTION OF THE MESA WATER DISTRICT BOARD OF DIRECTORS ADOPTING THE MITIGATED NEGATIVE DECLARATION AND THE MITIGATION MONITORING AND REPORTING PROGRAM FOR WELLS NO. 12 AND NO. 14 AND PIPELINE PROJECT; APPROVING THE PROJECT; AND DELEGATING AUTHORITY TO EXECUTE A NOTICE OF DETERMINATION AND TAKE OTHER REASONABLY REQUIRED ACTIONS

WHEREAS, the Mesa Water District (Mesa Water®) is a county water district organized and operating pursuant to the provisions of the laws of the State of California (State or California); and

WHEREAS, Mesa Water desires to construct two new groundwater production wells on certain real property owned by Mesa Water, located at (i) 4011 West Chandler Avenue and (ii) 3120 South Croddy Way in the City of Santa Ana, and construct those pipelines necessary to connect the two wells to Mesa Water's existing water system (collectively, Project); and

WHEREAS, Mesa Water, acting as lead agency as defined in Section 21067 of the California Public Resources Code, has undertaken the preparation of an Initial Study and an environmental impact analysis of the Project in accordance with the California Environmental Quality Act (CEQA); and

WHEREAS, the Initial Study concluded that there is no substantial evidence, in light of the whole record before Mesa Water, that the Project, with the incorporated mitigation measures, would have a significant effect on the environment; and

WHEREAS, Mesa Water prepared and circulated a Draft Mitigated Negative Declaration (Draft MND) based on and including the Initial Study, along with the Notice of Intent to Adopt the Proposed MND (NOI), for a 30-day public review period in accordance with CEQA commencing on February 21, 2019, and concluding on March 22, 2019; and

WHEREAS, the Project is more particularly described in the Draft MND, which, together with the supporting Initial Study, is incorporated herein by this reference, and is on file with the District Secretary at Mesa Water's Business Office and available for inspection upon request; and

WHEREAS, the Project is proposed to assist Mesa Water in meeting its goal of local water reliability; and

WHEREAS, Mesa Water published the NOI in the Orange County Register, and

WHEREAS, the Draft MND and NOI were circulated to affected governmental agencies and other interested persons for review and comment, and comments submitted during the public review period have been received; and

WHEREAS, the Board conducted a noticed public hearing on April 11, 2019, to receive comments on the Project and the Draft MND; and

WHEREAS, the Board has received a proposed "Final MND," which is inclusive of the Initial Study, Draft MND, all written comments received, and any and all written comments and/or modifications made to the Draft MND in response to such comments; and

WHEREAS, the Board has reviewed and considered the proposed Final MND, along with a proposed Mitigation Monitoring and Reporting Program (MMRP) and the supporting information; and

WHEREAS, the Final MND and all supporting materials which constitute the record of these proceedings are, and shall be, kept at the offices of Mesa Water District, in the custody of the District Secretary, located at 1965 Placentia Avenue, Costa Mesa, CA 92627.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE MESA WATER DISTRICT DOES HEREBY RESOLVE, DETERMINE, AND ORDER AS FOLLOWS:

- **Section 1.** The above recitals are true and correct, and are hereby incorporated herein as findings of the Board.
- **Section 2.** The Final MND and MMRP for the Project are adequate and in compliance with CEQA.
- Section 3. The Board has reviewed and considered the information contained in the Final MND including, without limitation, the supporting Initial Study, written comments submitted by the public and interested agencies, and any oral and written comments made at the public hearing or contained in the administrative record for the Project.
- **Section 4**. The Board hereby makes the following specific findings with respect to the Final MND:
 - (a) the Final MND prepared for the Project contains a complete and accurate reporting of the environmental impacts associated with the Project; and
 - (b) the Final MND has been completed in compliance with CEQA and the State CEQA Guidelines; and
 - (c) the Project will not result in a significant effect on the environment in as much as the mitigation measures described in the Final MND are incorporated as part of the Project; and

- (d) the MMRP contains those mitigation measures required in the Final MND that would reduce or avoid significant environmental effects and has been completed in compliance with CEQA and State CEQA Guidelines; and
- (e) there is no substantial evidence in the record supporting a fair argument that the Project, with the incorporation of the identified mitigation measures, will have significant impacts on the environment; and
- (f) the Final MND reflects the independent judgment and analysis of Mesa Water.
- Section 5. The location and custodian of records with respect to all of the relevant documents and any other material which constitutes the administrative record for the Final MND are as follows: District Secretary, Mesa Water District, 1965 Placentia Avenue, Costa Mesa, CA 92627.
- **Section 6**. The Final MND for the Project and the MMRP, as defined herein, are adopted.
- **Section 7**. The proposed Project is approved.
- The Board hereby delegates authority to the Mesa Water General Manager, or his designee, to take any action reasonably required to cause a Notice of Determination to be filed with the Orange County Clerk and the Governor's Office of Planning and Research, State Clearinghouse, including, but not limited to, issuance of payment of those Fish and Game fees that may be required pursuant to Fish and Game Code Section 711.4.

ADOPTED, SIGNED, and APPROVED this 11th day of April, 2019, by a roll call vote.

AYES: DIRECTORS: NOES: DIRECTORS: ABSENT: DIRECTORS: ABSTAIN: DIRECTORS:

Shawn Dewane President, Board of Directors

Denise Garcia
District Secretary

Mesa Water District Wells No. 12 and No. 14 and Pipeline Project

Final Initial Study/Mitigated Negative Declaration

Prepared For:

Mesa Water District 1965 Placentia Avenue Costa Mesa, CA 92627 Contact: Karyn Igar, P.E., Project Manager 949.207.5452

Prepared by:

Tetra Tech, Inc.
17885 Von Karman Ave. Suite 500
Irvine, CA 92614-6213
Contact: Derrick Coleman, Ph.D.
Environmental Task Manager
949.809.5039

April 2019

TABLE OF CONTENTS

1.0	INTR	ODUCTION	1-1
	1.1	INITIAL STUDY/MITIGATED NEGATIVE DECLARATION PUBLIC	
		REVIEW	1- 1
	1.2	AVAILABILITY OF IS/MND	1-1
	1.3	PROJECT DESCRIPTION	
	1.4	FINAL INITIAL STUDY / MITIGATED NEGATIVE DECLARATION	1-2
2.0	RESF	PONSE TO COMMENTS	2-1
	2.1	OVERVIEW	2-1
	2.2	LIST OF COMMENTERS	2-1
	2.3	COMMENTS AND RESPONSE TO COMMENT	2-1
		2.3.1 Comment Letter No. 1	
		2.3.2 Comment Letter No. 2	2-2
		2.3.3 Comment Letter No. 3	
		2.3.4 Comment Letter No. 4	2-5
3.0	CLAF	RIFICATIONS AND MODIFICATIONSTO THE IS/MND	3-1
4.0	FIND	INGS	4-1
		PROJECT IMPACTS	
	42	MITIGATION MEASURES	4-1

Appendices

Appendix A Comment Letters

Appendix B Mitigation Monitoring and Reporting Plan

April 2019 Page i

This page intentionally left blank

1.0 INTRODUCTION

1.1 INITIAL STUDY/MITIGATED NEGATIVE DECLARATION PUBLIC REVIEW

In accordance with the California Environmental Quality Act (CEQA) Section 21091 and State CEQA Guidelines Section 15073, the Initial Study/Mitigated Negative Declaration (IS/MND) for the Mesa Water District Water Wells No. 12 and No. 14 and Pipeline Project was circulated for a 30-day public review and comment period from February 20, 2019 to March 22, 2019. The subject of this IS/MND is the construction of two new potable water wells on approximately 0.89 acre of land located in the City of Santa Ana, and the construction of approximately 4,500 feet of pipeline to connect the proposed wells to Mesa Water District's existing system.

1.2 AVAILABILITY OF IS/MND

The IS/MND was available for review at the following locations:

- Mesa Water District headquarters, 1965 Placentia Avenue, Costa Mesa, CA 92627
- Mesa Water District website, https://www.mesawater.org/news/public-notices
- Santa Ana Public Library, 26 Civic Center Plaza Santa Ana, CA 92701

1.3 PROJECT DESCRIPTION

Project Location

The proposed Mesa Water District Wells No. 12 and No. 14 and Pipeline Project ("Project") site is located in the City of Santa Ana, in the central portion of Orange County (County), within Section 28 of Township 5 South, Range 10 West, on the Newport Beach, California, U.S. Geological Survey 7.5-minute Quadrangle Map (2015). Well No. 12 is located at 4011 W. Chandler Avenue. Well No. 14 is located at 3120 S. Croddy Way. The proposed pipeline will connect the two wells to the Mesa Water District's distribution system traversing Chandler Avenue to Croddy Way to W. MacArthur Boulevard to Hyland Avenue.

Project Description

Mesa Water District is proposing to construct two new potable water wells on approximately 0.89 acre of land located in the City of Santa Ana, California. Mesa Water District provides potable water for a population of approximately 110,000 within an 18-square mile service area which includes the City of Costa Mesa, portions of the City of Newport Beach, and portions of unincorporated Orange County. Mesa Water District distributes a combination of imported water and local groundwater and maintains five clear water supply wells and two tinted water wells. Tinted water is treated by the Mesa Water Reliability Facility to remove color before it is added to the water supply. Mesa Water District also has two reservoirs with a combined storage capacity of 28 million gallons. In 2014, Mesa Water District Board of Directors adopted a policy for local water reliability to be 115 percent of demand. This policy provides Mesa Water District with additional assurance to meet peak water demands with local groundwater supplies when other water production facilities undergo routine maintenance.

In order to provide additional local water reliability, Mesa Water District purchased two properties within the City of Santa Ana to be used as groundwater well sites. Proposed Well No. 12 and associated structures and equipment would be constructed within a 0.43-acre site. Proposed Well No. 14 and associated structures and equipment would be constructed within a 0.46-acre site. Each well site will include a well building, electrical building, Southern California Edison transformer, chemical storage area, emergency backup generator, and a well water waste air gap.

April 2019 Page 1-1



Both wells are located outside of Mesa Water District's service area and will require the construction of approximately 4,500 feet of pipeline to connect the proposed wells to Mesa Water District's existing system. Construction is anticipated to begin in the third quarter of 2020 fiscal year and last approximately 20 months. Once operational, Wells No. 12 and No. 14 can potentially provide an additional 6 to 8 million gallons per day of safe and reliable drinking water.

1.4 FINAL INITIAL STUDY / MITIGATED NEGATIVE DECLARATION

The final IS/MND consists of:

- the draft IS/MND, which is incorporated into this final IS/MND by reference
- public comments received during the public review period, see Section 2 and Appendix A
- response to the public comments, see Section 2
- clarifications and modifications to the draft IS/MND, see Section 3
- findings, see Section 4
- the Mitigation Monitoring and Reporting Plan, see Appendix B

These contents constitute the final IS/MND, to be presented to the Mesa Water District Board of Directors for certification and approval.



Page 1-2 April 2019

2.0 RESPONSE TO COMMENTS

2.1 OVERVIEW

During this public review period a total of four comment letters were received. None of the comments received during the comment period provide any basis to identify any new significant impacts or "significant new information" that would require recirculation of the IS/MND or preparation of an Environmental Impact Report.

Although a lead agency is not required to provide written responses to comments on negative declarations or mitigated negative declarations under the CEQA, Mesa Water District has evaluated the comments received on the Mesa Water District Water Wells No. 12 and No. 14 and Pipeline Project IS/MND, and has elected to provide responses to comments, as well as clarifications to the IS/MND.

2.2 LIST OF COMMENTERS

The following representatives of organizations submitted written comments on the IS/MND:

- 1. Jennifer Turner, Environmental Scientist, California Department of Fish and Wildlife
- 2. Tamera Rivers, Management Analyst, Orange County Fire Authority
- 3. Lijin Sun, J.D., Program Supervisor, CEQA IGR, South Coast Air Quality Management District
- 4. Susan Stewart, Environmental Scientist, State Water Resources Control Board, Division of Drinking Water

2.3 COMMENTS AND RESPONSE TO COMMENT

This section excerpts those comments received that specifically pertain to the scope and content of the IS/MND. Copies of the comment letters are included in Appendix A.

2.3.1 Comment Letter No. 1

Jennifer Turner, Environmental Scientist, California Department of Fish and Wildlife

Comment 1-1

Per our discussion this morning, I had the following questions with regard to surface water drawdown and the construction and operation of the wells. This topic is of concern to the Department because of our experience in the region with increased salinity at habitat mitigation sites due to unexpected draw down/diversion of water sources in Costa Mesa (i.e. Fairview Wetlands and Talbert Marsh):

Will the operation of the wells contribute to surface water drawdown or diversion from local riparian ecosystems? If so, where and how?

Response to Comment 1-1

Mesa Water District proposes the construction of Wells No. 12 and No. 14 to provide additional assurance to meet peak water demands with local groundwater supplies when other water production facilities undergo routine maintenance.

As discussed on page 3-39 of the IS/MND, the proposed Project would enable the use of Wells No. 12 and No. 14 to provide additional local water reliability. Implementation of the wells would not result in any exceedance of Mesa Water District's existing water entitlements. Rather, it would improve reliability and efficiency of the supply system. The wells will be located

April 2019 Page 2-1



approximately two miles north of Fairview Wetlands and five miles north of Talbert Marsh. In addition, the wells will be pumping from the principal aquifer at depths well below the shallow aquifer, at approximately 400 to 1,060 feet below ground surface. Thus, the Project would not deplete the shallow groundwater supplies or interfere with groundwater recharge.

Both well sites are currently developed with light industrial buildings and are surrounded by light industrial land uses. Stormwater currently flows across the sites to storm drains located in the surrounding streets. The proposed Project would not affect the hydrology of the Project area as development of the Project would not increase the amount of impervious area as compared to existing conditions. Therefore, the Project is not expected to result in significant impacts to the drainage conditions in the Project area. As the operation of the wells will not increase the depletion of groundwater beyond the regular operations of the principal aquifer or significantly change on-site drainage conditions, the operation will not increase surface water drawdown or diversion. No impacts associated with surface water drawdown or diversion from local riparian ecosystems are expected.

Comment 1-2

You mentioned on the phone that dewatering may be required in order to install the chemical storage tanks associated with the wells. Will this dewatering impact local surface water at all, and if so, how?

Response to Comment 1-2

Groundwater generated during Project construction will be discharged to baker tanks, that will be located onsite or within a designated area of the public right-of-way and will later be disposed of as discharge to the storm drain. It would be speculative to estimate the amount of water generated through construction dewatering activities as this can vary widely depending on the site and the depth at which groundwater is encountered. However, the dewatering activity will be short-term and consistent with development that has occurred in this area. In addition, the groundwater will be ultimately discharged to the existing City of Santa Ana stormwater catch basin which eventually discharges to the Santa Ana River. Therefore, short-term dewatering activities are not expected to contribute to surface water drawdown.

As discussed on page 3-40 of the IS/MND, the proposed Project would be subject to and comply with the Orange County Flood Control District National Pollutant Discharge Elimination System (NPDES) permit conditions for discharges into the storm drain system. By complying with the permit conditions and industry-standard best management practices (BMPs), any resulting impacts to water quality are expected to be less than significant.

2.3.2 Comment Letter No. 2

Tamera Rivers, Management Analyst, Orange County Fire Authority

Comment 2-1

Thank you for the opportunity to review the subject document. Given the nature of the project, the impacts to the OCFA are not significant. While no additional public safety resources are anticipated as a result of this project, all standard conditions and guidelines will be applied to the project during the normal plan review process. We do have a couple of comments on the overall project(s). The project is subject to review by the City and the OCFA for various construction document plan checks for the applicable fire life safety codes and regulations. The project will be subject to the current editions of the CBC, CFC, and related codes. The facility will be subject to OCFA's chemical review and permitting. Please make every effort to keep or develop safe points of access for the fire department in the event of a water rescue in these areas. This includes the width, nature and method of securing the access point.



Page 2-2 April 2019

Response to Comment 2-1

Comment noted. The proposed project will comply with all applicable codes and regulations. Mesa Water District is a self-permitting special district. The California legislature granted water districts the power to exempt water district property from county and city zoning requirements, provided the water district complies with the terms of Government Code Section 53091. The permits and/or approval required from other public agencies are discussed on page 2-11 of the IS/MND.

2.3.3 Comment Letter No. 3

Lijin Sun, J.D., Program Supervisor, CEQA IGR, South Coast Air Quality Management District

Comment 3-1

South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The following comments are meant as guidance for the Lead Agency and should be incorporated into the Final MND.

SCAQMD Staff's Summary of Project Description

The Lead Agency proposes to construct two potable water wells and 4,500 linear feet of pipelines on 0.89 acres (Proposed Project). The Proposed Project is located at 4011 West Chandler Avenue and 3120 South Croddy Way on the northwest corner of West MacArthur Boulevard and South Harbor Boulevard in the City of Santa Ana. Construction of the Proposed Project is expected to last 20 months, starting in January 2020 and will involve demolition of two existing office/storage buildings².

Response to Comment 3-1

Comment noted.

Comment 3-2

Since the Proposed Project includes, among others, construction and operation of two on-site aqueous ammonia storage tanks and two on-site, 500 horsepower diesel-fueled emergency generators³, permits from SCAQMD will be required, and SCAQMD should be identified as the Responsible Agency for the Proposed Project in the Final MND. In addition to a discussion of compliance with SCAQMD Rules 403 – Fugitive Dust and 1403 – Asbestos Emissions from Demolition/Renovation Activities, the Lead Agency should include a discussion to demonstrate compliance with applicable SCAQMD Rules, including, but not limited to, Rule 201 – Permit to Construct⁴, Rule 203 – Permit to Operate⁵, Rule 401 – Visible Emissions⁶, Rule 402 –

April 2019 Page 2-3



Government Code Section 53091.

⁽d) Building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.

⁽e) Zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water... (Amended by Stats. 2002, Ch. 267, Sec. 1. Effective January 1, 2003.).

² MND. Section 2.2. *Project Description*. Page 2-3 – 2-4.

³ MND. Section 2.2. *Project Description*. Page 2-5 – 2-11.

⁴ South Coast Air Quality Management District. Rule 201 – Permit to Construct. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-ii/rule-201.pdf.

⁵ South Coast Air Quality Management District. Rule 203 – Permit to Operate. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-ii/rule-203.pdf.

⁶ South Coast Air Quality Management District. Rule 401 – Visible Emissions. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-401.pdf.

Nuisance⁷, Regulation 13 – New Source Review⁸, Rule 1401 – New Source Review of Toxic Air Contaminants⁹, and Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines¹⁰ in the Air Quality Section of the Final MND

Response to Comment 3-2

SCAQMD will be identified as the Responsible Agency for the Proposed Project in the final MND, see Section 3. The proposed project will comply will all applicable codes and regulations, including as applicable, SCAQMD Rules 403 – Fugitive Dust and 1403 – Asbestos Emissions from Demolition/Renovation Activities, Rule 201 – Permit to Construct, Rule 203 – Permit to Operate, Rule 401 – Visible Emissions, Rule 402 – Nuisance, Regulation 13 – New Source Review, Rule 1401 – New Source Review of Toxic Air Contaminants, and Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines. The appropriate permits required for the construction and operation of the proposed Project will be obtained.

Comment 3-3

Furthermore, due to the light industrial historical usage of the site¹¹, if during soil disturbing activities such as grading, petroleum hydrocarbons may be encountered that will cause volatile organic compounds to become airborne, the Lead Agency should include a discussion to demonstrate compliance with SCAQMD Rule 1166 - Volatile Organic Compounds Emissions from Decontamination of Soil¹² and SCAQMD Rule 1466 - Control of Particulate Emissions from Soils with Toxic Air Contaminants¹³ in the Air Quality Section of the Final MND. Any assumptions used in the Air Quality Analysis in the Final MND will be used as the basis for permit conditions and limits for the Proposed Project. Should there be any questions on permits, please contact the SCAQMD's Engineering and Permitting staff at (909) 396-3385. For more general information permits, please visit SCAQMD's webpage http://www.agmd.gov/home/permits.

Response to Comment 3-3

As discussed on page 3-34 of the IS/MND, Phase I Environmental Site Assessments conducted for the well sites revealed no evidence of current or historical Recognized Environmental Conditions associated with the sites. A review of adjacent properties indicated no concerns to well sites. Neither well site is included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

However, if during soil disturbing activities such as grading, petroleum hydrocarbons are encountered that could cause volatile organic compounds to become airborne, any such materials will be appropriately contained and remediated as required by local, State, and federal law. This will include compliance with SCAQMD Rule 1166 – Volatile Organic Compounds

¹³ South Coast Air Quality Management District. Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants. Accessed at: https://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1466.pdf.



Page 2-4 April 2019

⁷ South Coast Air Quality Management District. Rule 402 – Nuisance. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-402.pdf.

⁸ South Coast Air Quality Management District. Regulation 13 – New Source Review. Accessed at: http://www.agmd.gov/home/rules-compliance/rules/scagmd-rule-book/regulation-xiii.

⁹ South Coast Air Quality Management District. Rule 1401 – New Source Review of Toxic Air Contaminants. Accessed at: http://www.agmd.gov/docs/default-source/rule-book/reg-xiv/rule-1401.pdf.

¹⁰ South Coast Air Quality Management District. Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1470.pdf.

¹¹ MND. Section 3.4.8 Hazards and Hazardous Materials. Page 3-34.

¹² South Coast Air Quality Management District. Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1166.pdf.

Emissions from Decontamination of Soil and SCAQMD Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants.

Comment 3-4

Pursuant to CEQA Guidelines Section 15074, prior to approving the Proposed Project, the Lead Agency shall consider the MND for adoption together with any comments received during the public review process. Please provide SCAQMD with written responses to all comments contained herein prior to the adoption of the Final MND. When responding to issues raised in the comments, response should provide sufficient details giving reasons why specific comments and suggestions are not accepted. There should be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information do not facilitate the purpose and goal of CEQA on public disclosure and are not meaningful, informative, or useful to decision makers and the public who are interested in the Proposed Project.

Response to Comment 3-4

Comment noted. Mesa Water District will provide SCAQMD with responses to their comments.

Comment 3-5

SCAQMD staff is available to work with the Lead Agency to address any air quality questions that may arise from this comment letter. Please contact Alina Mullins, Assistant Air Quality Specialist, at amullins@aqmd.gov or (909) 396-2402, should you have any questions.

Response to Comment 3-5

Comment noted.

2.3.4 Comment Letter No. 4

Susan Stewart, Environmental Scientist, State Water Resources Control Board, Division of Drinking Water

Comment 4-1

2.2.3.1 Well No. 12 Storm Drain (page 2-6) Consider if a Waste Discharge Permit is required. Is the proposed 18" storm drain a permanent drain or a temporary drain for construction? What is the length of the proposed 18" diameter storm drain for Well 12?

Response to Comment 4-1

The proposed 18-inch storm drain will be permanent and will be 50 feet in length. Project discharges to the storm drains during construction and operation of the project will consist of groundwater generated during construction dewatering activity or well testing. As discussed on page 3-40 of the IS/MND, the proposed Project would be subject to and comply with the Orange County Flood Control District NPDES permit conditions for discharges into the storm drain system. By complying with the permit conditions and industry-standard BMPs, any resulting impacts to water quality are expected to be less than significant.

Comment 4-2

2.2.3.2 Well No. 14 Storm Drain (page 2-8) Consider if a Waste Discharge Permit is required. Is the proposed 18" storm drain a permanent drain or a temporary drain for construction?

Response to Comment 4-2

The proposed 18-inch storm drain will be permanent and will be 570 feet in length. See Response to Comment 4-1.

April 2019 Page 2-5



Comment 4-3

2.3 (page 2-11) - State Water Resources Control Board, Division of Drinking Water – Water Quality (add) Supply Permit

Response to Comment 4-3

Comment noted. See Section 3 for modification to the IS/MND.

Comment 4-4

2.3 (page 2-11) – (add if required) State Water Resources Control Board, Division of Water Quality – Construction General Permit (CGP)

Response to Comment 4-4

Comment noted. See Section 3 for modification to the IS/MND.

Comment 4-5

3.1 (Page 3-1) Environmental Factors Potentially Affected – Check the appropriate boxes in the table.

Response to Comment 4-5

The Project will not result in any potentially significant impacts, therefore no environmental factors boxes will be checked.

Comment 4-6

3.4.6(b) Geology and Soils, Soil erosion or loss of topsoil (page 3-25) - Check the box for Less Than Significant with Mitigation Incorporated (if a CGP is required).

Response to Comment 4-6

The total project impact area for soil disturbance has been recalculated to include the area for the pipeline trenches, in addition to the area to be graded on each parcel. Since the project impact area would be above one acre, the proposed project would be subject to the requirements of the Construction General Permit under the NPDES program administered by the State Water Resources Control Board. With adherence to this permit, no significant impacts would be expected and no mitigation measures would be required. The IS/MND will be modified with this information. See Section 3 for modification to the IS/MND.

Comment 4-7

3.4.6(b) Geology and Soils, Soil erosion or loss of topsoil (page 3-27) Less Than Significant with Mitigation Incorporated (if a CGP is required). Please recalculate the total project impact area for soil disturbance including the area to be graded on each parcel, the surface area of any trenches, and the soil areas outside of the trenches that will be graded and or disturbed by construction equipment, vehicles, and machinery during construction activities. Contact the Construction Stormwater Program staff at (866) 563-3107 or stormwater@waterboards.ca.gov for confirmation of the soil disturbance area for the Project.

 Mitigation Measures: (Please add if required) GEO-1: Storm Water Pollution Prevention Plan (SWPPP)

Response to Comment 4-7

See Response to Comment 4-6. As discussed above, the proposed project would be subject to the requirements of the Construction General Permit under the NPDES program. This would include preparation of a site specific SWPPP. The proposed Project will comply with this and all



Page 2-6 April 2019

other applicable regulations, therefore, no significant impacts would be expected and no mitigation measures would be required.

Comment 4-8

3.4.9(a) Hydrology and Water Quality (page 3-39) Short Term Impacts – The proposed Project would be subject to the requirements of the CGP if the Project impact area will be greater than one acre of soil disturbance.

Mitigation Measures: (Reference GEO-1 SWPPP if required)

Response to Comment 4-8

See Response to Comment 4-6 and Comment 4-7.

Comment 4-9

3.4.19(a) Mandatory Findings of Significance – (page 3-70) Include a discussion regarding soil disturbance and the CGP including mitigation measure GEO-1. (if required)

Mitigation Measures: (add if required) GEO-1 SWPPP

Response to Comment 4-9

See Response to Comment 4-6 and Comment 4-7.

Comment 4-10

When the review process has ended, please forward the following items with your permit application to the Santa Ana District Office:

- Copy of the draft and final MND with any comment letters received and the lead agency responses as appropriate;
- Copy of the Resolution or Board Minutes certifying and adopting the MND;
- Copy of the stamped Notice of Determination (NOD) filed at the Orange County Clerk's Office or Governor's Office of Planning and Research, State Clearinghouse.

Response to Comment 4-10

Comment noted. The above requested information will be forwarded with the permit application.

April 2019 Page 2-7



This page intentionally left blank

3.0 CLARIFICATIONS AND MODIFICATIONSTO THE IS/MND

The following clarifications and modifications are intended to update the draft IS/MND in response to the comments received during the public review period. These modifications clarify, amplify, or make insignificant changes to the IS/MND. Revisions to the IS/MND have not resulted in new significant impacts or mitigation measures or increased the severity of an impact. None of the criteria for recirculation set forth in the CEQA Guidelines section 15088(a) have been met, and recirculation of the IS/MND or preparation of an Environmental Impact Report is not required.

The changes to the draft IS/MND are listed by section and page number. Text which has been removed is shown in this chapter with a strikethrough line, while text that has been added is shown with bold and italics.

Section 2.3 Other Public Agencies Whose Approval Is Required

Page Clarification/Revision

- 2-11 Other public agencies whose approval is expected to be required in the form of permits, financing approval, or participation agreements are as follows:
 - Santa Ana Regional Water Quality Control Board Variance for 50-foot control zone horizontal separation
 - State Water Resources Control Board, Division of Drinking Water Water Quality Supply Permit. Construction General Permit
 - Orange County Flood Control District Discharge Permit
 - City of Santa Ana, Department of Public Works Encroachment Permit and Storm Drain Connection
 - Orange County Fire Authority Planning and Development Fire Service Permit and Hazardous Materials & Process
 - Orange County Health Care Agency Risk Management Plan
 - South Coast Air Quality Management District Responsible Agency, Backup generators; Air Quality
 - City of Costa Mesa Encroachment Permit

Section 3.4.6 Geology and Soils

Page Clarification/Revision

3-27

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

Less than Significant Impact. Construction of the Project would include ground-disturbing activities, such as excavation, drilling, and grading in order to build the structure and install the associated pipelines that would connect the Project elements. Excess soil from the excavation of the infiltration basin will be placed as fill on the other portions of the site. The Project disturbance area will include 0.42 acres for the Well No. 12 site, 0.46 acres for the Well No. 14 site, and 0.62 acres for the pipeline. Since the project impact area would be above below one acre, the proposed project would not be subject to the requirements of the Construction General Permit under the National Pollutant Discharge Elimination System (NPDES) program administered by the State Water Resources Control Board. The proposed Project would be required to

April 2019 Page 3-1



comply with the requirement for a Storm Water Pollution Prevention Plan (SWPPP), which includes best management practices (BMPs) for erosion and sediment control. However, construction of the proposed project would be required to ensure that current industry-standardized best management practices (BMPs) are implemented. This would include the implementation of BMPs to minimize the potential for water quality impacts during construction. The Project site will be paved or landscaped so that no exposed soil would remain. With adherence to the Construction General Permit, fThe Project will have a less than significant impact related to erosion and loss of topsoil in the construction and operational phases.

Mitigation Measures: No mitigation is required.

Section 3.4.9 Hydrology and Water Quality

Page Clarification/Revision

3-39 Less than Significant Impact.

Short-term Impacts

The proposed Project could potentially result in water quality impacts during the short-term construction process. The grading and excavation required for Project implementation would result in exposed soils that may be subject to wind and water erosion. Since the project impact area would be **above** below one acre, the proposed project would not be subject to the requirements of the Construction General Permit under the NPDES program administered by the State Water Resources Control Board. The proposed Project would be required to comply with the requirement for a Storm Water Pollution Prevention Plan (SWPPP), which includes best management practices (BMPs) for erosion and sediment control. With adherence to the Construction General Permit, the Project will have a less than significant impact. However, construction of the proposed project would be required to ensure that current industry standardized best management practices (BMPs) are implemented.

This would include the implementation of BMPs to minimize the potential for water quality impacts during construction.



Page 3-2 April 2019

4.0 FINDINGS

4.1 PROJECT IMPACTS

An IS has been prepared to assess the Proposed Project's potential impacts on the environment and the significance of those impacts and is incorporated in the MND. Based on this IS, it has been determined that the Proposed Project would not have any significant impacts on the environment, once all proposed mitigation measures have been implemented. This conclusion is supported by the following findings:

- There was no potential for adverse impacts on agricultural resources, land use planning, mineral resources, population and housing, recreation, or tribal cultural resources associated with the Proposed Project.
- Potential adverse impacts resulting from the Proposed Project were found to be less than significant in the following areas: aesthetics, air quality, greenhouse gas emissions, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, public services, transportation/traffic, and utilities and service systems.
- Full implementation of the proposed mitigation measures included in this MND would reduce potential project-related adverse impact on biological resources and cultural resources to a less than significant level.

4.2 MITIGATION MEASURES

The following mitigation measures have been incorporated into the scope of work for the Proposed Project and will be fully implemented by the District to avoid or minimize adverse environmental impacts identified in this MND. These mitigation measures will be included in the Mitigation Monitoring and Reporting Plan prepared for this project (see Appendix B).

Mitigation Measures:

BIO-1: Project activities that will remove or disturb Project site trees will be scheduled outside the breeding bird season. The breeding bird nesting season is typically from February 15 through September 15.

If project activities cannot be avoided during February 15 through September 15, a qualified biologist will conduct a pre-construction breeding bird survey for breeding birds and active nests or potential nesting sites within the limits of project disturbance. The survey will be conducted at least seven days prior to the onset of scheduled activities, such as mobilization and staging. It will end no more than three days prior to vegetation, substrate, and structure removal and/or disturbance.

If no breeding birds or active nests are observed during the pre-construction survey or they are observed and will not be impacted, project activities may begin and no further mitigation will be required.

If a breeding bird territory or an active bird nest is located during the pre-construction survey and will potentially be impacted, the site will be mapped on engineering drawings and a no-activity buffer zone will be marked (fencing, stakes, flagging, orange snow fencing, etc.) a minimum of 100 feet in all directions or 500 feet in all directions for listed bird species and all raptors. The biologist will determine the appropriate buffer size based on the type of activities planned near the nest and the type of bird that created the nest. Some bird species are more tolerant than others of noise and activities occurring near their nest. This no-activity buffer zone will not be disturbed until a qualified biologist has determined that the nest is inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young will no longer be impacted by project activities. Periodic monitoring by a biologist will

April 2019 Page 4-1



be performed to determine when nesting is complete. Once the nesting cycle has finished, project activities may begin within the buffer zone.

If listed bird species are observed within the project site during the pre-construction survey, the biologist will immediately map the area and notify the appropriate resource agency to determine suitable protection measures and/or mitigation measures and to determine if additional surveys or focused protocol surveys are necessary. Project activities may begin within the area only when concurrence is received from the appropriate resource agency.

Birds or their active nests will not be disturbed, captured, handled or moved. Active nests cannot be removed or disturbed; however, nests can be removed or disturbed if determined inactive by a qualified biologist.

CUL-1: Environmental Training – prior to construction of the Project, a qualified archaeologist will provide a cultural resource briefing that includes all applicable laws and penalties pertaining to disturbing cultural resources, a brief discussion of the prehistoric and historic regional context and archaeological sensitivity of the area, types of cultural resources found in the area, instruction that Project workers will halt construction if a cultural resource is inadvertently discovered during construction, and procedures to follow in the event an inadvertent discovery (Inadvertent Discovery Plan) is encountered, including appropriate treatment and respectful behavior of a discovery (e.g., no posting to social media or photographs). If requested, a local tribal representative(s) shall be invited to participate in the environmental training to discuss or provide text from a tribal cultural perspective regarding the cultural resources within the region.

CUL 2: Inadvertent Discovery of Archaeological Resources During Construction - A qualified archaeologist shall prepare an Inadvertent Discovery Plan for the Project. During Project-level construction, should subsurface archaeological resources be discovered, all activity in the vicinity of the find shall stop and a qualified archaeologist shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency and any local Native American groups expressing interest, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to. Project re-route or re-design, Project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2.

CUL-3: Inadvertent Discoveries of Paleontological Resources - If the construction staff or others observe previously unidentified paleontological resources during ground disturbing activities, they will halt work within a 200-foot radius of the find(s), delineate the area of the find with flagging tape or rope (may also include dirt spoils from the find area), and immediately notify a qualified Paleontologist. Construction will halt within the flagged or roped-off area. The Paleontologist will assess the resource as soon as possible and determine appropriate next steps in coordination with Mesa Water District. Such finds will be formally recorded and evaluated. The resource will be protected from further disturbance or looting pending evaluation.



Page 4-2 April 2019

APPENDIX A COMMENT LETTERS

This page intentionally left blank

From: Turner, Jennifer@Wildlife [mailto:Jennifer.Turner@wildlife.ca.gov]

Sent: Thursday, February 28, 2019 11:00 AM **To:** Karyn Igar, PE < <u>karyni@mesawater.org</u>>

Subject: Wells No. 12 and No. 14 and Pipeline Project, SCH# 2019029119

Hello Karyn,

Thank you for taking the time to speak on the phone today in regard to the above-referenced project.

Per our discussion this morning, I had the following questions with regard to surface water drawdown and the construction and operation of the wells. This topic is of concern to the Department because of our experience in the region with increased salinity at habitat mitigation sites due to unexpected draw down/diversion of water sources in Costa Mesa (i.e. Fairview Wetlands and Talbert Marsh):

- 1) Will the operation of the wells contribute to surface water drawdown or diversion from local riparian ecosystems? If so, where and how?
- 2) You mentioned on the phone that dewatering may be required in order to install the chemical storage tanks associated with the wells. Will this dewatering impact local surface water at all, and if so, how?

I appreciate your time and attention.

Sincerely,

Jennifer Turner
Environmental Scientist
California Department of Fish and Wildlife
3883 Ruffin Road
San Diego, CA 92123
(858)467-2717

Jennifer.Turner@wildlife.ca.gov

Prevent the spread of destructive tree pests! Please don't move firewood!



Find out more, including local sources of firewood, at: www.firewood.ca.gov



<u>SaveOurWater.com</u> · <u>Drought.CA.gov</u>



ORANGE COUNTY FIRE AUTHORITY

P.O. Box 57115, Irvine, CA 92619-7115 1 Fire Authority Way, Irvine, CA 92602

Brian Fennessy, Fire Chief • www.ocfa.org • (714) 573-6000 / Fax (714) 368-8843

March 18,2019

Mesa Water District Attn: Karyn Igar, P.E. 1965 Placentia Avenue Costa Mesa, CA 92627

Ref: Mitigated Negative Declaration (MND) and Notice of Intent to Adopt the Proposed MND

Dear Karyn Igar, P.E.:

Thank you for the opportunity to review the subject document. Given the nature of the project, the impacts to the OCFA are not significant. While no additional public safety resources are anticipated as a result of this project, all standard conditions and guidelines will be applied to the project during the normal plan review process. We do have a couple of comments on the overall project(s). The project is subject to review by the City and the OCFA for various construction document plan checks for the applicable fire life safety codes and regulations. The project will be subject to the current editions of the CBC, CFC and related codes. The facility will be subject to OCFA's chemical reviews and permitting. Please make every effort to keep or develop safe points of access for the fire department in the event of a water rescue in these areas. This includes the width, nature and method of securing the access point.

Thank you for providing us with this information. Please contact me at 714-573-6199 if you have any questions.

Sincerely,

Tamera Rivers

Management Analyst Strategic Services Section tamyrivers@ocfa.org

714-573-6199

SENT VIA E-MAIL AND USPS:

March 20, 2019

karyni@mesawater.org

Karyn Igar, P.E., Senior Civil Engineer Mesa Water District 1965 Placentia Avenue Costa Mesa, CA 92627

AQMD (909) 396-2000 · www.aqmd.gov

Mitigated Negative Declaration (MND) for the Proposed Wells No. 12 and No. 14 Pipeline Project

South Coast Air Quality Management District (SCAOMD) staff appreciates the opportunity to comment on the above-mentioned document. The following comments are meant as guidance for the Lead Agency and should be incorporated into the Final MND.

SCAQMD Staff's Summary of Project Description

The Lead Agency proposes to construct two potable water wells and 4,500 linear feet of pipelines on 0.89 acres (Proposed Project). The Proposed Project is located at 4011 West Chandler Avenue and 3120 South Croddy Way on the northwest corner of West MacArthur Boulevard and South Harbor Boulevard in the City of Santa Ana. Construction of the Proposed Project is expected to last 20 months, starting in January 2020 and will involve demolition of two existing office/storage buildings¹.

Permits and Compliance with SCAQMD Rules

Since the Proposed Project includes, among others, construction and operation of two on-site aqueous ammonia storage tanks and two on-site, 500 horsepower diesel-fueled emergency generators², permits from SCAQMD will be required, and SCAQMD should be identified as the Responsible Agency for the Proposed Project in the Final MND. In addition to a discussion of compliance with SCAQMD Rules 403 - Fugitive Dust and 1403 - Asbestos Emissions from Demolition/Renovation Activities, the Lead Agency should include a discussion to demonstrate compliance with applicable SCAQMD Rules, including, but not limited to, Rule 201 - Permit to Construct³, Rule 203 - Permit to Operate⁴, Rule 401 - Visible Emissions⁵, Rule 402 – Nuisance⁶, Regulation 13 – New Source Review⁷, Rule 1401 – New Source Review of Toxic Air Contaminants⁸, and Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines⁹ in the Air Quality Section of the Final MND.

MND. Section 2.2. *Project Description*. Page 2-3 – 2-4.

² *Ibid.* Pages 2-5-2-11.

³ South Coast Air Quality Management District. Rule 201 Permit to http://www.aqmd.gov/docs/default-source/rule-book/reg-ii/rule-201.pdf.

⁴ South Coast Air Quality Management District. Rule 203 – Permit to Operate. Accessed at: http://www.aqmd.gov/docs/defaultsource/rule-book/reg-ii/rule-203.pdf.

⁵ South Coast Air Quality Management District. Rule 401 – Visible Emissions. Accessed at: http://www.aqmd.gov/docs/default- source/rule-book/rule-iv/rule-401.pdf.

⁶ South Coast Air Quality Management District. Rule 402 - Nuisance. Accessed at: http://www.aqmd.gov/docs/default-10 source/rule-book/rule-iv/rule-402.pdf.

⁷ South Coast Air Quality Management District. Regulation 13 - New Source Review. Accessed at: http://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/regulation-xiii.

⁸ South Coast Air Quality Management District. Rule 1401 - New Source Review of Toxic Air Contaminants. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1401.pdf.

South Coast Air Quality Management District. Rule 1470 - Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1470.pdf.

Karyn Igar, P.E. March 20, 2019

Furthermore, due to the light industrial historical usage of the site¹⁰, if during soil disturbing activities such as grading, petroleum hydrocarbons may be encountered that will cause volatile organic compounds to become airborne, the Lead Agency should include a discussion to demonstrate compliance with SCAQMD Rule 1166 – Volatile Organic Compounds Emissions from Decontamination of Soil¹¹ and SCAQMD Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants¹² in the Air Quality Section of the Final MND. Any assumptions used in the Air Quality Analysis in the Final MND will be used as the basis for permit conditions and limits for the Proposed Project. Should there be any questions on permits, please contact the SCAQMD's Engineering and Permitting staff at (909) 396-3385. For more general information on permits, please visit SCAQMD's webpage at: http://www.aqmd.gov/home/permits.

Conclusion

Pursuant to CEQA Guidelines Section 15074, prior to approving the Proposed Project, the Lead Agency shall consider the MND for adoption together with any comments received during the public review process. Please provide SCAQMD with written responses to all comments contained herein prior to the adoption of the Final MND. When responding to issues raised in the comments, response should provide sufficient details giving reasons why specific comments and suggestions are not accepted. There should be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information do not facilitate the purpose and goal of CEQA on public disclosure and are not meaningful, informative, or useful to decision makers and the public who are interested in the Proposed Project.

SCAQMD staff is available to work with the Lead Agency to address any air quality questions that may arise from this comment letter. Please contact Alina Mullins, Assistant Air Quality Specialist, at amullins@aqmd.gov or (909) 396-2402, should you have any questions.

Sincerely,

Lijin Sun

Lijin Sun, J.D. Program Supervisor, CEQA IGR Planning, Rule Development & Area Sources

LS:AM/AS ORC190221-03 Control Number

_

¹⁰ MND. Section 3.4.8 *Hazards and Hazardous Materials. Page* 3-34.

¹¹ South Coast Air Quality Management District. Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1166.pdf.

¹² South Coast Air Quality Management District. Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants. Accessed at: https://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1466.pdf.





State Water Resources Control Board

March 22, 2019

Mesa Water District Attn: Ms. Karyn Igar, P.E 1965 Placentia Avenue Costa Mesa, CA 92627

RE: MESA WATER DISTRICT, MITIGATED NEGATIVE DECLARATION (MND) FOR THE WELLS NO. 12 AND NO. 14 AND PIPELINE PROJECT (PROJECT); SCH # 2019029119

Dear Ms. Igar:

Thank you for the opportunity to review the MND for the proposed Project. The State Water Resources Control Board, Division of Drinking Water (State Water Board) is responsible for issuing water supply permits administered under the Safe Drinking Water Act and will require a new or amended water supply permit for the above referenced Project. A project requires a permit if it includes water system consolidation or changes to a water supply source, storage, or treatment. The State Water Board is a responsible agency pursuant to the California Environmental Quality Act (CEQA) and considers the above referenced document as adequate to meet water supply permit CEQA requirements.

The proposed Project includes construction of two new potable water wells on approximately 0.89 acre of land located in the City of Santa Ana, California. The District purchased two properties within the City of Santa Ana to be used as groundwater well sites. Well No. 12 is located at 4011 W. Chandler Avenue. Well No. 14 is located at 3120 S. Croddy Way. The Project includes drilling, constructing, developing, testing, and equipping of Wells No. 12 and No. 14, plus construction of facilities at the sites for operation of the wells. In addition, approximately 4,500 feet of pipeline will connect the two wells to Mesa Water District's distribution system traversing Chandler Avenue to Croddy Way to W. MacArthur Boulevard to Hyland Avenue. The long-range plan for the Project is to provide enough space to construct a second generation, separate water well at each well site when the original wells have significantly reduced production and cannot be recovered by rehabilitation.

Proposed Well No. 12 and associated structures and equipment would be constructed within a 0.43–acre site. Proposed Well No. 14 and associated structures and equipment would be constructed within a 0.46–acre site. Each well site will include a well building, electrical building, SCE transformer, chemical storage area, emergency backup generator, and a well water waste air gap. Both wells are located outside of Mesa Water District's service area and will require the construction of approximately 4,500 feet of pipeline to connect the proposed wells to Mesa Water District's existing system. Construction is anticipated to begin in the third quarter of 2020 fiscal year and last approximately 20 months. Existing office and storage buildings at each location will be demolished and trees will be removed in order to provide

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR



work area to drill the wells. Once operational, Wells No. 12 and No. 14 can potentially provide an additional 6 to 8 million gallons per day of safe and reliable drinking water.

COMMENTS

- 2.2.3.1 Well No. 12 Storm Drain (page 2-6) Consider if a Waste Discharge Permit is required. Is the proposed 18" storm drain a permanent drain or a temporary drain for construction? What is the length of the proposed 18" diameter storm drain for Well 12?
- 2.2.3.2 Well No. 14 Storm Drain (page 2-8) Consider if a Waste Discharge Permit is required. Is the proposed 18" storm drain a permanent drain or a temporary drain for construction?
- 2.3 (page 2-11) State Water Resources Control Board, Division of Drinking Water Water Quality (add) Supply Permit
- 2.3 (page 2-11) (add if required) State Water Resources Control Board, Division of Water Quality Construction General Permit (CGP)
- 3.1 (Page 3-1) Environmental Factors Potentially Affected Check the appropriate boxes in the table.
- 3.4.6(b) Geology and Soils, Soil erosion or loss of topsoil (page 3-25) Check the box for Less Than Significant with Mitigation Incorporated (if a CGP is required).
- 3.4.6(b) Geology and Soils, Soil erosion or loss of topsoil (page 3-27) Less Than Significant with Mitigation Incorporated (if a CGP is required). Please recalculate the total project impact area for soil disturbance including the area to be graded on each parcel, the surface area of any trenches, and the soil areas outside of the trenches that will be graded and or disturbed by construction equipment, vehicles, and machinery during construction activities. Contact the Construction Stormwater Program staff at (866) 563-3107 or stormwater@waterboards.ca.gov for confirmation of the soil disturbance area for the Project.
 - Mitigation Measures: (Please add if required) GEO-1: Storm Water Pollution Prevention Plan (SWPPP)
- 3.4.9(a) Hydrology and Water Quality (page 3-39) Short Term Impacts The proposed Project would be subject to the requirements of the CGP if the Project impact area will be greater than one acre of soil disturbance.

Mitigation Measures: (Reference GEO-1 SWPPP if required)

- 3.4.19(a) Mandatory Findings of Significance (page 3-70) Include a discussion regarding soil disturbance and the CGP including mitigation measure GEO-1. (if required)
 - Mitigation Measures: (add if required) GEO-1 SWPPP

When the review process has ended, please forward the following items with your permit application to the Santa Ana District Office:

- Copy of the draft and final MND with any comment letters received and the lead agency responses as appropriate;
- Copy of the Resolution or Board Minutes certifying and adopting the MND;
- Copy of the stamped Notice of Determination (NOD) filed at the Orange County Clerk's Office or Governor's Office of Planning and Research, State Clearinghouse.

Please contact James Jablonski at Santa Ana District Office, at (714) 558-4410 or <u>James.Jablonski@waterboards.ca.gov</u> if you have any questions regarding water supply permit requirements.

Sincerely,

Susan Stewart Environmental Scientist PO Box 944212 Sacramento CA, 94244-2120

cc: Office of Planning and Research, State Clearinghouse

James Jablonski Santa Ana District

APPENDIX B MITIGATION MONITORING AND REPORTING PLAN

This page intentionally left blank

Mesa Water District Wells No. 12 and No. 14 and Pipeline Project

MITIGATION MONITORING AND REPORTING PROGRAM

Prepared For:

Mesa Water District

1965 Placentia Avenue Costa Mesa, California 92627

Contact: Karyn Igar, P.E., Project Manager 949.207.5452

MITIGATION MONITORING AND REPORTING PROGRAM

Public Resources Code, Section 21081.6 (Assembly Bill 3180) requires that mitigation measures identified in environmental review documents prepared in accordance with California Environmental Quality Act (CEQA) are implemented after a project is approved. Therefore, this Mitigation Monitoring and Reporting Program (MMRP) has been prepared to ensure compliance with the adopted mitigation measures during the Mesa Water District Wells No. 12 and No. 14 and Pipeline Project (Project). Mesa Water District is the agency responsible for implementation of the mitigation measures identified in the Initial Study/Mitigated Negative Declaration.

This MMRP provides Mesa Water District with a convenient mechanism for quickly reviewing all the mitigation measures including the ability to focus on select information such as timing. The MMRP includes the following information for each mitigation measure:

- The phase of the project during which the required mitigation measure must be implemented;
- The phase of the project during which the required mitigation measure must be monitored; and
- The monitoring agency.

The MMRP includes a checklist to be used during the mitigation monitoring period. The checklist will verify the name of the monitor, the date of the monitoring activity, and any related remarks for each mitigation measure.

Mitigation Measure	Implementation Phase	Monitoring Phase	Monitoring Agency	Compliance Verification	
				Initial	Date
BIO-1: Project activities that will remove or disturb Project site rees will be scheduled outside the breeding bird season. The preeding bird nesting season is typically from February 15 hrough September 15.	Pre-Construction	Pre-Construction	Mesa Water District		
f project activities cannot be avoided during February 15 hrough September 15, a qualified biologist will conduct a presonstruction breeding bird survey for breeding birds and active lests or potential nesting sites within the limits of project disturbance. The survey will be conducted at least seven days prior to the onset of scheduled activities, such as mobilization and staging. It will end no more than three days prior to regetation, substrate, and structure removal and/or					

Mitigation Measure	Implementation Phase	Monitoring Phase		Compliance \	/erification
			Monitoring Agency	Initial	Date
f no breeding birds or active nests are observed during the pre-					
construction survey or they are observed and will not be					
mpacted, project activities may begin and no further mitigation					
will be required.					
If a breeding bird territory or an active bird nest is located during					
the pre-construction survey and will potentially be impacted, the					
site will be mapped on engineering drawings and a no-activity					
buffer zone will be marked (fencing, stakes, flagging, orange					
snow fencing, etc.) a minimum of 100 feet in all directions or					
500 feet in all directions for listed bird species and all raptors.					
The biologist will determine the appropriate buffer size based					
on the type of activities planned near the nest and the type of					
bird that created the nest. Some bird species are more tolerant					
than others of noise and activities occurring near their nest.					
This no-activity buffer zone will not be disturbed until a qualified					
piologist has determined that the nest is inactive, the young					
nave fledged, the young are no longer being fed by the parents,					
the young have left the area, or the young will no longer be					
mpacted by project activities. Periodic monitoring by a biologist					
will be performed to determine when nesting is complete. Once					
he nesting cycle has finished, project activities may begin					
within the buffer zone.					
If listed bird species are observed within the project site during					
the pre-construction survey, the biologist will immediately map					
he area and notify the appropriate resource agency to					
determine suitable protection measures and/or mitigation					
neasures and to determine if additional surveys or focused					
protocol surveys are necessary. Project activities may begin					
within the area only when concurrence is received from the					
appropriate resource agency.					

MITIGATION	I MONITORING ANI	O REPORTING PROC	BRAM			
				Compliance Verification		
Mitigation Measure	Implementation Phase	Monitoring Phase	Monitoring Agency	Initial	Date	
Birds or their active nests will not be disturbed, captured, handled or moved. Active nests cannot be removed or disturbed; however, nests can be removed or disturbed if determined inactive by a qualified biologist.						
CUL-1: Environmental Training – prior to construction of the Project, a qualified archaeologist will provide a cultural resource briefing that includes all applicable laws and penalties pertaining to disturbing cultural resources, a brief discussion of the prehistoric and historic regional context and archaeological sensitivity of the area, types of cultural resources found in the area, instruction that Project workers will halt construction if a cultural resource is inadvertently discovered during construction, and procedures to follow in the event an inadvertent discovery (Inadvertent Discovery Plan) is encountered, including appropriate treatment and respectful behavior of a discovery (e.g., no posting to social media or photographs). If requested, a local tribal representative(s) shall be invited to participate in the environmental training to discuss or provide text from a tribal cultural perspective regarding the cultural resources within the region.	Pre-Construction; Construction	Pre-Construction; Construction	Mesa Water District			
CUL-2: Inadvertent Discovery of Archaeological Resources During Construction – A qualified archaeologist shall prepare an Inadvertent Discovery Plan for the Project. During Project-level construction, should subsurface archaeological resources be discovered, all activity in the vicinity of the find shall stop and a qualified archaeologist shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency and any local Native American groups expressing interest, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section	Construction	Construction	Mesa Water District			

MITIGATION	MITIGATION MONITORING AND REPORTING PROGRAM								
				Compliance Verification					
Mitigation Measure	Implementation Phase	Monitoring Phase	Monitoring Agency	Initial	Date				
15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, Project re-route or re-design, Project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2.									
CUL-3: Inadvertent Discoveries of Paleontological Resources – If the construction staff or others observe previously unidentified paleontological resources during ground disturbing activities, they will halt work within a 200-foot radius of the find(s), delineate the area of the find with flagging tape or rope (may also include dirt spoils from the find area), and immediately notify a qualified Paleontologist. Construction will halt within the flagged or roped-off area. The Paleontologist will assess the resource as soon as possible and determine appropriate next steps in coordination with Mesa Water District. Such finds will be formally recorded and evaluated. The resource will be protected from further disturbance or looting pending evaluation.	Construction	Construction	Mesa Water District						

Mesa Water District Wells No. 12 and No. 14 and Pipeline Project

DRAFT

Initial Study/Mitigated Negative Declaration

Prepared For:

Mesa Water District
1965 Placentia Avenue
Costa Mesa, California 92627
Contact: Karyn Igar, P.E., Project Manager
949.207.5452

Prepared by:

Tetra Tech, Inc.
17885 Von Karman Ave. Suite 500
Irvine, CA 92614-6213
Contact: Derrick Coleman, Ph.D.
Environmental Task Manager
949.809.5039

February 2019

WELLS NO. 12 AND NO. 14 AND PIPELINE PROJECT

PROPOSED MITIGATED NEGATIVE DECLARATION (MND) AND NOTICE OF INTENT TO ADOPT THE PROPOSED MND

This serves as the Mesa Water District's Notice of Intent to adopt a Mitigated Negative Declaration for the Wells No. 12 and No. 14 and Pipeline Project, prepared in accordance with the California Environmental Quality Act (CEQA) and CEQA Guidelines.

Name of Project: Wells No. 12 and No. 14 and Pipeline Project

Project Location: The proposed Mesa Water District Wells No. 12 and No. 14 and Pipeline Project

("Project") site is located in the City of Santa Ana, in the central portion of Orange County (County), within Section 28 of Township 5 South, Range 10 West, on the Newport Beach, California, U.S. Geological Survey 7.5-minute Quadrangle Map (2015). Well No. 12 is located at 4011 W. Chandler Avenue. Well No. 14 is located at 3120 S. Croddy Way. The proposed pipeline will connect the two wells to the Mesa Water District's distribution system traversing Chandler Avenue to Croddy

Way to W. MacArthur Boulevard to Hyland Avenue.

Lead Agency: Mesa Water District

1965 Placentia Avenue

Costa Mesa, California 92627

Project Description:

Mesa Water District is proposing to construct two new potable water wells on approximately 0.89 acre of land located in the City of Santa Ana, California. Mesa Water District provides potable water for a population of approximately 110,000 within an 18-square mile service area which includes the City of Costa Mesa, portions of the City of Newport Beach, and portions of unincorporated Orange County. Mesa Water District distributes a combination of imported water and local groundwater and maintains five clear water wells, two tinted water wells which is treated by the Mesa Water Reliability Facility to remove color, and two reservoirs with a combined capacity of 28 million gallons. In 2014, Mesa Water District Board of Directors adopted a policy for local water reliability to be 115 percent of demand. This policy provides Mesa Water District with additional assurance to meet peak water demands with local groundwater supplies when other water production facilities undergo routine maintenance.

In order to provide additional local water reliability, Mesa Water District purchased two properties within the City of Santa Ana to be used as groundwater well sites. Proposed Well No. 12 and associated structures and equipment would be constructed within a 0.43–acre site. Proposed Well No. 14 and associated structures and equipment would be constructed within a 0.46–acre site. Each well site will include a well building, electrical building, SCE transformer, chemical storage area, emergency backup generator, and a well water waste air gap.

Both wells are located outside of Mesa Water District's service area and will require the construction of approximately 4,500 feet of pipeline to connect the proposed wells to Mesa Water District's existing system. Construction is anticipated to begin in the third quarter of 2020 fiscal year and last approximately 20 months. Once operational, Wells No. 12 and No. 14 can potentially provide an additional 6 to 8 million gallons per day of safe and reliable drinking water.

The Project site is not designated a hazardous waste property, or a hazardous waste disposal site as enumerated under Section 65962.5 of the California Government Code.

NOTICE IS HEREBY GIVEN THAT Mesa Water District proposes to adopt a Mitigated Negative Declaration for the above-cited Project. Such Mitigated Negative Declaration is based on the finding that, by implementing the identified mitigation measures, the Project's potential impacts will be maintained at a less than significant level. The reasons to support such a finding are documented by the Initial Study prepared by Mesa Water District. Copies of the Initial Study, the proposed Mitigated Negative Declaration and supporting materials are available for review at Mesa Water District headquarters located at 1965 Placentia Avenue, Costa Mesa, CA 92627.

For questions regarding the Mitigated Negative Declaration, please contact:

NAME: Karyn Igar, P.E. **PHONE**: 949.631.1200

TITLE: Senior Civil Engineer EMAIL: karyni@mesawater.org

ADDRESS: Mesa Water District

1965 Placentia Avenue Costa Mesa, CA 92627

Public Review Period: 30 days Begins: February 20, 2019 Ends: March 22, 2019

Public Hearing: Consideration of adoption of the Mitigated Negative Declaration via public

hearing by Mesa Water District is scheduled to take place on April 11, 2019 at 6:00 p.m. at Mesa Water District headquarters located at 1965 Placentia

Avenue, Costa Mesa, CA 92627.

In accordance with CEQA Guidelines, any comments concerning the findings of the proposed Initial Study/Mitigated Negative Declaration must be submitted in writing and **received by Mesa Water District no later than 5:00 p.m. on March 22, 2019**, in order to be considered prior to Mesa Water District's final determination on the Project. Please submit your written comments to Karyn Igar, P.E. (karyni@mesawater.org), Mesa Water District, 1965 Placentia Avenue, Costa Mesa, CA 92627.

TABLE OF CONTENTS

ABB	REVIATI	IONS AND ACRONYMS	iii
1.0	INTR	ODUCTION	1-1
	1.1	STATUTORY AUTHORITY AND REQUIREMENTS	
	1.2	REQUIRED CONTENT	1-1
2.0	PROJ	JECT INFORMATION	2-1
	2.1	ENVIRONMENTAL SETTING	
		2.1.1 Regional	
		2.1.2 Project Area	
	2.2	PROJECT DESCRIPTION	
		2.2.1 General Description	2-3
		2.2.2 Demolition of Existing Structures	
		2.2.3 Project Components and Ancillary Facilities	2-4
		2.2.3.1 Well No. 12	
		2.2.3.2 Well No. 14	
		2.2.4 Project Pipeline	
		2.2.5 Construction Details	
		2.2.5.1 Well No. 12	
		2.2.5.2 Well No. 14	
		2.2.5.3 Project Pipeline	
		2.2.6 Operations	
	2.3	2.2.7 Future Subsequent Wells OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED	
3.0	ENVII 3.1 3.2	RONMENTAL CHECKLISTENVIRONMENTAL FACTORS POTENTIALLY AFFECTEDDETERMINATION: (TO BE COMPLETED BY THE LEAD	3-1
		AGENCY)	3-1
	3.3	EVALUATION OF ENVIRONMENTAL IMPACTS	
	3.4	ENVIRONMENTAL IMPACT ANALYSIS	
		3.4.1 Aesthetics	
		3.4.2 Agriculture and Forest Resources	
		3.4.3 Air Quality	
		3.4.4 Biological Resources	
		3.4.5 Cultural Resources	
		3.4.6 Geology and Soils	
		3.4.7 Greenhouse Gas Emissions	
		3.4.8 Hazards and Hazardous Materials	
		3.4.9 Hydrology and Water Quality	
		3.4.10 Land Use and Planning	
		3.4.11 Mineral Resources	
		3.4.12 Noise	
		3.4.13 Population and Housing	
		3.4.14 Public Services	
		3.4.15 Recreation	
		3.4.16 Transportation/Traffic	3-58

TABLE OF CONTENTS

(Continued)

	3.4.17 Tribal Cultural Resources	3-62
	3.4.18 Utilities and Service Systems	
	3.4.19 Mandatory Findings of Significance	3-70
4.0 LIS	T OF PREPARERS	4-1
5.0 RE	FERENCES	5-1
List of Tal	bles	
Table 1.	Construction Emissions Summary - Well No. 12 Construction Phase	3-11
Table 2.	Construction Emissions Summary - Well No. 14 Construction Phase	3-12
Table 3.	Construction Emissions Summary - Well Nos. 12 and 14, Storm	
	Drain and Pipeline Construction Phase	3-12
Table 4.	Construction Emissions vs. SCAQMD Regional and Localized	
	Emissions Thresholds	
Table 5.	Operation Emissions Summary	3-13
Table 6.	Operation Emissions vs. SCAQMD Regional and Localized	2.42
T-1-1- 7	Emissions Thresholds	
Table 7.	GHG Emissions	3-30
List of Fig	uires	
	Regional Map	
•	Vicinity Map	
•	Well No. 12 Site Plan	
•	Well No. 14 Site Plan	
· ·	Pipeline Route	
•	•	
rigure 2-6	Water Pipeline Construction Traffic Detour Routes, Well No. 12 to Well No.14	
Figure 2-7	Water Pipeline Construction Traffic Detour Routes, Well No.14 to Hyland Avenue	
Figure 2-8	Storm Drain Construction Traffic Detour Routes	

Appendices

Appendix A Air Quality and Greenhouse Gas Technical Report

Appendix B Cultural Resources

ABBREVIATIONS AND ACRONYMS

A ampere

AB Assembly Bill

APE area of potential effect

AQMP Air Quality Management Plan

bgs below ground surface

BMP Best Management Practices

CalEEMod California Emissions Estimator Model®
CEQA California Environmental Quality Act

City Santa Ana City

CMU concrete masonry unit

CNEL Community Noise Equivalent Level

CO carbon monoxide

CO₂e carbon dioxide equivalent

County Orange County

CRHR California Register of Historical Resources

dBA A-weighted sound level

EIR Environmental Impact Report

GHG greenhouse gas

HVAC heating, ventilation, and air conditioning

Leq equivalent continuous sound level LST localized significance threshold

MLD Most Likely Descendant

NAHC Native American Heritage Commission

NO_X nitrogen oxides

NPDES National Pollutant Discharge Elimination System

NRHP National Register of Historic Places

 O_3 ozone

OCFA Orange County Fire Authority

PM particulate matter

PM₁₀ particulate matter 10 micrometers or less in diameter PM_{2.5} particulate matter 2.5 micrometers or less in diameter

PRC Public Resources Code

PVC polyvinyl chloride

February 2019 Page iii

Mesa Water District Water Well No.12 and No. 14 Draft Initial Study/Mitigated Negative Declaration

ROG reactive organic compound

SCAB South Coast Air Basin

SCADA supervisory control and data acquisition

SCAQMD South Coast Air Quality Management District

SCCIC South Central Coastal Information Center

SCE Southern California Edison

SO₂ sulfur dioxide

VdB vibration decibel

V volt

1.0 INTRODUCTION

Mesa Water District is proposing to develop and install two new potable water wells and connecting pipeline at 4011 W. Chandler Avenue (Well No. 12) and 3120 S. Croddy Way (Well No. 14) in the City of Santa Ana, California. Mesa Water District Water Wells No. 12 and No. 14 and Pipeline Project (herein referenced as "Project") is needed to provide additional local water reliability.

Following initial review of the proposed Project, Mesa Water District has determined that it is subject to the guidelines and regulations of the California Environmental Quality Act (CEQA). This Initial Study addresses the environmental effects of the Project, as proposed.

1.1 STATUTORY AUTHORITY AND REQUIREMENTS

This Mitigated Negative Declaration has been prepared by Mesa Water District with technical assistance from Tetra Tech, Inc. to evaluate if implementation of the Project would have a significant effect on the environment. Pursuant to Section 15070 of the *Guidelines for Implementation of the California Environmental Quality Act* (14 California Code of Regulations §§ 15070-15075), a public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when:

- (a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or
- (b) The initial study identifies potentially significant effects, but:
 - (1) Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and
 - (2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

1.2 REQUIRED CONTENT

CEQA Guidelines Section 15071 indicate that a Negative Declaration circulated for public review shall include:

- (a) A brief description of the project, including a commonly used name for the project, if any;
- (b) The location of the project, preferably shown on a map, and the name of the project proponent;
- (c) A proposed finding that the project will not have a significant effect on the environment;
- (d) An attached copy of the Initial Study documenting reasons to support the finding; and
- (e) Mitigation measures, if any, included in the project to avoid potentially significant effects.



This page intentionally left blank

2.0 PROJECT INFORMATION

Project title: Mesa Water District Water Wells No. 12 and No. 14 and

Pipeline Project

Lead agency name and

address:

Mesa Water District 1965 Placentia Avenue

Costa Mesa, California 92627

Contact person and phone

number:

Karyn Igar, P.E. (karyni@mesawater.org)

949.631.1200

Project location: The Project site is located in the City of Santa Ana, in

the central portion of Orange County, within Section 28 of Township 5 South, Range 10 West, on the Newport Beach, California, U.S. Geological Survey 7.5-minute Quadrangle Map (2015). Well No. 12 is located at 4011 W. Chandler Avenue (Assessor's Parcel Number 415-014-03). Well No. 14 is located at 3120 S. Croddy Way (Assessor's Parcel Number 415-024-17). The proposed pipeline will connect the two wells to Mesa Water

District's distribution system traversing Chandler Avenue to Croddy Way to W. MacArthur Boulevard to Hyland

Avenue. See Figure 2-1, Project Location Map.

Project sponsor's name and

address:

Mesa Water District

1965 Placentia Avenue Costa Mesa, CA 92627

General Plan Designation: IND 0.45 (Industrial)

Zoning Designation: M1 (Light Industrial)

Surrounding land uses: Surrounding land uses consist of light industrial uses.

The Santa Ana river trail is located approximately 440 feet to the west. Nearby major cross streets are S. Harbor Boulevard to the east and W. MacArthur

Boulevard to the south.



This page intentionally left blank

2.1 ENVIRONMENTAL SETTING

2.1.1 Regional

The City of Santa Ana (City) encompass 27.3 square miles in the west-central section northern Orange County (City of Santa Ana 1998). The City is located in the central block of the Tustin Plain in the Orange County Coastal Basin (Centec Engineering 2017a). The Santa Ana River is the major drainage channel flowing through the City which diagonally traverses the western portions of the City running southwest-northeast.

The City is surrounded by the incorporated cities of Garden Grove, Anaheim, Orange, Tustin, Irvine, Newport Beach, Costa Mesa, and Fountain Valley. Regional access to the City is provided by Interstate 5, which diagonally traverses the northeastern portions of the City running southeast-northwest, State Route 22, which generally forms the City's northern boundary; State Route 55, which generally forms the City's eastern boundary; Interstate 405, which runs southeast-northwest south of the City's southern boundary; and State Route 57, which travels north-south from the north side of the City. The City is also accessible from adjacent communities via major arterial surface streets.

Land uses in Santa Ana are characterized as a diverse collection of residential, commercial, light industrial, and public uses, including parks. As the seat for Orange County, the Civic Center area of Santa Ana contains Federal, State, and local governmental facilities including the courts, criminal justice facilities, administrative offices, and service centers. (City of Santa Ana 1998)

2.1.2 Project Area

The Project's well sites and new pipeline are located within a commercial/light industrial area of the City of Santa Ana, the area bounded by the Santa Ana River on the west, Warner Ave. on the north, Harbor Boulevard on the east, and MacArthur Boulevard on the south, see Figure 2-2, Project Layout. This area adjoins the City of Costa Mesa, which is south of MacArthur Boulevard.

The Well No. 12 site consists of a rectangular-shaped parcel of land approximately 0.426 acres in size. The site is currently improved with one, two-story office building along the south perimeter which is attached to a larger light-industrial/warehouse building that totals approximately 8,450 square feet of building improvements, asphalt-paved driveway surface along the east perimeter, drainage features, and associated landscaping. (Centec Engineering 2017b)

The Well No. 14 site consists of a rectangular-shaped parcel of approximately 0.468 acres in size. The site is currently developed with a concrete tilt-up light-industrial building of approximately 6,944 square feet with associated drive and parking areas. (Centec Engineering 2017a)

2.2 PROJECT DESCRIPTION

2.2.1 General Description

Mesa Water District is proposing to construct two new potable water wells on approximately 0.89 acre of land located in the City of Santa Ana, California. Well No. 12 is located at 4011 W. Chandler Avenue. Well No. 14 is located at 3120 S. Croddy Way. The Project includes drilling, constructing, developing, testing, and equipping of Wells No. 12 and No. 14, plus construction of facilities at the sites for operation of the wells. In addition, approximately 4,500 feet of pipeline



will connect the two wells to Mesa Water District's distribution system traversing Chandler Avenue to Croddy Way to W. MacArthur Boulevard to Hyland Avenue.

The long-range plan for the Project is to provide enough space to construct a second generation, separate water well at each well site when the original well has reached its end of life. The second well at each location would be used in succession over the intended life of the Project, providing two generations of well production. Thus, only one well would be in use at each well site at any given time. The project sequence would be that the first well at each site will be drilled, equipped, and operated until it no longer produces a sufficient amount of water. Replacement of the previous generation well will only occur when the original production rate of that well is significantly reduced and cannot be recovered by rehabilitation. At that point, the second well will be drilled and placed into service, so the initial well can be properly abandoned. It is unknown at this time how long the first well will last, but based on the existing wells in the area, the service period for the initial well could potentially be between 30 and 50 years. Hence, the Project description details in this section are focused on what is known to be required for construction and operation of the first well for each well site, but some information regarding the subsequent wells is also provided in Section 2.2.7 Future Subsequent Wells.

Mesa Water District provides potable water for a population of approximately 110,000 within an 18-square mile service area which includes the City of Costa Mesa, portions of the City of Newport Beach, and portions of unincorporated Orange County. Mesa Water District distributes a combination of imported water and local groundwater and maintains five clear water wells, two tinted water wells (providing water which is treated by the Mesa Water Reliability Facility to remove color), and two reservoirs with a combined capacity of 28 million gallons. In 2014, Mesa Water District Board of Directors adopted a policy for local water reliability to be 115 percent of demand. This policy provides Mesa Water District with additional assurance to meet peak water demands with local groundwater supplies when other water production facilities undergo routine maintenance.

In order to provide additional local water reliability, Mesa Water District purchased two properties within the City of Santa Ana to be used as groundwater well sites. Proposed Wells No. 12 and associated structures and equipment would be constructed within a 0.43-acre site. Proposed No. 14 and associated structures and equipment would be constructed within a 0.46-acre site. Each well site will include a well building, electrical building, Southern California Edison (SCE) transformer, chemical storage area, emergency backup generator, and a well water waste air gap.

Both wells are located outside of Mesa Water District's service area and will require the construction of approximately 4,500 feet of pipeline to connect the proposed wells to Mesa Water District's existing system.

2.2.2 Demolition of Existing Structures

The existing office and storage building at 4011 West Chandler Avenue will be demolished and three trees located in the front of the property also removed in order to provide work area to drill Well No. 12.

The existing office building and storage at 3120 South Croddy Way shall be demolished and seven trees located throughout the property removed in order to provide work area to drill Well No. 14.

2.2.3 Project Components and Ancillary Facilities

At this time, the Project includes drilling the initial water wells at each site, installing equipment to operate the new wells, and constructing the associated housing, and perimeter fence and



block walls. It also involves constructing approximately 4,500 linear feet of pipeline to connect the proposed wells to Mesa Water District's existing system.

2.2.3.1 Well No. 12

The Well No. 12 site is bounded by West Chandler Avenue to the south, industrial uses and South Shannon Street to the west and north, and industrial uses and South Croddy Way to the east.

Well No. 12 and associated structures and equipment will consist of a well building, electrical building, SCE transformer, emergency backup generator, covered chemical storage area, and a well water waste air gap structure, see Figure 2-3, Well No. 12 Site Plan.

Water Well: Based on production data for surrounding existing wells, as discussed in the Preliminary Design Well Report, the optimal depth for the well to be drilled is approximately 1,030 feet below ground surface (bgs). The final design of the well will depend on the actual geology and water quality determined by zone isolation testing during drilling. The pump for Well No. 12 will be a vertical turbine pump with above ground electrical motor. The well building will be located in the center of the site, west of the chemical storage building, and will be approximately 693 square feet in size and 18 feet in height with a 3-foot parapet.

Chemical System: Well No. 12 will include chloramination to disinfect the groundwater prior to distribution. Chloramine is formed when chlorine reacts with ammonia. The well will be equipped with a dedicated chemical storage, dosing and containment area for sodium hypochlorite and aqueous ammonia.

Sodium hypochlorite is injected directly into a static mixer at the discharge of each wellhead. The chemical metering pumps will be flow-paced to maintain an operator adjustable dosing rate. The total chlorine will be monitored downstream of chemical dosing.

Downstream of the sodium hypochlorite injection, aqueous ammonia is injected directly into a static mixer. The chemical metering pumps will be flow-paced to maintain an operator adjustable dosing rate. Monochloramine will be monitored downstream of chemical dosing.

The covered chemical storage area for the sodium hypochlorite and ammonia will be located in the center of the site, east of the well. This area will occupy approximately 769 square feet with a canopy (roof) about 9.5 feet in height.

Electric Power Transmission: Electricity will be supplied by SCE through an SCE connection and transformer to power all the electrical equipment including the 600 horsepower variable frequency drive electrical motor, pump control, supervisory control and data acquisition (SCADA) system, gate motor, lights, alarm systems, ventilation fans, air conditioning units and miscellaneous instrumentation. The electrical building will be located on the south end of the site and will be approximately 351 square feet in size and 18 feet in height with a 5-foot parapet.

SCE will provide electrical services through a three-phase pad mounted transformer. The Well site will have a 480 volt (V), 1000 amperes (A), 3-phase main switchboard with a kilowatt hour meter and a main circuit breaker. This main switchboard will be in an isolated room outside the electrical room, with roof to protect from weather, per local code. Access to this switchboard will be through a double door to allow the three-foot clearance per electrical code.

The distribution switchboard will be installed inside the electrical room. This switchboard will include all the necessary circuit breakers, a 480 to 208/120V step down transformer, and a 208/120V panelboard. The variable frequency drive will be standalone, and will be housed in a National Electrical Manufacturers Association type 1 enclosure located inside the electrical room. The design also has an automatic transfer switch and emergency diesel generator with enclosure located on the exterior of the electrical building.



Structure Designs: As described above, Well No. 12 will include three structures consisting of a well building, electrical building and a chemical storage area. The well and electrical buildings will have steel roof framing, corrugated steel roof deck, expanded polystyrene rigid insulation and single ply polyvinyl chloride (PVC) roofing. The PVC roofing is durable, flexible and energy efficient (due to the white color of the roofing). Both buildings will have interior ladders with ladder-up and roof hatches to allow access to the roof mounted exhaust fan or air conditioning unit and roof drains. The walls of both buildings will be 8-inch thick, solid-grouted concrete block.

In order to have the well and electrical buildings visually blend in with the surrounding buildings, a flat stucco finish is proposed over the exterior of the concrete block. Access to the wellhead will be provided by a 10 foot-8 inches by 12 foot removable steel roof panel and removable steel wall panels at the northwest corner of the building at Well No. 12. Both buildings will have concrete slabs-on-grade. Steel doors with heavy duty hardware will be provided for secured access to both buildings.

The chemical area will have a steel framed canopy with factory coated steel roofing panels. A substantial mat foundation will provide support for chemical tanks and canopy. The tanks will be surrounded by a 3.5-foot minimum high reinforced concrete walls, as secondary containment. The tanks will be anchored to the foundation with cast-in-place anchor bolts.

Perimeter Fencing: For security, 10-foot-high block walls will be installed around the majority of the well site, except where 10-foot-high screened metal fences and rolling metal gates will be provided for access. The proposed wall adjacent to West Chandler Avenue will be a minimum 10-foot offset north of existing right-of-way, consistent with the City Ordinance for the existing building.

Site Access: The existing 27-foot-wide driveway connecting the project site to Chandler Avenue is located on the eastern half of the project site between the existing building located to the west and the surface parking on the eastern boundary. The driveway will be relocated to the eastern boundary of the property with a 25-foot-wide driveway to allow access for delivery and fire trucks. An additional 13-foot-wide driveway will be constructed on the west side of the property to allow for maintenance vehicle access adjacent to the well.

Parking: No public parking will be provided. Parking for maintenance vehicles will be provided within the Well Site perimeter fencing.

Landscaping: The Project site frontage will be landscaped per City of Santa Ana Landscape guidelines.

Lighting: The Project will include access lighting for the building doorways and entrance gate and security lighting for the site.

Storm Drain: A new 18-inch storm drain will convey site storm water and pump waste discharge from Well No. 12 to an existing City of Santa Ana stormwater catch basin on the north side of West Chandler Avenue. The existing catch basin is approximately 3.9 feet deep per existing record drawings and is connected to an existing 18-inch storm drain pipe. The eventual discharge of the existing storm drain is the Santa Ana River.

2.2.3.2 Well No. 14

The Well No. 14 site is bounded by South Croddy Way to the east, industrial uses and West MacArthur Boulevard to the south, industrial uses and South Shannon Street to the west, and industrial uses and West Garry Avenue to the north.

Well No. 14 and associated structures and equipment will consist of a well building, electrical building, SCE transformer, emergency backup generator, covered chemical storage area, and a well water waste air gap structure, see Figure 2-4, Well No. 14 Site Plan.



Water Well: Based on production data for surrounding existing wells, as discussed in the Preliminary Design Well Report, the optimal depth for the well to be drilled at the Well No. 14 site is approximately 990 feet bgs. The final design of the well will depend on the actual geology and water quality determined by zone isolation testing during drilling. The pump for Well No. 14 will be a vertical turbine pump with above ground electrical motor. The well building will be located in the east side of the site and will be approximately 693 square feet in size and 18 feet in height with a 3-foot parapet.

Chemical System: Well No. 14 will include chloramination for disinfection of groundwater prior to its distribution. Chloramine is formed when chlorine reacts with ammonia. The well will be equipped with a dedicated chemical storage, dosing and containment area for sodium hypochlorite and aqueous ammonia.

Sodium hypochlorite is injected directly into a static mixer at the discharge of each wellhead. The chemical metering pumps will be flow-paced to maintain an operator adjustable dosing rate. The total chlorine will be monitored downstream of chemical dosing.

Downstream of the sodium hypochlorite injection, aqueous ammonia is injected directly into a static mixer. The chemical metering pumps will be flow-paced to maintain an operator adjustable dosing rate. Monochloramine will be monitored downstream of chemical dosing.

The covered chemical storage area for the sodium hypochlorite and ammonia, will be located in the north-central area of the site, will occupy approximately 769 square feet, and will measure about 9.5 feet in height.

Electric Power Transmission: Electricity will be supplied by SCE through an SCE connection and transformer to power all of the electrical equipment including the 600 horsepower variable frequency drive electrical motor, pump control, variable frequency drive, SCADA system, gate motor, lights, alarm systems, ventilation fans, air conditioning units and miscellaneous instrumentation. The electrical building will be located in the south-central area of the site and will be approximately 351 square feet in size and 18 feet in height with a 5-foot parapet.

SCE will provide electrical services through a three-phase pad mounted transformer. The Well site will have a 480V, 1000A, 3-phase main switchboard with a kilowatt hour meter and a main circuit breaker. This main switchboard will be located in an isolated room outside the electrical room, with roof to protect from weather, per local code. Access to this switchboard will be through a double door to allow the 3-foot clearance per electrical code.

The distribution switchboard will be installed inside the electrical room. This switchboard will include all the necessary circuit breakers, a 480 to 208/120V step down transformer, and a 208/120V panelboard. The variable frequency drive will be standalone housed in National Electrical Manufacturers Association type 1 enclosure located inside the electrical room. The design also has an automatic transfer switch and emergency diesel generator with enclosure located adjacent to the electrical building.

Structure Designs: As describe above, Well No. 14 will include three structures consisting of a well building, electrical building and a chemical storage area. The well and electrical buildings will have steel roof framing, corrugated steel roof deck, expanded polystyrene rigid insulation and single ply PVC roofing. The PVC roofing is durable, flexible and energy efficient (due to the white color of the roofing). Both buildings will have interior ladders with ladder-up and roof hatches to allow access to the roof mounted exhaust fan or air conditioning unit and roof drains. The walls of both buildings will be 8-inch thick, solid-grouted concrete block.

In order to have the well and electrical buildings visually blend in with the surrounding buildings, a flat stucco finish is proposed over the exterior of the concrete block. Access to the wellhead will be provided by a 10 foot-8 inches by 12 foot removable steel roof panel and removable steel wall panels at the northeast corner of the building at Well No. 14. Both buildings will have



concrete slabs-on-grade. Steel doors with heavy duty hardware will be provided to allow access to both buildings.

The chemical area will have a steel framed canopy with factory coated steel roofing panels. A substantial mat foundation will provide support chemical tanks and canopy. The tanks will be surrounded by a 3.5-foot minimum high reinforced concrete walls, as secondary containment. The tanks will be anchored to the foundation with cast-in-place anchor bolts.

Perimeter Fencing: For security, 10-foot-high block walls will be installed around the majority of the well site, except where 10-foot-high screened metal fences and rolling metal gates will be provided for access. The proposed wall adjacent to South Croddy Way will be a minimum 35-foot offset west of existing right-of-way, consistent with the offset for the existing buildings on South Croddy Way..

Site Access: The existing 24-foot-wide driveway will be protected in place to allow access for delivery and fire trucks and an additional 13-foot-wide driveway will be constructed in the middle of the site to allow for maintenance vehicle access adjacent to the well.

Parking: No public parking will be provided. Parking for maintenance vehicles will be provided within the Well Site perimeter fencing.

Landscaping: The Project site frontage will be landscaped per City of Santa Ana Landscape guidelines.

Lighting: The Project will include access lighting for the building doorways and entrance gate and security lighting for the site.

Storm Drain: Approximately 535 linear feet of 18-inch storm drain is proposed to convey site stormwater and pump waste discharge from Well No. 14 to an existing City of Santa Ana stormwater catch basin on the west side of Croddy Way approximately 500 feet to the south of the Well No. 14 site. The existing storm drain catch basin is approximately 6.9 feet deep per existing record drawings and is connected to an existing 27-inch storm drain pipe. The eventual discharge of the existing storm drain is the Santa Ana River.

2.2.4 Project Pipeline

As discussed above, both wells are located outside of Mesa Water District's service area and will require the construction of approximately 4,500 linear feet of pipeline to connect the proposed wells to Mesa Water District's existing system, see Figure 2-5, Pipeline Route.

A proposed pipeline of approximately 2,200 linear feet of 16-inch diameter ductile iron pipeline will convey water from Well No. 12 and continue east along West Chandler Avenue then bear south onto South Croddy Way to allow a connection to Well No. 14. At the connection point with Well No. 14 the pipeline will increase in diameter to 30-inches. The 2,300 linear feet of 30-inch diameter ductile iron or cement mortar lined and coated steel pipeline will continue south along South Croddy Way and bear west onto MacArthur Boulevard. At Hyland Avenue the pipeline with turn south and connect to the existing 18-inch and two 12-inch asbestos-cement pipes.

2.2.5 Construction Details

Construction is anticipated to begin in the third quarter of 2020 fiscal year and last approximately 20 months.

Construction Best Management Practices (BMPs) for stormwater, erosion/sediment control, and spill prevention will be used.



2.2.5.1 Well No. 12

Well No. 12 construction sequencing will occur as follows:

- 1. Demolition of existing building, piping, and site features
- 2. Well Drilling
- 3. Well Development
- 4. Well Equipping
- 5. On-site Pipeline Construction
- 6. Testing
- 7. Final Site Improvements

All staging and stockpiling will occur on-site for well drilling, developing, and equipping only, within the work zones. A 24-foot-high sound wall will be provided to enclose the well area during drilling. The pipeline contractor will be responsible for obtaining temporary storage area. The entire Site will be graded. Waste and excess debris will be hauled away for disposal. Equipment and material will be hauled from the Site traveling east on Chandler Avenue, south on Croddy Way, east on Segerstrom Avenue, and then south on Harbor Boulevard to the entrance of the 405 Freeway ramp.

Water for the drilling project will be provided by the existing fire hydrant located adjacent to the Project site on West Chandler Avenue. Groundwater generated during well drilling and testing will be discharged to baker tanks, that will be located onsite or within a designated area of the public right-of-way and will later be disposed of as discharge to the storm drain. Construction of the well and facilities will include approximately 420 working days of construction during normal working days and hours (Monday through Friday, except District holidays). This will include three phases of construction that must be conducted 24 hours per day as follows: 7 days of 24 hours per day drilling, 4 days of 24 hours per day testing, and 7 days of 24 hours per day mechanical development. Construction will require between two to eight construction workers.

2.2.5.2 Well No. 14

Well No. 14 construction sequencing will occur as follows:

- 1. Demolition of existing building, piping, and site features
- 2. Construct new fire hydrant and storm drain piping on South Croddy Way and catch basin on-site
- 3. Well Drilling
- 4. Well Development
- 5. Well Equipping
- 6. On-site Pipeline Construction
- 7. Testing
- 8. Final Site Improvements

All staging and stockpiling will occur on-site for well drilling, developing, and equipping only, within the work zones. A 24-foot-high sound wall will be provided to enclose the well areas during drilling. The entire Site will be graded. Waste and excess debris will be hauled away for disposal. Equipment and material will be hauled from the Site traveling south on Croddy Way, east on MacArthur Boulevard, and then south on Harbor Boulevard to the entrance of the 405 Freeway ramp.



Water for the drilling project will be provided by a new fire hydrant to be located on South Croddy Way that will be installed as a part of the storm drain construction. Groundwater generated during well drilling and testing will be discharged to baker tanks, that will be located onsite and will later be disposed of as discharge to the storm drain.

Construction of the well and facilities will include approximately 350 working days of construction during normal working days and hours (Monday through Friday, except District holidays). This will include three phases of construction that must be conducted 24 hours per day as follows: 7 days of 24 hours per day drilling, 4 days of 24 hours per day testing, and 7 days of 24 hours per day mechanical development. Construction will require between two to eight construction workers.

2.2.5.3 Project Pipeline

The pipeline contractor will be responsible for obtaining temporary storage areas. The construction work area along the proposed pipeline will be approximately 24 feet wide. A traffic control plan will be prepared to accommodate this work area width along the pipeline route. A single 20 feet wide travel lane can be provided for construction on Chandler Avenue and Croddy Way resulting in a work area of 24 feet wide. Traffic in the opposite direction shall be detoured to one of the adjacent arterial streets, or flaggers can be provided to keep one lane open for traffic in both directions. Refer to Figures 2-6 through 2-8 for conceptual traffic detour plans. MacArthur Boulevard is an 86-foot-wide major arterial street. The northern half (westbound lanes) of the street is within the City of Santa Ana, and the southern half (eastbound lanes) is within the City of Costa Mesa. One westbound lane and three eastbound lanes can be maintained from Croddy Way to Hyland Avenue resulting in a work area of 24 feet wide. At the intersection of Hyland Avenue and MacArthur Boulevard, one westbound and one eastbound can be maintained. Hyland Avenue southbound lanes will be closed to traffic and northbound left and through will be closed.

It is anticipated that the construction duration of the proposed water pipeline and Well No. 14 storm drain will be completed in 196 calendar days from notice to proceed. The Well No. 14 storm drain connection will be needed to convey water generated during well development to the City storm drain. Therefore, Well No. 14 storm drain and construction of a new fire hydrant for Well No. 14 will be completed prior to drilling of Well No. 14.

All the work for this phase will be during normal working days and hours (Monday through Friday, except District holidays, working hours will be as noted on the City encroachment permit. This phase will require up to seven construction workers.

2.2.6 Operations

Once operational, Wells No. 12 and No. 14 can potentially provide an additional 6 to 8 million gallons per day of safe and reliable drinking water. During normal operation, the well is expected to operate 24 hours per day, 7 days a week. The estimated well production could be up to 4,000 gallons per minute.

The normal operation of the well will require one vehicle trip weekly for one worker to monitor the operation of the well facilities. Maintenance and tank filling will require one bi-weekly vehicle trip. Periodic maintenance activities will include replacement of the sodium hypochlorite or ammonia tanks, and testing and maintaining equipment. During filling of the tanks, Mesa Water District personnel will be present to guard against spillage. Strict procedures will be in place and adhered to at all times. Wash down/containment facilities will also be in place in the event of a spill. The well facility will be highly automated to ensure protection of the public health, safety, and general welfare, and to monitor maintenance requirements and operations.



The well would be shut down and restarted approximately two to three times per month for maintenance and testing.

No solid waste will be generated at the Site.

Well operations will require electrical power to be provided by SCE (for the electric systems and motor). Diesel generators will supply back-up power to the electric motor for emergencies and when electricity is not available. Mesa Water District will monitor operation of the plant through Mesa Water District's SCADA system.

2.2.7 Future Subsequent Wells

Replacement of the initial well installed at each well site location would occur when the original production rate of the current well is significantly reduced and cannot be recovered by rehabilitation.

Second Generation Well No. 12: The first generation well and facilities will be located on the front half of the project site. The remaining space towards the back of the property can accommodate a second generation well to be drilled. A 20-foot-wide fire lane will be required the length of the property per Orange County Fire Authority (OCFA) requirements.

Second Generation Well No. 14: The first generation well and facilities will be located on the front half of the project site. The remaining space toward the back of the property can accommodate a second generation well to be drilled. A 20-foot-wide fire lane will be required the length of the property per OCFA requirements.

2.3 OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED

Other public agencies whose approval is expected to be required in the form of permits, financing approval, or participation agreements are as follows:

- Santa Ana Regional Water Quality Control Board Variance for 50-foot control zone horizontal separation
- State Water Resources Control Board, Division of Drinking Water Water Quality
- Orange County Flood Control District Discharge Permit
- City of Santa Ana, Department of Public Works Encroachment Permit and Storm Drain Connection
- Orange County Fire Authority Planning and Development Fire Service Permit and Hazardous Materials & Process
- Orange County Health Care Agency Risk Management Plan
- South Coast Air Quality Management District Backup generators; Air Quality
- City of Costa Mesa Encroachment Permit



This page intentionally left blank

3.0 ENVIRONMENTAL CHECKLIST

3.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

	cted by this Project, ir indicated by the check	_			
☐ Aesth	etics	☐ Agriculture and For Resources	prestry	☐ Air Quality	
Biolog	jical Resources	☐ Cultural Resource	s	☐ Geology/Soils	
☐ Greer Emiss	nhouse Gas sions	☐ Hazards & Hazard	lous Materials	☐ Hydrology/Water Qua	ılity
☐ Land	Use/Planning	☐ Mineral Resource	S	□ Noise	
☐ Popul	ation/Housing	☐ Public Services		Recreation	
☐ Trans	portation/Traffic	☐ Tribal Cultural Res	sources	☐ Utilities/Service Syste	ms
☐ Mand Significar	atory Findings of nce				
3.2	DETERMINATION:	(TO BE COMPLETE	D BY THE LE	AD AGENCY)	
On the b	oasis of this initial ev	/aluation:			
		oosed project COULE ECLARATION will be p		ignificant effect on the er	nvironment,
X	there will not be a	significant effect in thi	s case because	ignificant effect on the er revisions in the Project TED NEGATIVE DECLAF	have been
		osed project MAY ha IMPACT REPORT is r		effect on the environme	ent, and an
	significant unless madequately analyzed been addressed by	itigated" impact on that in an earlier docume mitigation measures bandenTAL IMPACT F	e environment, nt pursuant to ap ased on the earli	ly significant impact" or but at least one effect 1 oplicable legal standards, er analysis as described of is required, but it must a) has been and 2) has on attached
	because all potentia or NEGATIVE DECI mitigated pursuant	illy significant effects (ARATION pursuant to to that earlier EIR or	a) have been an applicable stan NEGATIVE DE	ignificant effect on the en nalyzed adequately in an dards, and (b) have been CLARATION, including re project, nothing further is re	earlier EIR avoided or evisions or
S	ignature	Date	Signatu	re	Date
P	rint Name		Print Na	ame	
•				····-	

3.3 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 if it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a projectspecific 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, 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 when the incorporation of mitigation measures has reduced an effect from a "potentially significant impact" to a "less than significant impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
- (5) Earlier analyses may be used if, pursuant to 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 earlier analyses 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 incorporated," describe the mitigation measures that 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, when 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 a less than significant level.



This page intentionally left blank

3-4

3.4 ENVIRONMENTAL IMPACT ANALYSIS

3.4.1 Aesthetics

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wo	uld the project:				
a.	Have a substantial adverse effect on a scenic vista?				X
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?				×
C.	Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d.	Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?			X	

Existing Conditions:

The Project site is located in an urban setting characterized by views of light industrial buildings. None of the scenic corridors identified in the City of Santa Ana's General Plan Scenic Corridors Element are near or within the viewshed of the project site. The closest identified scenic corridor is the Sana Ana River, which is within approximately 440 feet of the site (City of Santa Ana 1982a). However, due to intervening buildings, the viewshed of the project site does not include the river.

According to the Caltrans Map of Designated Scenic Routes (Caltrans 2018), there are no official State-designated routes in the Project vicinity. State Route 1, an eligible State Scenic Highway, is located approximately 5.5 miles to the west. The Project site is not visible from State Route 1 due to distance and intervening structures and topography.

Both well sites are developed with light-industrial buildings, asphalt-paved drive ways and parking areas, and landscaping with ornamental vegetation. Views of the both sites are limited to the surrounding light-industrial uses and adjacent roadways.

Discussion:

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

No Impact.

The Project site does not contain a scenic vista. As discussed above, direct views of the Project site are from surrounding light-industrial uses and adjacent roadways.

The proposed Project will involve enclosing the Project site with a 10-foot tall block wall. Implementation of the proposed Project would not block any scenic views. In addition, views of the proposed Project will be predominately screened from public view. As the Project site does not contain any scenic vistas, and because the proposed Project will not block existing views of any scenic vista and will be predominately screened from viewpoints from the adjacent



neighborhood part, implementation of the proposed Project would not impact views of any scenic vista. No impact will be experienced.

Mitigation Measures: No mitigation is required.

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

No Impact. The Project site is not in the viewshed of any designated or eligible State scenic highway. No impact to a scenic highway will occur.

Mitigation Measures: No mitigation is required.

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

Less Than Significant Impact. The proposed Project would involve both temporary and permanent changes to the visual character of the site. Temporary changes are associated with construction activities, including construction equipment, staging, and Site construction. These visual impacts would be short-term in nature and are not considered to be significant.

Implementation of the proposed Project would result in long-term/permanent changes to the visual character of the site due to the replacement of light-industrial buildings with a water well, associated housing, and perimeter walls. The Project site will be enclosed by a 10-foot tall block wall. In order to have the well and electrical buildings visually blend in with the surrounding buildings, a stucco finish is proposed over the exterior of the concrete block. From most viewpoints, only views of the upper portion of the well housing structure would be available. While the proposed Project would result in a change to the existing visual character of the site, it would not result in the removal or degradation of any significant visual resources and would be consistent in appearance to the existing and adjacent light-industrial land uses. For this reason, impacts are considered to be less than significant.

Mitigation Measures: No mitigation is required.

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

Less Than Significant Impact. There are two primary sources of light: light emanating from building interiors that pass through windows, and light from exterior sources (e.g., street lighting, parking lot lighting, building illumination, security lighting, and landscape lighting). Light introduction can be a nuisance to adjacent uses and diminish the view of the clear night sky. Currently, light and glare in the Project vicinity is produced by vehicle headlights, street lighting, and lighting from the onsite and light-industrial adjacent uses.

The Project would include access lighting for the building doorways and entrance gate. However, the amount of light produced at the Site would be the minimum required for safety and security purposes. The lights on the Site would be designed to direct the light toward the Site to reduce spillage into the surrounding streets and residences. The Project would not introduce a substantial amount of additional night lighting or glare compared to the existing lighting around the Project site. Furthermore, since the structures, roofs, and wall would not include shiny finishes, the Project is not expected to create any daytime glare. Therefore, a less than significant impact from the standpoint of light and glare would occur.

Mitigation Measures: No mitigation is required.



3.4.2 Agriculture and Forest Resources

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wo	uld the project:		<u> </u>	T	
а.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?				Х
b.	Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?				Х
C.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)) or timberland (as defined in PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				Х
d.	Result in the loss of forest land or conversion of forest land to non-forest use?				Х
e.	Involve other changes in the existing environment that, 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?				Х

Existing Conditions:

The City of Santa Ana is predominately built-out with limited vacant land. On the Farmland Mapping and Monitoring Program Map for California (California Department of Conservation 2018), the Project site and the surrounding area is designated as Urban and Built-Up Land, which is generally described as land occupied by structures that has a variety of uses including residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Discussion:

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

No Impact. According to the Farmland Mapping and Monitoring Program Map for California, the Project site is an area designated as Urban and Built-Up Land. No Prime or Unique Farmland,

or Farmland of Statewide importance exists within the Project site or vicinity; therefore, no impact would occur.

Mitigation Measures: No mitigation is required.

b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

No Impact. The Project site is designated in the Santa Ana General Plan Land Use Plan as IND 0.45 (Industrial), and there are no agricultural zoning designations or agricultural uses within the Project limits or adjacent areas (City of Santa Ana 1998). The Project would not convert farmland or conflict with any land zoned for agriculture. No Williamson Act contracts apply to the Project site. Therefore, no impact would occur.

Mitigation Measures: No mitigation is required.

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)) or timberland (as defined in PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The Project site is zoned as M1 (Light Industrial). It is surrounded by land zoned as M1. The proposed Project would not conflict with existing zoning, or cause rezoning of forest land or timberland resources. Therefore, no impact would occur.

Mitigation Measures: No mitigation is required.

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. There is no forest land in the vicinity of the Project site. Therefore, the proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

Mitigation Measures: No mitigation is required.

e. Would the project involve other changes in the existing environment that, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. There is no farmland or forest land located within or near the Project site. Therefore, the Project would not involve any changes that could result in the loss or conversion of farmland or forest land to other uses. No impact would occur.

Mitigation Measures: No mitigation is required.



3.4.3 Air Quality

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wo	uld the project:				
a.	Conflict with or obstruct implementation of the applicable air quality plan?				X
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
C.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d.	Expose sensitive receptors to substantial pollutant concentrations?			Х	
e.	Create objectionable odors affecting a substantial number of people?			X	

An Air Quality and Greenhouse Gas Technical Report was prepared by Tetra Tech and is provided under Appendix A. The following summarizes the air quality analysis results and conclusions.

Existing Conditions:

The Project site is located within the South Coast Air Basin (SCAB) and is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAB region is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. It includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. Basin-wide air pollution levels are administered by the SCAQMD through the most current Air Quality Management Plan (AQMP; 2017). The AQMP provides a program for obtaining attainment status for key monitored air pollution standards, based on existing and future air pollution emissions.

Air pollutants are typically classified as primary or secondary pollutants. Carbon monoxide (CO), nitrogen dioxide, particulate matter (PM), sulfur dioxide (SO₂), and lead are considered primary pollutants because they are emitted directly into the atmosphere. Ozone (O₃), a secondary pollutant, is formed through a photochemical reaction in the atmosphere with reactive organic compounds (ROGs) and nitrogen oxides (NO_x) in the presence of sunlight.

Both the federal and State governments have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect public health (see Table 1 of Appendix A). The national and State ambient air quality standards have been set at levels whose concentrations could be generally harmful to human health and welfare and to protect the most sensitive persons from illness or discomfort with a margin of safety. While ambient air quality standards have been developed specifically for O_3 and NO_X , there is no State or federal ambient air quality standard for ROGs. ROGs include many compounds of carbon, excluding



CO, carbon dioxide (CO₂), carbonic acid, metallic carbides or carbonates, ammonium carbonate, and methane, among others. While the State and federal entities have not established ambient attainment levels for ROGs, they have for O_3 . Because ROGs react with NO_X through photochemical reactions to form O_3 , air districts, including SCAQMD, have provided ROG significance thresholds for project-level analysis in order to further limit the levels of ROGs available in the atmosphere that can be converted to O_3 .

Areas are classified under the Federal Clean Air Act as either "attainment" or "nonattainment" areas for each criteria pollutant, based on whether the National Ambient Air Quality Standards have been achieved or not. Attainment relative to the State standards is determined by California Air Resources Board. The SCAB has been designated by the U.S. Environmental Protection Agency as a nonattainment area for O_3 , particulate matter 10 micrometers or less in diameter (PM_{10}), and particulate matter 2.5 micrometers or less in diameter ($PM_{2.5}$). The SCAB is also designated as being in extreme nonattainment for the 8-hour average O_3 standard. Currently, the SCAB is in attainment with the ambient air quality standards for CO, lead, SO_2 , and nitrogen dioxide.

Discussion:

a. Would the project conflict with or obstruct implementation of the applicable air quality plans?

No impact. The SCAQMD is required, pursuant to the Clean Air Act, to reduce emissions of certain pollutants for which the Basin is in non-attainment (i.e., O₃ and PM₁₀). The project would be subject to the SCAQMD's AQMP. The AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections.

The determination of AQMP consistency is primarily concerned with the long-term influence of the project on air quality in the Basin. Neither the development of the project nor its operation would result in short-term and long-term regional impacts. The project would comply with SCAQMD Rule 403 and would implement all feasible mitigation measures for control of PM₁₀ and PM_{2.5}; the project would be consistent with the goals and policies of the AQMP for control of fugitive dust. The proposed project is not expected in conflict with the AQMP and no impact would occur.

Mitigation Measures: No mitigation is required.

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

Less Than Significant Impact.

Construction Impacts. Construction emissions are expected from the following equipment and processes:

- On-site Fugitive Dust Associated with Site Construction Activities:
- On-site Construction Equipment (dump trucks, backhoes, graders, etc.);
- On-site and Off-site Vehicle Emissions, including Delivery Trucks and Worker Vehicles.

The California Emissions Estimator Model® (CalEEMod) model divides the construction processes into phases, including demolition, site preparation, grading, building construction, paving, etc. These model settings can be modified to fit applicable features of a specific project. Each construction phase could generate the following emissions:

(1) Fugitive dust emissions resulting from soil disturbance activity.



Construction activities at the site include grading, trenching, and truck filling/dumping. These activities generate dust emissions. Vehicles and trucks traveling on paved and unpaved roads are also a source of fugitive emissions during the construction period.

During construction, the proposed project would be subject to SCAQMD Rules 403 (Fugitive Dust). The purpose of Rule 403 is to reduce man-made fugitive dust. Rule 403 requires implementing control measures to prevent, reduce, or mitigate fugitive dust emissions and includes a performance standard that prohibits visible emissions from crossing any property line (SCAQMD Rule 403). Dust control measures, such as water application on dry soil and reduced vehicles travelling on unpaved roads, are standard mitigation techniques. Project construction will be required to comply with Rule 403. Implementing the dust suppression techniques specified in Rule 403 can reduce the fugitive dust generation (and thus the PM₁₀ component) by 50 percent or more. Therefore, the estimation of fugitive dust emissions during project construction assumes Rule 403 compliance.

(2) Emissions of air pollutants from fuel combustion in construction equipment

On-site construction equipment will be a source of combustion emissions. Construction equipment is expected to include excavator, tractor, loader, scraper, crane, water truck, paver, and compactor. See Table 3 of Appendix A for the typical construction equipment mix used at each site.

(3) Emissions of air pollutants from fuel combustion in vehicles and trucks

Vehicles used for worker commute and delivery trucks for material delivery to the site, and haul trucks used for construction debris disposal will be a source of combustion emissions. Primary emissions generated will include combustion emissions from engines during idling and while operating. Emissions are based on the estimated number of trips per day and the round trip travel distances. See Table 4 of Appendix A provides the worker commute and haul truck information.

Data presented above was input into the CalEEMod model. Construction activities result in emissions of CO, ROGs, NO_X , SO_X , PM_{10} , and $PM_{2.5}$ and greenhouse gas (GHGs). The CalEEMod model output files are provided in Appendix A.

Construction emissions are summarized in Tables 1, 2 and 3. Table 4 compares the project element emissions with the SCAQMD's regional and localized construction significance threshold levels. As Table 4 shows, construction-related daily (short-term) emissions would not exceed SCAQMD regional significance thresholds for ROGs, NO_X, CO, SO₂, and PM. Thus, project construction emissions would result in a less than significant regional impact.

Table 1. Construction Emissions Summary - Well No. 12 Construction Phase

Construction Phases	CO (lbs/day)	NO _x (lbs/day)	ROG (lbs/day)	SO ₂ (lbs/day)	PM ₁₀ Total (lbs/day)	PM _{2.5} Total (lbs/day)	CO2e (ton/yr)
Demolition	11.62	18.1	1.85	0.02	2.02	1.072	8.77
Demolition (Hauling)	0.99	2.34	0.12	0.06	1.326	0.178	2.93
Well (drilling)	44.5	66.2	6.42	0.184	2.3	2.19	223.7
Well (developing)	26.7	28.9	2.83	0.066	1.31	1.24	115.5
Well (Hauling)	0.70	0.50	0.083	0.002	0.425	0.076	3.26
Well Equipping	13.4	13.7	1.55	0.020	0.794	0.735	102.2

Table 2. Construction Emissions Summary - Well No. 14 Construction Phase

Construction Phases	CO (lbs/day)	NO _x (lbs/day)	ROG (lbs/day)	SO ₂ (lbs/day)	PM ₁₀ Total (lbs/day)	PM _{2.5} Total (lbs/day)	CO2e (ton/yr)
Demolition	11.62	18.14	1.85	0.020	2.02	1.07	8.77
Demolition (Hauling)	0.76	2.32	0.096	0.006	1.26	0.16	2.629
Well (drilling)	44.5	66.2	6.42	0.184	2.30	2.19	223.7
Well (developing)	26.69	28.88	2.83	0.066	1.31	1.235	115.5
Well (Hauling)	0.688	0.548	0.083	0.002	0.193	0.052	3.26
Well Equipping	14.46	14.48	1.65	0.022	0.887	0.783	112.2

Table 3. Construction Emissions Summary - Well Nos. 12 and 14, Storm Drain and Pipeline Construction Phase

Construction Phases	CO (lbs/day)	NO _X (lbs/day)	ROG (lbs/day)	SO ₂ (lbs/day)	PM ₁₀ Total (lbs/day)	PM _{2.5} Total (lbs/day)	CO2e (ton/yr)
Storm Drain	13.32	14.30	1.733	0.025	0.772	0.731	16.29
Well Drilling	0.605	0.055	0.072	0.001	0.177	0.048	1.186
Storm Drain Paving	8.520	8.160	0.892	0.012	0.480	0.452	2.834
Pipeline	5.322	12.98	1.603	0.025	0.669	0.646	385.5
Pipeline Hauling	0.194	0.018	0.023	0.001	0.057	0.015	9.01
Pipeline Paving	8.244	7.289	0.791	0.013	0.411	0.387	4.94

Table 4. Construction Emissions vs. SCAQMD Regional and Localized Emissions Thresholds

Air Pollutants	ROG	NO _X	СО	SO ₂	PM ₁₀	PM _{2.5}	GHG
Emissions Unit			lbs/	day			MT/yr
Max. Overlapping Emissions	6.4	66.2	44.5	0.2	2.3	2.19	544
Regional Construction Emissions Threshold	75	100	550	150	150	55	10,000
Over (Under)	(68.6)	(33.8)	(505.5)	(149.8)	(147.7)	(52.8)	(9,456)
Exceed Threshold (Yes/No)	No	No	No	No	No	No	No
Localized Construction Emissions Thresholds		81	485		4	3	
Over (Under)		(14.8)	(440.5)		(1.7)	(0.81)	
Exceed Threshold (Yes/No)	No	No	No	No	No	No	No

Operation Impacts. During operation, the two wells will include chloramination to disinfect the groundwater prior to distribution. Chloramine is formed when chlorine reacts with ammonia. The well will be equipped with a dedicated chemical storage, dosing and containment area for sodium hypochlorite and aqueous ammonia.

Sodium hypochlorite is injected directly into a static mixer at the discharge of each wellhead. The chemical metering pumps will be flow-paced to maintain an operator adjustable dosing rate.

The total chlorine will be monitored downstream of chemical dosing. Downstream of the sodium hypochlorite injection, aqueous ammonia is injected directly into a static mixer. The chemical metering pumps will be flow-paced to maintain an operator adjustable dosing rate. Monochloramine will be monitored downstream of chemical dosing. The chemical storage area for the sodium hypochlorite and ammonia tanks at each well will be covered with a canopy roof.

The normal operation of the well will require one vehicle trip per week for one worker to monitor the operation of the well facilities. Maintenance and tank filling will require one bi-weekly vehicle trip. Periodic maintenance activities will include replacement of the sodium hypochlorite or aqueous ammonia tanks and testing and maintaining equipment, including an emergency generator. During filling of the tanks, Mesa Water District personnel will be present to guard against spillage. Strict procedures will be in place and adhered to at all times. Wash down/containment facilities will also be in place in the event of a spill. The well facility will be highly automated to ensure protection of the public health, safety, and general welfare, and to monitor maintenance requirements and operations.

For the air quality impact analyses of the operation phase, the CalEEMod model was run to quantify emissions from a conservative worker daily trip (though one trip per week is expected) and bi-weekly trip and monthly testing of the emergency generator. Appendix A provides the CalEEMod output files.

Table 5 shows the CalEEMod results for operational emission. Table 6 shows the comparison of the operational emission vs the SCAQMD Regional and Localized Thresholds. As shown in Table 6, the project is less than significant impact.

Table 5.	Operation	Emissions	Summary
----------	-----------	------------------	----------------

Location	Operation	CO (lb/day)	NOX (lb/day)	ROG (lb/day)	SO ₂ (lb/day)	PM ₁₀ Total (lb/day)	PM _{2.5} Total (lb/day)	CO2e (ton/day)
	Maintenance	0.072	0.007	0.004	1.1 x 10 ⁻⁴	0.012	0.003	2.04
	Emergency Generator Testing	0.287	0.314	0.112	5.48 x10 ⁻⁴	0.017	0.017	9.55
Well No. 14	Maintenance	0.079	0.007	0.005	1.1x10 ⁻⁴	0.013	0.004	2.22
	Emergency Generator Testing	0.041	0.037	0.011	5.48x10 ⁻⁵	0.002	0.002	0.96

Table 6. Operation Emissions vs. SCAQMD Regional and Localized Emissions Thresholds

	ROG	NO _X	СО	SO ₂	PM ₁₀	PM _{2.5}	GHG
Emissions Unit	lbs/day						MT/yr
Total Emissions	0.13	0.36	0.5	0.001	0.04	0.03	14.0
Regional Operation Emissions Threshold	55	55	550	150	150	55	10,000
Over (Under)	(54.9)	(54.6)	(549.5)	(150)	(150)	(150)	(9,986)
Exceed Threshold (Yes/No)	No	No	No	No	No	No	No
Localized Emissions Thresholds		81	485		4	3	
Over (Under)		(80.6)	(484.5)		(3.96)	(2.97)	
Exceed Threshold (Yes/No)		No	No		No	No	

Mitigation Measures: No mitigation is required.

d. Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. In addition to the SCAQMD's regional significance threshold, the SCAQMD has also developed localized significance thresholds (LSTs) that identify daily emissions levels at a project construction site that could cause or contribute to adverse localized air quality impacts to the nearest sensitive receptors.

For projects with a daily construction footprint larger than five acres, SCAQMD recommends that the localized air quality impact analysis be performed using an appropriate air dispersion model. For projects with a daily construction footprint of five acres or less, the SCAQMD has developed the LST methodology to determine localized impacts. This LST Methodology consists of mass emission rate look-up tables. If the calculated emissions for the construction activity are below the emission level found in the LST lookup tables, the construction activity is not considered significant. The screening tables were developed using conservative assumptions, including the worst meteorological conditions. If localized emissions exceed the values in the lookup tables, dispersion modeling, which is more precise, may be performed.

Since the maximum daily construction footprint for each site would be less than five acres, the LST Methodology would be applicable. LSTs apply only to the following criteria pollutants: NO_X , CO, PM_{10} , and $PM_{2.5}$, and apply only to emissions generated on site. LSTs represent the maximum on-site 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 standards and are developed based on the ambient concentrations of that pollutant in that area.

Table 4 summarizes the localized impacts from the construction activities for each site, together with the SCAQMD's daily construction LST significance threshold levels.

As Table 4 shows, construction-related daily (short-term) emissions would not exceed SCAQMD LSTs for NO_X, CO, and PM. Thus, project construction emissions would result in a less than significant localized impact.

Mitigation Measures: No mitigation is required.

e. Would the project create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. Potential sources that may emit odors during construction activities include the use of coating and solvents, and diesel-powered equipment. Due to relatively small footprint of the construction sites, limited use of odorous solvent and coating, and few pieces of diesel-powered equipment operating simultaneously, odor impacts would be less than significant. During operation, all odorous chemicals will be properly stored and handled, odor impact would be less than significant.

Mitigation Measures: No mitigation is required.



3.4.4 Biological Resources

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wol	uld the project:				
а.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				Х
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				Х
C.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?				Х
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			Х	
f.	Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?				x

Existing Conditions:

Regional and Local Plans

The Project site is not located within or near a Habitat Conservation Plan area or a Natural Community Conservation Plan area (County of Orange 2012).

According to the City of Santa Ana General Plan Conservation Element, is a built-up, urban community with limited natural habitat and wildlife resources (City of Santa Ana 1982b).

The Project area is highly urbanized and is an area that has been heavily modified by humans, including roadways, existing buildings, and landscaping with ornamental vegetation. Because of the high degree of disturbance in these areas, they generally have low habitat value for wildlife; wildlife found here are adapted to living in heavily urbanized areas.

City Tree Ordinance

Article VII (Regulation of the Planting, Maintenance, and Removal of Trees), establishes policies, regulations and standards necessary to ensure that the city will continue to realize the benefits provided by its urban forest. Section 33-188 of Article VII, states that:

"Site plan review shall require the planting of street trees to coincide with the development, redevelopment, renovating of any tract or parcel. The site plan for development or improvement of any tract or parcel of land shall be evaluated and approved by the city's transportation and development services division and street maintenance division for the placement of street trees by the developer in accordance with Santa Ana Municipal Code sections 33-47 through 33-53 and section 34-81. The approved site plan, in addition to the usual requirements of the zoning code, contained in chapter 41 of this Code, shall show the approximate location, size, and species of all existing trees to be maintained, trees to be removed and trees required for approval of the project."

Wetlands/Riparian Habitat

The U.S. Fish and Wildlife Service National Wetlands Inventory (USFWS 2018) was reviewed for potential wetlands and riparian habitat in the vicinity of the Project site. No wetlands or riparian areas are mapped in or near the Project site. The closest resource is the Santa Ana river, located approximately 440 feet to the west of the Project site.

Project Site

The Project site is developed with and surrounded by light-industrial land uses. Several large mature trees are located on both well sites and along the adjacent streets. No wetlands or riparian habitat occur on or in the vicinity of the Project site.

Discussion:

a. Would the project have a substantial adverse impact, 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 the U.S. Fish and Wildlife Service?

No Impact. The Project site is developed with and surrounded by light-industrial land uses. The Project site does not contain any sensitive habitat or wildlife resources. Therefore, the Project will result in no impact to biological resources.

Mitigation Measures: No mitigation is required.

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

No Impact. There are no riparian habitats or sensitive natural communities present on or near the Project site. No impacts would occur to riparian habitats or sensitive natural communities.

Mitigation Measures: No mitigation is required.



3-16 February 2019

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

No Impact. There are no wetlands, marshes, or vernal pools within or in the vicinity of the Project Site. Therefore, no impact would occur to any federally protected wetlands under the Clean Water Act.

Mitigation Measures: No mitigation is required.

d. Would the project 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 wildlife nursery sites?

Less Than Significant With Mitigation Incorporated. With no native habitat, and no wildlife corridors that traverse the project site, 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. The Santa Ana River is located approximately 440 feet west of the project site and is separated from the site by urban development.

The project site supports trees that could potentially provide cover, forage, and nesting habitats for bird species that have adapted to urban areas, such as rock pigeons (*Columba livia*) or mourning doves (*Zenaida macroura*). Mourning doves are protected by the Migratory Bird Treaty Act and certain Fish and Game Codes. The statutes make it unlawful to take native breeding birds, and their nests, eggs, and young. The Project will involve the removal of the trees on site. If these trees are removed during breeding bird nesting season (typically from February 15 through September 15), implementation of mitigation measure BIO-1, provided in the event that any nesting birds are found at the project site location, will reduce impacts to less than significant.

Mitigation Measures: *Mitigation Measure BIO-1:* Project activities that will remove or disturb Project site trees will be scheduled outside the breeding bird season. The breeding bird nesting season is typically from February 15 through September 15.

If project activities cannot be avoided during February 15 through September 15, a qualified biologist will conduct a pre-construction breeding bird survey for breeding birds and active nests or potential nesting sites within the limits of project disturbance. The survey will be conducted at least seven days prior to the onset of scheduled activities, such as mobilization and staging. It will end no more than three days prior to vegetation, substrate, and structure removal and/or disturbance.

If no breeding birds or active nests are observed during the pre-construction survey or they are observed and will not be impacted, project activities may begin and no further mitigation will be required.

If a breeding bird territory or an active bird nest is located during the pre-construction survey and will potentially be impacted, the site will be mapped on engineering drawings and a no-activity buffer zone will be marked (fencing, stakes, flagging, orange snow fencing, etc.) a minimum of 100 feet in all directions or 500 feet in all directions for listed bird species and all raptors. The biologist will determine the appropriate buffer size based on the type of activities planned near the nest and the type of bird that created the nest. Some bird species are more tolerant than others of noise and activities occurring near their nest. This no-activity buffer zone will not be disturbed until a qualified biologist has determined that the nest is inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young will no longer be impacted by project activities. Periodic monitoring by a biologist will



be performed to determine when nesting is complete. Once the nesting cycle has finished, project activities may begin within the buffer zone.

If listed bird species are observed within the project site during the pre-construction survey, the biologist will immediately map the area and notify the appropriate resource agency to determine suitable protection measures and/or mitigation measures and to determine if additional surveys or focused protocol surveys are necessary. Project activities may begin within the area only when concurrence is received from the appropriate resource agency.

Birds or their active nests will not be disturbed, captured, handled or moved. Active nests cannot be removed or disturbed; however, nests can be removed or disturbed if determined inactive by a qualified biologist.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact. The proposed Project would require the removal of ten trees. Trees in the public right-of-way in the City of Santa Ana are protected under Article VII (Regulation of the Planting, Maintenance, and Removal of Trees).

Nine of the trees that will be removed as part of the proposed project are on private property and not subject to the City ordinance. One tree on the Well No. 12 site is within the City's right of way and will be subject to the City ordinance. With compliance with the City ordinance, the proposed Project would not conflict with any local policies protecting biological resources and no impact would occur.

Mitigation Measures: No mitigation is required.

f. Would the project conflict with the provisions of an adopted habitat conservation plan, natural communities conservation plan, or any other approved local, regional, or state habitat conservation plan?

No Impact. The Project site is not located within a Habitat Conservation Plan area, a Natural Community Conservation Plan area, or in any other local, regional, or State habitat conservation plan areas. Therefore, no impact would occur.

Mitigation Measures: No mitigation is required.



3.4.5 Cultural Resources

Wol	uld the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?				Х
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		Х		
C.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		Х		
d.	Disturb any human remains, including those interred outside of formal cemeteries?			Х	

Existing Conditions:

Section 15064.5(a) of the CEQA Guidelines generally defines a historical resource as a resource that is listed in, or eligible for listing in, the California Register of Historical Resources (CRHR), listed in a local register of historical resources, identified as significant in a historical resource survey (meeting the requirements of Section 5024.1(g) of the Public Resources Code), or determined to be a historical resource by a project's lead agency. Historic, cultural, and paleontological resources include historic buildings, structures, artifacts, sites, and districts of historic, architectural, archaeological, or paleontological significance.

According to the City of Santa Ana General Plan Conservation Element (City of Santa Ana 1982b), Santa Ana was founded in 1869 by William Spurgeon. The original town, laid out by Mr. Spurgeon, consisted of 24 blocks. The town served as a shopping center and post office for surrounding agricultural areas. In 1878 the Southern Pacific Railroad arrived and the Santa Fe Railroad followed in 1886. This encouraged development of the City. In 1889 the Orange County seat was located in Santa Ana and this further stimulated the development of businesses, stores, financial institutions and hotels serving the metropolitan population. Citrus and walnut farms were still plentiful and buying and selling land became the number one enterprise. Many of the structures in downtown and the surrounding bungalow homes were built in the early 1900's and 1920's. Today the City is developed with urban uses and limited vacant land.

According to the County of Orange General Plan (County of Orange 2012), sub-surface resources such as archaeological and paleontological sites are abundant in South Orange County, along the coast and in creek areas. Based on the County of Orange General Plan, the Project Site is not located in areas mapped for archaeological and paleontological sensitivity or historical areas.

Focusing the discussion of existing conditions for cultural resources in specific reference to the Project Site, the Site and surrounding area is developed land that has been permanently altered due to the construction of below and aboveground improvements including streets, sidewalks, buildings, and utilities.

The Well No. 12 site is currently improved with one, two-story office building which was built in 1977. (Centec Engineering 2017b)

The Well No. 14 site is currently developed with a concrete tilt-up light-industrial building which was built in 1979. (Centec Engineering 2017a)

Record Search Results

A records search was conducted of the Project's Area of Potential Effect (APE) and surrounding areas via the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System on September 13, 2018 (SCCIC File No.: 19378.5313). For the records search, the study area included a half mile buffer centered on the APE. As part of this records search, the SCCIC database of survey reports and overviews was consulted, as well as documented cultural resources, cultural landscapes, and ethnic resources. Additionally, the search included a review of the following publications and lists: California Office of Historic Preservation Historic Properties Directory, National Register of Historic Places (NRHP), California Office of Historical Resources/CRHR, California Points of Historical Interest, California Historical Landmarks, and local historic resource inventories. See Appendix B for record search results.

One previously conducted cultural resource survey (VN-00299¹) and no previously recorded cultural resources were identified within the APE. VN-00299 consisted of an overview for archaeological, architectural, and paleontological resources and was conducted in 1975. An additional 16 previous studies have been conducted within a half mile of the APE between 1975 and 2007. These cultural resource investigations are comprised of archaeological and architectural surveys, and literature searches.

Based on the SCCIC record search results, no CRHR or NRHP listed or eligible sites were identified within the APE. One previously recorded historic building (P-30-176943: Ana Mesa Inn) was identified within a half mile of the APE. This building appears unevaluated for the CRHR/NRHP.

Review of Historic Aerial Photographs

Review of historic aerial photographs provides information regarding potential unrecorded historic features or sites within the APE. Based on the map review², the APE was undeveloped agricultural land from 1953 to 1972. By 1995, the APE appears as a paved north to south trending road with building adjacent east and west, similar as it appears today.

Native American Heritage Commission Sacred Lands Files Search

Tetra Tech, Inc. contacted the California Native American Heritage Commission (NAHC) on August 24, 2018 and requested that the NAHC review its Sacred Lands Files. The NAHC replied on August 27, 2018 that results were negative for Native American Native tribal resources within the APE and provided a list of local Native American contacts with knowledge of the Project area. The NAHC recommends conducting outreach to the listed tribes or individuals as they may have knowledge of cultural resources within or near the Project area. Native American consultation is part of the lead CEQA agency's responsibilities under Assembly Bill (AB) 52, and CEQA as discussed under Section 3.4.17, Tribal Cultural Resources.

² Historic Aerials by Netronline 2018. Electronic database located at https://www.historicaerials.com/viewer accessed 9/23/2018.



3-20 February 2019

¹ Archaeological Associates 1975. Compilation of Historical, Archaeological, and Paleontological Data for Costa Mesa. On file at the SCCIC.

Discussion:

a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines §15064.5?

No Impact. Section 15064.5 of the CEQA Guidelines specifically defines a "historical resource" as a resource that meets one or more of the following criteria:

- Listed in, or determined eligible for listing in, the CRHR; or
- A resource listed in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code (PRC); or
- Identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the PRC; or
- Any object, building, structure, site, area, place, record, or manuscript which a lead
 agency determines to be historically significant or significant in the architectural,
 engineering, scientific, economic, agricultural, educational, social, political, military,
 or cultural annals of California that may be considered to be an historical resource,
 provided the lead agency's determination is supported by substantial evidence in
 light of the whole record.

Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (PRC, § 5024.1, Title 14 California Code of Regulations, Section 4852) including the following:

- An association with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
- An association with the lives of persons important to local, California, or national history.
- An embodiment of the distinctive characteristics of a type, period, region, or method of construction, or a representation of the work of a master, or possesses high artistic values.
- A resource that has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

The buildings on the well sites proposed for demolition were both constructed post 1977 and are under 45 years of age. As of the date of this document, the buildings are not considered historic resources under CEQA. The proposed Project would not cause a substantial adverse change in the significance of a historical resource defined in Section 15064.5 of the CEQA guidelines. The Project Site and immediate vicinity do not contain any known historic resources. Therefore, the proposed Project would not cause a substantial adverse change in the significance of an historical resource and no Project impact would result.

Mitigation Measures: No mitigation is required.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines §15064.5?

Less Than Significant with Mitigation Incorporated. The Project Site is not located in an area of archaeological resources sensitivity (County of Orange 2012). Although the Project area is relatively densely developed, very few previous archaeological studies have been conducted throughout the region. The surficial deposits within the APE have been subjected to previous ground disturbance. The depth of ground surface disturbance is unknown. The Project area is



within the southern end of the broad Coastal Plain of Orange County, specifically the Tustin Plain. Sediments within the APE consist of Holocene (recent to 10,000 years old, 10 to 20 feet in depth) and Pleistocene (10,000 to 2 million years old, 20 feet -plus in depth) alluvium deposits derived from the erosion of bedrock out of the Santa Ana Mountain and the San Joaquin Hills. Late Pleistocene and Holocene deposits are generally considered more likely to contain prehistoric deposits. If construction ground disturbance depths range within native soils (approximately 1 to 2 feet in depth and beyond), there would be a potential to impact previously unrecorded subsurface cultural resources. With incorporation of Mitigation Measure CUL-1 and CUL-2 listed below, these effects on archaeological resources as a result of Project construction would be reduced to less than significant.

Mitigation Measures:

CUL-1: Environmental Training – prior to construction of the Project, a qualified archaeologist will provide a cultural resource briefing that includes all applicable laws and penalties pertaining to disturbing cultural resources, a brief discussion of the prehistoric and historic regional context and archaeological sensitivity of the area, types of cultural resources found in the area, instruction that Project workers will halt construction if a cultural resource is inadvertently discovered during construction, and procedures to follow in the event an inadvertent discovery (Inadvertent Discovery Plan) is encountered, including appropriate treatment and respectful behavior of a discovery (e.g., no posting to social media or photographs). If requested, a local tribal representative(s) shall be invited to participate in the environmental training to discuss or provide text from a tribal cultural perspective regarding the cultural resources within the region.

CUL 2: Inadvertent Discovery of Archaeological Resources During Construction - A qualified archaeologist shall prepare an Inadvertent Discovery Plan for the Project. During Project-level construction, should subsurface archaeological resources be discovered, all activity in the vicinity of the find shall stop and a qualified archaeologist shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency and any local Native American groups expressing interest, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, Project re-route or re-design, Project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2.

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

Less Than Significant with Mitigation Incorporated. The Project Site is not located in an area of paleontological sensitivity (County of Orange 2012). Given the highly disturbed condition of the Project Site and surroundings, the likelihood that paleontological resources or unique geologic features exist on-site is considered low. Nevertheless, ground-disturbing activities, such as grading or excavation, could unearth undocumented paleontological resources or unique geologic features by disturbing native soils that may contain cultural resources. The proposed Project could potentially cause a substantial adverse change in significance to a



paleontological resource, but incorporation of the following Mitigation Measure CUL-3 would reduce the potential impact on paleontological resources to less than significant.

Mitigation Measures:

CUL-3: Inadvertent Discoveries of Paleontological Resources—If the construction staff or others observe previously unidentified paleontological resources during ground disturbing activities, they will halt work within a 200-foot radius of the find(s), delineate the area of the find with flagging tape or rope (may also include dirt spoils from the find area), and immediately notify a qualified Paleontologist. Construction will halt within the flagged or roped-off area. The Paleontologist will assess the resource as soon as possible and determine appropriate next steps in coordination with Mesa Water District. Such finds will be formally recorded and evaluated. The resource will be protected from further disturbance or looting pending evaluation.

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

Less than Significant Impact. Ground disturbance within native soils may potentially contain unanticipated cultural material. Existing regulations require that if human remains and/or cultural items defined by the Health and Safety Code, Section 7050.5, are inadvertently discovered, all work in the vicinity of the find would cease and the Orange County Coroner would be contacted immediately. If the remains are found to be Native American as defined by Health and Safety Code, Section 7050.5, the coroner will contact the NAHC by telephone within 24 hours. The NAHC shall immediately notify the person it believes to be the Most Likely Descendant (MLD) as stipulated by California PRC, Section 5097.98. The MLD(s), with the permission of the landowner and/or authorized representative, shall inspect the site of the discovered remains and recommend treatment regarding the remains and any associated grave goods. The MLD shall complete their inspection and make their recommendations within 48 hours of notification by the NAHC. Any discovery of human remains would be treated in accordance with Section 5097.98 of the PRC and Section 7050.5 of the Health and Safety Code. Therefore, with compliance with existing regulations, Project impact would be less than significant.

Mitigation Measures: No mitigation is required. Compliance with existing regulations will ensure that any Project impact on human remains would be less than significant.



This page intentionally left blank

3.4.6 Geology and Soils

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wo	uld the project:		1		
a.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i.) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				Х
	ii.) Strong seismic ground shaking?			X	
	iii.) Seismic-related ground failure, including liquefaction?			X	
	iv.) Landslides?				X
b.	Result in substantial soil erosion or the loss of topsoil?			X	
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 an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?			x	
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			Х	
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?				Х

Existing Conditions:

The Project is located within the Tustin Plain of the Orange County Coastal Basin. According to the Department of Water Resources, the Tustin Plain is a relatively flat physiographic expression of alluvial fans and flood plains. The Orange County Coastal Basin is a large alluvial basin extending from the Pacific Ocean in the west to the foothills of the Santa Ana Mountains in the east and from the Los Angeles-Orange County line in the north to the San Joaquin Hills in the south. (Centec Engineering 2017a)

The stratigraphic sequence underlying the Tustin Plain consists of a basement complex of Mesozoic and older ingenuous and metamorphic rocks, Tertiary semi-consolidated sediments, Pleistocene alluvium, and Recent alluvium. The thickness of the alluvium beneath the site is



reportedly several hundred feet, with the upper 50 feet consisting of silty sands, medium-grained sands, silty clays, and sandy clays. (Centec Engineering 2017a)

The well sites and pipeline alignment are not located within an Alquist-Priolo Earthquake Fault Zone (Leighton 2018).

Subsurface soils that underlie the pavement sections of the Project site, consisted of 2 to 5 feet of artificial fill overlying Quaternary-aged young alluvial fan deposits to the maximum explored depth of 26.5 feet. The fill materials generally consisted of silty sand, clayey sand, and sandy clay with some gravel; and the alluvial deposits generally consisted of medium stiff to stiff sandy clay and lean clay, and loose sand and silty sand. (Leighton 2018)

The Well Site No. 12 site is located at an elevation of approximately 40 feet above sea level. The natural ground surface slopes gently to the southwest, parallel to the river gradient. Depth to groundwater has historically ranged from approximately 9 to 14 feet bgs. (Centec Engineering 2017b)

The Well Site No. 14 site is located at an elevation of approximately 35 feet above sea level. Below the site, perched and unusable groundwater zones may be expected at depths from 20-25 feet bgs, and would be expected to flow in a southerly direction. (Centec Engineering 2017a)

Discussion:

- a. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i.) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact.

The well sites and pipeline alignment are not located within an Alquist-Priolo Earthquake Fault Zone (Leighton 2018). No active faults are known to cross the well sites or pipeline route (City of Santa Ana 1982c). The probability of damage because of surface ground rupture is low due to the lack of known active faults crossing the Project area. The proposed water well and supporting facilities have been designed in accordance with applicable seismic safety standards. The operation of the proposed Project, therefore, is not anticipated to expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death from the rupture of a known earthquake fault. No impact is anticipated.

Mitigation Measures: No mitigation is required.

ii.) Strong seismic ground shaking?

Less than Significant Impact. The Project is located within the seismically active Southern California region and is likely to experience strong ground shaking from seismic events generated on regionally active faults. The project has been designed in accordance with applicable seismic safety standards. The operation of the proposed Project, therefore, is not anticipated to expose people or structures to potential substantial adverse effects from strong seismic ground-shaking. The impact is anticipated to be less than significant.

Mitigation Measures: No mitigation is required.

iii.) Seismic-related ground failure, including liquefaction?

Less than Significant Impact. The Project is within a liquefaction hazard zone (JCP-LGS 2017). Construction projects within a liquefaction hazard zone require geotechnical reports to



3-26 February 2019

address and mitigate the potential vulnerability of structural integrity during earthquakes. Construction of the well and associated Project facilities will comply with applicable measures of the California Building Code regarding construction in a liquefaction zone and other seismic safety measures. Operation of the proposed Project would not expose people or structures to substantial impacts involving seismic-related ground failure from liquefaction; therefore, a less than significant impact would occur.

Mitigation Measures: No mitigation is required.

iv.) Landslides?

No Impact. The Project Site is not located in a landslide area. The land within and in the vicinity of the Project Site is relatively flat; thus, no impact from landslides is anticipated.

Mitigation Measures: No mitigation is required.

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

Less than Significant Impact. Construction of the Project would include ground-disturbing activities, such as excavation, drilling, and grading in order to build the structure and install the associated pipelines that would connect the Project elements. Excess soil from the excavation of the infiltration basin will be placed as fill on the other portions of the site. Since the project impact area would be below one acre, the proposed project would not be subject to the requirements of the Construction General Permit under the National Pollutant Discharge Elimination System (NPDES) program administered by the State Water Resources Control Board. However, construction of the proposed project would be required to ensure that current industry-standardized best management practices (BMPs) are implemented. This would include the implementation of BMPs to minimize the potential for water quality impacts during construction. The Project site will be paved or landscaped so that no exposed soil would remain. The Project will have a less than significant impact related to erosion and loss of topsoil in the construction and operational phases.

Mitigation Measures: No mitigation is required.

c. Is the project 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 landslides, lateral spreading, subsidence, liquefaction, or collapse?

Less than Significant Impact. Based on the analysis provided in Response 3.4.6(a)(iv) above, no impact would be experienced related to on-site or off-site landslides. Since the Project Site is located within a liquefaction hazard zone, the potential for liquefaction to occur during intense ground shaking does exist. The Project Site is also located in a subsidence hazard zone (City of Santa Ana 1982c). As with the potential for liquefaction, construction projects within a subsidence hazard zone require geotechnical reports to address and mitigate the potential vulnerability of structural integrity during earthquakes. Construction of the well and associated Project facilities will comply with applicable measures of the California Building Code regarding construction in a liquefaction hazard zone, subsidence hazard zone, and other seismic safety measures. Operation of the proposed Project would not expose people or structures to substantial impacts involving seismic-related ground failure from liquefaction; therefore, a less than significant impact would occur.

Mitigation Measures: No mitigation is required.

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

Less than Significant Impact. Expansiveness refers to the potential to swell and shrink with repeated cycles of wetting and drying and is a common feature of fine-grained clayey soils. This



wetting and drying causes damage due to differential settlement within buildings and other improvements. The City of Santa Ana General Plan does not identify areas of expansive soils; however, the design and construction of the Project will be in compliance with applicable regulations and standard specifications to prevent potential risk of damage from expansive soils. The project would be required to comply with building code requirements in order to minimize the potential for hazards due to expansive soils. Therefore, regulatory compliance will ensure that impacts would be less than significant.

Mitigation Measures: No mitigation is required.

e. Would the project have soils that are incapable of supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. No septic tanks or alternative wastewater systems will be constructed as part of the project, and no impacts will occur.

Mitigation Measures: No mitigation is required.

3.4.7 Greenhouse Gas Emissions

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wo	uld the project:				
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b.	Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?				Х

An Air Quality and Greenhouse Gas Technical Report was prepared by Tetra Tech and is provided under Appendix A. The following summarizes the air quality analysis results and conclusions.

Existing Conditions:

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena; however, data indicate that current global conditions differ from past climate changes in rate and magnitude. According to the Intergovernmental Panel on Climate Change, the increase in atmospheric GHGs is largely the result of human activities, namely fossil fuel combustion, land use changes and agriculture (IPCC 2007). GHGs are those compounds in the Earth's atmosphere that play a critical role in determining the Earth's surface temperature. Specifically, these gases allow high-frequency solar radiation to enter the Earth's atmosphere, but retain the low frequency energy which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. Increased concentrations of GHGs in the Earth's atmosphere have been linked to global climate change and such conditions as rising surface temperatures, melting icebergs and snowpack, rising sea levels, and the increased frequency and magnitude of severe weather conditions.

GHGs include CO₂, methane, O₃, water vapor, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Carbon dioxide is the most abundant GHG in the atmosphere. GHGs are the result of both natural and anthropogenic activities. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions.

In September 2006, Governor Arnold Schwarzenegger signed the California Global Warming Solutions Act of 2006, also known as AB 32, into law. AB 32 commits the State to achieving the following:

- 2000 GHG emission levels by 2010 (which represents an approximately 11 percent reduction from business as usual)
- 1990 levels by 2020 (approximately 25 percent below business as usual)

To achieve these goals, AB 32 mandates that California Air Resources Board establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce



Statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved

The CEQA Guidelines, Section 15064.7, define a threshold of significance as an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. CEQA gives wide latitude to lead agencies in determining what impacts are significant and does not prescribe thresholds of significance, analytical methodologies, or specific mitigation measures (OPR 2007). CEQA leaves the determination of significance to the reasonable discretion of the lead agency and encourages lead agencies to develop and publish thresholds of significance to use in determining the significance of environmental effects.

The SCAQMD released a draft guidance document regarding interim CEQA GHG significance thresholds in October 2008. SCAQMD proposed a tiered approach, whereby the level of detail and refinement needed to determine significance increases with a project's total GHG emissions. In December 2008, SCAQMD adopted interim CEQA GHG significance thresholds for use only when SCAQMD is the lead agency on projects. These thresholds apply to industrial projects only, and include a 10,000 metric ton carbon dioxide equivalent (CO₂e) screening level. For purposes of this analysis, the 10,000-metric ton CO₂e threshold for industrial projects is applied to this project.

While it is difficult to predict the specific impact of one project's incremental contribution to the global effects of GHG emissions due to a variety of factors, including the complex and long-term nature of such effects and the global scale of climate change, it is possible to determine whether a project is implementing design strategies consistent with the guidance that is available. Thus, if a project implements design strategies consistent with the goals of AB 32, the project will not be considered to have a significant impact with respect to global climate change, either on a project-specific basis or with respect to its contribution to a cumulative impact on global climate change.

Discussion:

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact. GHG emissions from this proposed project are from two major sources: Fuel combustion in construction equipment and truck hauling. The CalEEMod model was run to determine the GHG emissions. Table 7 shows the total GHG emissions together with the SCAQMD's significance thresholds. As shown in Table 7, GHG emissions are below SCAQMD significance thresholds of 10,000 metric tons per year and no significant impact will occur.

Table 7. GHG Emissions

Phases	CO₂e (Metric Tons/yr)	SCAQMD Significance Threshold	Exceed Threshold (Yes/No)
Construction	544	10,000	No
Operation	14	10,000	No

Mitigation Measures: No mitigation is required.



b. Would the project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact. The proposed project would not conflict with the AQMP or the City's policies to reduce GHG emissions, as the project would not increase population. Furthermore, the project would not generate substantial vehicle trips and would not increase roadway capacity. Therefore, the implementation of the proposed project would not affect any plans, policies, or regulations adopted for the purpose of reducing GHG emissions and impacts would be less than significant.

Mitigation Measures: No mitigation is required.



This page intentionally left blank

3.4.8 Hazards and Hazardous Materials

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wo	uld the project:				
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			Х	
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?			Х	
C.	Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?				X
d.	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 it create a significant hazard to the public or the environment?				X
e.	Be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?				X
f.	Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?				Х
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			Х	
h.	Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				Х

Existing Conditions:

The Project area is urbanized with light industrial land uses. Phase I Environmental Site Assessments conducted for the well sites revealed no evidence of current or historical Recognized Environmental Conditions associated with the sites. A review of adjacent properties indicated little to no concerns to well sites. Due to the pre-1980 construction of the buildings at both sites, some asbestos-containing materials and/or lead-based paint may be present in the existing building materials. Neither well site is included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. (Centec Engineering 2017a, 2017b)

The Project site is also not located within 2 miles of a public airport or public use airport. The nearest airport is John Wayne Airport located approximately 3.5 miles to the southeast. The Project site is within an Orange County Airport Land Use Plan Area for John Wayne Airport but is not within the John Wayne Airport Safety Zone (ALUC 2005).

The OCFA provides emergency response to fires and hazardous materials incidents in the City of Santa Ana. The City of Santa Ana maintains an Emergency Services Plan which provides direction and guidance for officials and citizens in the event of emergency; including emergencies related to major fires and/or explosions, industrial accidents, traffic control, and hazardous materials spills (City of Santa Ana 1982d).

Discussion:

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

Less than Significant Impact. The short-term construction process for the proposed Project would not involve any routine transport, use, or disposal of hazardous materials. Some examples of hazardous materials include fuels, lubricating fluids such as paints and adhesives, and solvents. Fuels and solvents for construction would be stored and utilized pursuant to existing regulatory requirements. Therefore, short-term construction impacts would be less than significant.

Operation of the well would require limited transport, storage, use, and disposal of hazardous materials. The project would involve the use of sodium hypochlorite and aqueous ammonia for disinfection, and diesel fuel for the emergency diesel generator. The chemical storage area will be fully contained and covered for protection from the elements. The emergency diesel generator will be located within an enclosure located on the exterior of the electrical building.

All chemical storage and usage would comply with existing federal, State, and local requirements (including chemical hygiene requirements administered by the California Division of Occupational Safety and Health). During filling of storage tanks, Mesa Water District personnel will be present to guard against spillage. Wash down/containment facilities will also be available in the event of a spill. The well facility will be highly automated to ensure protection of the public health, safety, and general welfare, and to monitor maintenance requirements and operations.

Strict safety procedures and best management practices will be implemented for fuel transport and during tank refueling. No disposal of hazardous materials would occur on-site. With the aforementioned procedures and BMPs implemented as part of the Project, impacts would be less than significant.

Mitigation Measures: No mitigation is required.

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



Less than Significant Impact. Due to the pre-1980 construction of the buildings at both sites, some asbestos-containing materials and/or lead-based paint may be present in the existing building materials. Any activity that involves cutting, grinding, or drilling during building renovation or demolition, or that involves relocation of underground utilities, could release friable asbestos fibers unless proper precautions are taken. The federal Clean Air Act regulates asbestos as a hazardous air pollutant, which subjects it to regulation by SCAQMD under its Rule 1403. The federal Occupational Safety and Health Administration also regulates asbestos as a potential worker safety hazard. Prior to demolition or renovation of any of the well sites' existing buildings, any asbestos-containing materials and/or lead-based paint must be identified and abated. With removal of these hazardous materials prior to demolition, as required, and in accordance with all applicable laws, no significant impacts are expected.

During construction, there is a potential for accidental release of hazardous substances such as petroleum-based fuels or hydraulic fluid used by construction equipment. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials utilized during construction. The construction contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, State, and federal law. As with the discussion for 3.4.8(a) above, all chemical and fuel storage and usage would comply with existing federal, State, and local requirements (including chemical hygiene requirements administered by the California Division of Occupational Safety and Health). In addition, Mesa District will implement a risk management plan for each well facility. During filling of storage tanks for sodium hypochlorite and aqueous ammonia, personnel will be present to guard against spillage. Wash down/containment facilities will also be available in the event of a spill. The well facility will be highly automated to ensure protection of the public health, safety, and general welfare, and to monitor maintenance requirements and operations. With the aforementioned measures implemented as part of the proposed Project, impacts would be less than significant.

Mitigation Measures: No mitigation is required.

c. Would the project emit hazardous emissions or handle hazardous materials or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

No Impact. There are no schools within 0.25 mile. The closest school, Mamie L. Northcutt Elementary School, is located approximately 0.7 mile to the northwest of the Project site. No impact would occur.

Mitigation Measures: No mitigation is required.

d. Is the project located on a site that is included on a list of hazardous material 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?

No Impact. Since neither well site is on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, there would be no hazard to the public or environment and therefore, no impact would be experienced.

Mitigation Measures: No mitigation is required.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?



No Impact. The Project site is also not located within 2 miles of a public airport or public use airport. The nearest airport is John Wayne Airport located approximately 3.5 miles to the southeast. The Project site is within an Orange County Airport Land Use Plan Area for John Wayne Airport but is not within the John Wayne Airport Safety Zone (ALUC 2005). In addition, the project is an infill project, consistent with the City's General Plan and zoning designations, see Response 3.4.10(b); and therefore, is consistent with the Orange County Airport Land Use Plan. The Project would not result in a safety hazard for people residing or working in the project area and no impact would occur.

Mitigation Measures: No mitigation is required.

f. For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The Project Site is not located in the vicinity of a private airstrip or heliport; therefore, the Project would not result in a safety hazard for people residing or working in the project area and no impact would occur.

Mitigation Measures: No mitigation is required.

g. Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. For construction of the proposed Project, traffic control will be needed to temporarily reduce available lanes during the construction of the pipeline, storm drain, utility services and street resurfacing. Full road closures are not anticipated, however. In addition, a traffic control plan will be prepared to accommodate this work area width along the pipeline route. Refer to Figures 2-6 through 2-8 for conceptual traffic detour plans. These impacts would be short term and temporary and would have a less than significant impact to roadways utilized for emergency purposes. The Project would not require full time employees at the site and thus would not increase the burden on existing emergency response plans. Only one weekly trip to the Site would be required during operation and thus would not generate traffic congestion, obstruct traffic flow, or emergency operations. During Project operation, emergency access would be maintained to all residences and public facilities since the existing adjacent roads would not be altered. Therefore, the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan and impacts would be less than significant.

Mitigation Measures: No mitigation is required.

h. Would the project expose people or structures to the risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The Project site is located in an urbanized and fully developed area and is not located within or near any wildland areas (County of Orange 2012). Also, the proposed landscaping would not create hazardous conditions due to wildland fires. Therefore, the Project would not pose a fire hazard due to wildland fires and no impact would occur.

Mitigation Measures: No mitigation is required.



3.4.9 Hydrology and Water Quality

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wo	uld the project:	-	-	-	-
a.	Violate any water quality standards or waste discharge requirements?			X	
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?				X
C.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on site or off site?			X	
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on site or off site?			X	
e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
f.	Otherwise substantially degrade water quality?				X
g.	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map or other flood hazard delineation map?				X
h.	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				Х
i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?			Х	
j.	Contribute to inundation by seiche, tsunami, or mudflow?				Х

Existing Conditions:

Surface Water

Both well sites are currently developed with small areas of ornamental vegetation. The surrounding area is developed with light industrial land uses. Stormwater flows across the site to storm drains located in the surrounding streets.

The Project and the surrounding areas are in a Federal Emergency Management Agency flood Zone X, where the probability of flooding inundation has been evaluated to be 0.2 percent (i.e. a 500-year event, FEMA 2009).

The Project is within the Prado Dam Inundation Area and the Santiago Reservation Inundation Area (City of Santa Ana 1982d).

The Project site is not located in a tsunami run-up area (California Emergency Management Agency 2009).

The Santa Ana River is the major drainage channel flowing through the City and many of the major storm drains in the City, are (directly or indirectly) connected to it. The reach through Santa Ana consists mostly of a trapezoidal, concrete lined channel with a bottom width of 180 feet. Santiago Creek is the main tributary to the Santa Ana River. The creek joins the Santa Ana River just south of Garden Grove Boulevard. (City of Santa Ana 1998)

The City of Santa Ana is served by two primary flood control and drainage systems: City-operated and maintained storm drain system, including catch basins and storm drain pipes; and flood control facilities operated and maintained by the Orange County Flood Control District, including the large flood control channels in the City (City of Santa Ana 2015). The NPDES Stormwater Permit issued to the County of Orange and its co-permittees requires development projects to incorporate appropriate best management practices to minimize pollutant levels in runoff (County of Orange 2017).

Groundwater

The Project site is located within the Tustin Plain of the Orange County Coastal Basin. The Well Site No. 12 is located approximately 1,600 feet east of the engineered channel of the Santa Ana River. The site is located at an elevation of approximately 40 feet above sea level. The natural ground surface slopes gently to the southwest, parallel to the river gradient. Depth to groundwater has historically ranged from approximately 9 to 14 feet bgs. (Centec Engineering 2017b)

The Well Site No. 14 is located approximately 400 feet east of the engineered channel of the Santa Ana River. The site is located at an elevation of approximately 35 feet above sea level. Below the site, perched and unusable groundwater zones may be expected at depths from 20-25 feet bgs, and would be expected to flow in a southerly direction. (Centec Engineering 2017a)

Discussion:

a. Would the project violate any water quality standards or waste discharge requirements?



Less than Significant Impact.

Short-term Impacts

The proposed Project could potentially result in water quality impacts during the short-term construction process. The grading and excavation required for Project implementation would result in exposed soils that may be subject to wind and water erosion. Since the project impact area would be below one acre, the proposed project would not be subject to the requirements of the Construction General Permit under the NPDES program administered by the State Water Resources Control Board. However, construction of the proposed project would be required to ensure that current industry-standardized best management practices (BMPs) are implemented.

This would include the implementation of BMPs to minimize the potential for water quality impacts during construction.

For Well No. 12, an 18-inch storm drain will convey site storm water and pump waste discharge from Well No. 12 to an existing City of Santa Ana 18-inch storm drain catch basin on the north side of West Chandler Avenue.

For Well No. 14, approximately 535 linear feet of 18-inch storm drain will be constructed to convey site stormwater and pump waste discharge from Well No. 14 to an existing City of Santa Ana 27-inch storm drain catch basin on the west side of Croddy Way approximately 500 feet to the south of the Well No. 14 site.

The storm drains will be constructed based on Regional Water Quality Control Board Non-Stormwater discharge requirements. Upon adherence to these existing requirements, short term impacts to water quality standards and waste discharge requirements would be less than significant.

Long-Term Operational Impacts

The proposed Project would not affect hydrology or water quality in the Project area upon completion of construction. Development of the Well Site would not increase the amount of impervious area as compared to existing conditions. The Project is not expected to alter the drainage conditions in the Project area. Impacts would be less than significant.

Mitigation Measures: No mitigation is required.

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

No Impact. Mesa Water District's water system currently meets its potable water demand through utilization of groundwater wells supplemented with imported water. In 2014, Mesa Water District Board of Directors adopted a policy for local water reliability to be 115 percent of demand. This policy provides Mesa Water District with additional assurance to meet peak water demands with local groundwater supplies when other water production facilities undergo routine maintenance. The proposed Project would enable the use of Wells No. 12 and No. 14 to provide additional local water reliability.

Implementation of the wells would not result in any exceedance of Mesa Water District's existing water entitlements. Rather, it would improve reliability and efficiency of the supply system. Thus, the Project would not deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the groundwater table level. Therefore, impacts to groundwater supply would be less than significant.



Mitigation Measures: No mitigation is required.

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

Less than Significant Impact. Refer to Response 3.4.9(a) above. Development of the Project is not expected to alter drainage conditions in the Project area. As noted above, the proposed Project will construct storm drains based on Regional Water Quality Control Board Non-Stormwater discharge requirements. Thus, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

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

Less than Significant Impact. Refer to Responses 3.4.9(a) and 3.4.9(c) above. The proposed Project is not expected to alter off-site runoff in comparison to existing conditions. Impacts would be less than significant.

Mitigation Measures: No mitigation is required.

e. Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less than Significant Impact. Refer to Responses 3.4.9(a) and 3.4.9(c) above. The Project is not expected to alter off-site runoff in comparison to existing conditions. Therefore, impacts to stormwater drainage systems would be less than significant.

Mitigation Measures: No mitigation is required.

f. Would the project otherwise substantially degrade water quality?

No Impact. Refer to Responses 3.4.9(a) and 3.4.9(c) above. The proposed Project would be subject to the Orange County Flood Control District NPDES permit conditions for discharges into the storm drain system. Impacts to water quality are expected to be less than significant.

Mitigation Measures: No mitigation is required.

g. Would the project place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The Project site is not located within a 100-year floodplain (FEMA 2009) and does not include construction of housing or remapping of a floodplain; therefore, no impact would occur.

Mitigation Measures: No mitigation is required.

h. Would the project place within a 100-year floodplain structures that would impede or redirect flood flows?

No Impact. The Project site is not located within a 100-year flood plain and therefore would not impede or redirect flood flows. Therefore, no impact would occur.

Mitigation Measures: No mitigation is required.



3-40 February 2019

i. Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less than Significant Impact. The Project is within the Prado Dam Inundation Area and the Santiago Reservation Inundation Area (City of Santa Ana 1982d), so in the event of a dam breach the area could be flooded. However, flood depths would be less than 1 foot in the event of a dam failure and are not considered a significant risk. In addition, the Project and the surrounding areas are in Federal Emergency Management Agency Flood Zone X, the 500-year floodplain, where the probability of flood inundation is only 0.2 percent. As a result, potential impacts to structures would be less than significant, and these facilities will not require active and on-site operations personnel so no injury or death from flooding is anticipated.

Mitigation Measures: No mitigation is required.

j. Would the project contribute to inundation by seiche, tsunami, or mudflow?

No Impact. The Project site is not located near any or areas at risk for seiche, tsunami or mudflows; therefore, no impact would occur.

Mitigation Measures: No mitigation is required.

This page intentionally left blank

3.4.10 Land Use and Planning

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wo	uld the project:				
a.	Physically divide an established community?				Х
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
C.	Conflict with any applicable habitat conservation plan or natural community conservation plan?				Х

Existing Conditions:

The Project is located within a light industrial area of the City of Santa Ana. Both well sites are currently developed with light industrial land uses.

Land use in the City of Santa Ana is directed by the City of Santa Ana General Plan (City of Santa Ana 1998). According to the Santa Ana General Plan Land Use Map, the land use designation for the Project site and adjacent areas is IND 0.45 (Industrial). The Project site and surrounding areas are zoned as M1 (Light Industrial).

The City of Santa Ana's General Plan defines the IND 0.45 (Industrial) designation as "...those areas developed with manufacturing and industrial uses. The designation applies to areas which are predominantly industrial in character, and includes those industrial districts in the southwestern, south central and southeastern sections of the City.... The maximum floor area ratio for this designation is 0.45." Typical land uses found under these designations include light and heavy product manufacturing and assembly and commercial uses ancillary to industrial uses.

The City of Santa Ana Municipal Code Section 41-472 states that permitted uses in the M1 zoning district include public utility structures (City of Santa Ana 2018).

The California legislature granted water districts the power to exempt water district property from county and city zoning requirements, provided the water district complies with the terms of Government Code Section 53091.³



Government Code Section 53091.

⁽d) Building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.

⁽e) Zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water... (Amended by Stats. 2002, Ch. 267, Sec. 1. Effective January 1, 2003.).

The Project site is not located within any habitat conservation plan areas or natural community conservation plan areas.

Discussion:

a. Would the project physically divide an established community?

No Impact. The Project area is urbanized with light industrial land uses. The Project well sites are small in size and development of the water well facilities would not hinder pedestrians or travelers on the adjacent streets or sidewalks from accessing other areas in the surrounding community. Therefore, the proposed Project would not divide an established community and no impact would occur.

Mitigation Measures: No mitigation is required.

b. Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. Land uses permitted under the Santa Ana General Plan Land Use Map for the Project site include light and heavy product manufacturing and assembly and commercial uses ancillary to industrial uses. The permitted uses for the Project site M1 zoning district includes public utility structures. Since the proposed Project is considered an allowed use in this zoning district, the proposed Project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project. In addition, the Project would be exempt from local jurisdiction zoning regulations.; therefore, no impacts would occur.

Mitigation Measures: No mitigation is required.

c. Would the project conflict with any applicable habitat conservation plan or natural communities conservation plan?

No Impact. The Project site is not located within any habitat conservation plan areas or natural community conservation plan areas; therefore, no impact would occur.

Mitigation Measures: No mitigation is required.



3.4.11 Mineral Resources

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wo	uld 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?				×
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?				х

Existing Conditions:

Mineral Resource Zones are commercially viable mineral or aggregate deposits, such as sand, gravel, and other construction aggregate. The mineral resources in Orange County consist of deposits of regionally significant aggregate resources identified by the California Department of Conservation, Divisions of Mines and Geology (County of Orange 2012). These significant sand and gravel resources for the Orange County region are located in portions of the Santa Ana River, Santiago Creek, San Juan Creek, Arroyo Trabuco and other areas. Orange County's petroleum resources are in the form of oil and natural gas deposits. The primary petroleum resource areas of the Orange County are Huntington Beach, Newport Beach, Seal Beach and the Brea/La Habra foothill regions. The Project site is not located near any of these areas.

Discussion:

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. No mineral recovery activities currently occur in the Project area, and the Project site is not underlain by any known mineral resources of value to the region and residents of the State. Thus, no impacts would occur.

Mitigation Measures: No mitigation is required.

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. As stated above, the Project site is not located within a Mineral Resource Zone or an area of oil and gas resources. Thus, no impacts would occur.

Mitigation Measures: No mitigation is required.



This page intentionally left blank

3.4.12 Noise

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wo	uld the project result in:				
a.	Exposure of persons to or generation of noise levels in excess of standards established in a local general plan or noise ordinance, or applicable standards of other agencies?			×	
b.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
C.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			x	
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			Х	
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				Х

Existing Environment:

The existing noise environment in the vicinity of the proposed Well No. 12 consists of vehicle noise from Chandler Avenue, Croddy Way, and Segerstrom Avenue. For Well No. 14 the existing noise environment consists of vehicle noise from Croddy Way and MacArthur Boulevard. Adjacent land uses to both well locations are industrial zoned. The Courtyard by Marriott hotel is located along Harbor Boulevard approximately 1,000 feet from Well No. 12 and 800 feet from Well No. 14. The nearest residential receptors are located approximately 0.35 mile south of Well No. 12 and approximately 0.85 miles to the east of Well No. 14. There are no residential land uses located in the direct vicinity of the well sites and pipeline route. No ambient noise monitoring data have been identified for the project vicinity, but existing land uses and street patterns as well as the existing noise contours published in the City of Santa Ana's Noise Element indicate that the existing ambient noise levels at the proposed project site should be at or below 65 A-weighted decibels (dBA) Community Noise Equivalent Level (CNEL).

Discussion:

a. Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?

Less than Significant. The City of Santa Ana's Noise Element to the General Plan identifies the land use compatibility standard for noise-sensitive land uses as a CNEL of 65 dBA. No ambient noise monitoring data have been identified for the project vicinity, but existing land uses and street patterns indicate within the City of Santa Ana's Noise Element that the existing ambient noise levels should be at or below the CNEL standard of 65 dBA at the project site and adjacent properties. The construction of the proposed well sites and pipeline would have only a minimal impact on daily traffic volumes in the project vicinity, and thus would have minimal impact on traffic noise conditions.

The City of Santa Ana's Municipal Code Chapter 18 Article VI limits noise propagation to residential land uses from stationary equipment during the daytime period (7:00 am to 10:00 pm) to 55 dBA equivalent continuous sound level (L_{ea}) and during the nighttime period (10:00 pm to 7:00 am) to 50 dBA Leg. Both well sites are proposing a pump building, a chemical storage area, an electrical building, an emergency backup generator, a single ground level heating, ventilation, and air conditioning (HVAC) unit, and a transformer. The pump structure contains an electric motor pump that generates a noise emission level not to exceed 90 dBA at 5 feet. The pump is also enclosed within a steel framed concrete masonry unit (CMU) building. The electrical building incorporates a ground level HVAC unit with a sound power level of 83 dBA and an emergency backup generator with a sound power level of 73 dBA. A transformer is also located on the southern portion of Well No. 12 and the eastern portion of Well No. 14. Each transformer will have a sound power level of 79 dBA. Given that high noise producing equipment is located with steel framed CMU buildings and assuming all equipment will operate simultaneously the noise levels from the project operations would be less than 20 dBA Leg at the nearest residential land use located 0.35 miles south of Well No. 12. At the nearest sensitive receptor (Courtyard by Marriott hotel) the noise levels will be less than 30 dBA Leq. Noise levels at the property lines of both well sites will be 50 dBA L_{eg} or less and are, therefore, considered to be a less than significant impact.

The City Santa Ana's Municipal Code Chapter 18 Section 18.314 exempts construction equipment operating between the daytime hours of 7:00 a.m. to 8:00 p.m. on weekdays, including Saturday. The majority of the construction of the proposed project would be conducted during weekdays between the hours of 7:00 a.m. to 8:00 p.m.f However, the well drilling, pump testing, and mechanical development will require 24-hour operation occurring over a total of 18-day period for each well site. Noise levels from the drilling operations will exceed the City of Santa Ana's nighttime threshold level of 50 dBA L_{eq}.

To reduce the noise levels below the below the 50 dBA $L_{\rm eq.}$, Project construction will include provision of 24-foot-high sound wall to enclose the well areas during drilling. Project construction will also incorporate construction BMPs including use of the best available noise control techniques for equipment and vehicles.

With the incorporation of the sound wall and construction BMPS, noise impacts generated by the construction of the project will be less than significant.

Mitigation Measures: No mitigation is required.

b. Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact. Operation of the pump facility would not generate vibration; however, construction of the structures and site grading would require the use of equipment that could generate vibration. Possible sources of vibration may include a drill rig, jackhammer,



3-48 February 2019

dump trucks, backhoes, rollers, and other construction equipment that produces vibration. No blasting will be required at the project site.

Project construction activities would occur within approximately 50 feet from the nearest structure. According to the Federal Transit Administration guidelines, a vibration level of 65 vibration decibel (VdB) is the threshold of perceptibility for humans. For a significant impact to occur, vibration levels must exceed 80 VdB during infrequent events (Federal Transit Administration 2006). Based on the levels published by the Federal Transit Administration (Federal Transit Administration 2006) and the type of equipment proposed for use at the Proposed Project, coupled with the distance to the existing identified receptors as well as adjacent structures, analysis shows that all identified sensitive receptors and adjacent structures will be below the maximum vibration guideline criteria of 80 VdB. This vibration level is considered acceptable for short term infrequent impacts at residential homes as well as other nearby buildings and is, therefore, considered to be a less than significant impact.

Mitigation Measures: No mitigation is required.

c. Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. The dominant noise sources in the vicinity of the Well No. 12 consists of vehicle noise from Chandler Avenue, Croddy Way, and Segerstrom Avenue. For Well No. 14 the existing noise environment consists of vehicle noise from Croddy Way and MacArthur Boulevard. Based on existing traffic volumes noise levels at the Courtyard by Marriott hotel and the nearest residence located approximately 0.35 miles from Well No. 12 range from 60 dBA CNEL to 65 dBA CNEL. Both well sites are proposing a pump building, a chemical storage area, an electrical building, an emergency backup generator, a single ground level HVAC unit, and a transformer. The pump building encloses the pump within a steel framed CMU building. The electrical building incorporates a ground level HVAC unit. A transformer is also located on the southern portion of Well No. 12 and the eastern portion of Well No. 14. The noise levels from the project operations would be less than 20 dBA Leg at the nearest residential land use located 0.35 miles south of Well No. 12. At the nearest sensitive receptor (Courtyard by Marriott hotel) the noise levels will be less than 30 dBA Lea. Based on the existing noise levels generated by the vehicle traffic, the noise impacts from the project related equipment at both well sites would result in an increase of less than one dBA to the ambient noise levels at the nearest residential property lines and at the nearest sensitive receptor (hotel). Since the Proposed Project is shown to only increase the overall ambient community noise level by less than one dBA, it is considered to be a less than significant impact.

Mitigation Measures: No mitigation is required.

d. Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant. Construction of the Well No. 12, Well No. 14, and the pipeline is planned to start in January of 2020 and last approximately 20 months. The project construction activities are anticipated to occur in phases and include the installation of the pipeline, drilling and equipping at Wells No. 12 and No. 14. These construction activities would require a variety of equipment. Typical construction equipment would not be expected to generate noise levels above 90 dBA at 50 feet, and most equipment types would typically generate noise levels of less than 85 dBA at 50 feet.

The highest noise levels during construction are normally generated during the use of earth moving equipment or drilling. Drilling equipment would be the loudest equipment used at the well sites. This equipment is expected to generate a maximum instantaneous noise level of up to 50-55 dBA at the nearest sensitive receptor located at a distance of 850 feet. The pipeline



construction would result in noise levels ranging from 56 to 73 dBA maximum instantaneous noise level at a distance of 350 feet to the nearest sensitive receptor. The noise levels from the construction would be loud enough to temporarily interfere with speech communication outdoors and indoors with the windows open. Majority of the project construction would occur between the hours of 7:00 a.m. and 8:00 p.m., Monday through Friday as well as implement standard noise reduction measures. However, the well drilling, pump testing, and mechanical development will require 24-hour operation occurring over a total of 18-day period for each well site. The drilling operations will incorporate sound barrier mitigation and construction BMPS. Due to the infrequent nature of loud construction activities at the site, the limited hours of construction, and the implementation of standard noise mitigation measures, the temporary increase in noise due to construction is considered to be a less than significant impact.

Mitigation Measures: No mitigation is required.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. There is no public airport or public use airport located within two miles of the proposed Project site. The Project would not result in exposing people residing or working in the project area to excessive noise levels associated with a public airport and no impact would occur.

Mitigation Measures: No mitigation is required.

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

No Impact. There are no private airstrips located in the Project vicinity. The Project would not result in exposing people residing or working in the project area to excessive noise levels associated with a private airstrip and no impact would occur.

Mitigation Measures: No mitigation is required.

3.4.13 Population and Housing

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wo	uld the project:				
a.	Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?				Х
b.	Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?				Х
C.	Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?				X

Existing Conditions:

According to the City of Santa Ana's 2014-2021 Housing Element (City of Santa Ana 2014), population growth in the City of Santa Ana during the 1990s was significantly slower than surrounding communities and the county as a whole. Between 2000 and 2010 the City's population decreased by about 4 percent. In 2010, the City of Santa Ana's estimated population of 324,528 represented approximately 11 percent of the county's total population, ranking Santa Ana as the second most populated city in the county behind Anaheim. Estimates from the California Department of Finance show the City of Santa Ana's 2018 population to be 338,247, a 0.1 percent increase from 2017 (California Department of Finance 2018). The City has an estimated 78,052 housing units.

Discussion:

a. Would the project induce substantial population growth in an area, either directly (e.g., by proposing new homes and business) or indirectly (e.g., through extension of roads or other infrastructure)?

No Impact. Mesa Water District provides potable water for a population of approximately 110,000 within an 18-square mile service area which includes the City of Costa Mesa, portions of the City of Newport Beach, and portions of unincorporated Orange County. Mesa Water District's water system currently meets its potable water demand through a combination of imported water, local groundwater, and five clear water wells and two tinted water wells. In 2014, Mesa Water District Board of Directors adopted a policy for local water reliability to be 115 percent of demand. This policy provides Mesa Water District with additional assurance to meet peak water demands with local groundwater supplies when other water production facilities undergo routine maintenance.

The proposed Project would provide additional local groundwater water reliability. Implementation of the Project would not result in any exceedance of Mesa Water District's existing water entitlements. Rather, it would improve reliability and efficiency of the water supply system. The proposed Project would not involve the construction of any homes, businesses, or



other uses that would result in direct population growth. Therefore, no impacts in regard to growth-inducement would be expected.

Mitigation Measures: No mitigation is required.

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

No Impact. The Project site is developed with light industrial uses and is not currently used for housing. Construction of the Project would not require the removal or obstruction of existing housing. Therefore, no impacts to existing housing would occur.

Mitigation Measures: No mitigation is required.

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

No Impact. The Project site is not used for housing. Construction of the Project would not require the removal or obstruction of existing housing and thus would not require the displacement of people or the construction of replacement housing elsewhere. Therefore, no impacts would occur.

Mitigation Measures: No mitigation is required.

3.4.14 Public Services

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wo	uld the project:				
a.	Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a 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 following public services:				
	i.) Fire protection?			X	
	ii.) Police protection?			X	
	iii.) Schools?				X
	iv.) Parks?				Х
	v.) Other public facilities?				Х

Existing Conditions:

Public services include critical facilities such as police stations, fire stations, hospitals, shelters, and other facilities that provide important services to the community. Other public services include schools and parks and libraries that serve the communities.

Fire protection and other related services in Santa Ana are provided by the OCFA. The closet OCFA station to the Project site is Station No. 77, located at 2317 S. Greenville Street, Santa Ana, approximately 1.16 miles east of the Project site (OCFA 2018).

Police protection services for the City of Santa Ana are provided by the City of Santa Ana Police Department at the Santa Ana Civic Center located at 60 Civic Center Plaza, approximately 3.7 miles northeast of the Project site (SAPD 2018).

The City of Santa Ana is served by four school districts: Santa Ana Unified, Garden Grove Unified, Tustin Unified and Orange Unified (City of Santa Ana 1988). The City owns and operates approximately 35 parks, comprising about 400 acres (City of Santa Ana 1982f). The City library system consists of a central library in Civic Center' Plaza and two branch libraries in the western portion of Santa Ana: the McFadden and Newhope Branches (City of Santa Ana 1982e).

Discussion:

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a 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:

i.) Fire Protection

Less Than Significant Impact. The proposed Project would not substantially increase the need for fire protection services as no residential uses are proposed and the Project is not expected to result in an increase in the City of Santa Ana's population. The water well would not cause the development of uses that would result in a substantial increase in the likelihood of a fire or other hazard. Moreover, by increasing Mesa Water District's water supply reliability for its service area, the Project is expected to result in beneficial impacts related to fire flow and protection. Therefore, impacts to fire protection services or facilities would be less than significant.

Mitigation Measures: No mitigation is required.

ii.) Police Protection

Less Than Significant Impact. The proposed Project would not substantially increase the need for additional police protection services. The proposed Project would not introduce residential, commercial, or other uses, that would require an increase in demand for police protection beyond what is currently provided and therefore, would not require police facilities to be altered. The buildings on-site would be equipped with an alarm system for security purposes, and the proposed perimeter block walls around the site would limit unauthorized access. Therefore, impacts to police protection services or facilities would be less than significant.

Mitigation Measures: No mitigation is required.

iii.) Schools

No Impact. Implementation of the proposed Project would not result in the need for the construction of additional school facilities, as the Project would not result in an increase in population nor would it result in a removal of a school, a reduction of school capacity, or displacement of students from existing schools. Therefore, no impact to school services or facilities would occur.

Mitigation Measures: No mitigation is required.

iv.) Parks

No Impact. Implementation of the proposed Project would not result in the need for the construction of additional park facilities, as the Project would not result in an increase in population nor would it result in a removal of a park. Therefore, no impact to park facilities would occur.

Mitigation Measures: No mitigation is required.

v.) Other Public Facilities

No Impact. The proposed Project would not alter any of the government facilities in the area or produce a need for additional or new government services; therefore, no impacts to other public facilities would occur.

Mitigation Measures: No mitigation is required.



3.4.15 Recreation

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wou	ld the project:				
a.	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				х
b.	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				х

Existing Conditions:

The City owns and operates approximately 35 parks, comprising about 400 acres (City of Santa Ana 2010).

Discussion:

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

No Impact. The construction or operation of the proposed Project would not involve temporary access to, or use of, any park. The proposed Project would not add additional residences or business in the neighborhood and thus would not cause additional use of any park or other recreational facilities in the area. Therefore, no impact to existing neighborhood and regional parks or other recreational facilities would occur.

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

No Impact. The proposed Project does not include recreational facilities or expansion of existing recreational facilities; therefore, no impact would occur.

Mitigation Measures: No mitigation is required.



3.4.16 Transportation/Traffic

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wou	ıld the project:		I		
a.	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
C.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				Х
d.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			Х	
e.	Result in inadequate emergency access?				X
f.	Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				×

Existing Conditions:

Well No. 12 is located at 4011 W. Chandler Avenue. Well No. 14 is located at 3120 S. Croddy Way. The Project includes drilling, constructing, developing, testing, and equipping of Wells No. 12 and No. 14, plus construction of facilities at the sites for operation of the wells. In addition, approximately 4,500 feet of pipeline will connect the two wells to Mesa Water District's distribution system traversing Chandler Avenue to Croddy Way to W. MacArthur Boulevard to Hyland Avenue. The nearest airport is John Wayne Airport located approximately 3.5 miles to the southeast.

Discussion:

a. Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, including



mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less than Significant Impact. The proposed Project would not conflict with any transit plan or ordinance. Traffic control will be needed to temporarily reduce available lanes during construction of the pipeline, storm drain, utility services and street resurfacing, but full road closures are not anticipated during construction. Construction equipment and staging for the wells would be contained within the Project site. These impacts would be short term and temporary, and would have a less than significant impact on circulation surrounding the site.

The normal operation of the well would generate one trip weekly for a worker to monitor the operation of the well facilities and perform maintenance as necessary. Periodic maintenance activities such as replacement of tanks, and testing and maintaining equipment will require a weekly trip to the Site. This is considered an insignificant change in the trips in the vicinity of the Project Site. Therefore, long-term impacts would be less than significant.

Mitigation Measures: No mitigation is required.

b. Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less than Significant Impact. As discussed in Response 3.4.16(a), the Project would have less than significant impacts to traffic and circulation.

Mitigation Measures: No mitigation is required.

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

No impact. The proposed Project involves the development of water wells and supporting facilities. The proposed Project would not result in a change in air traffic patterns, either an increase in traffic levels or a change in location that results in substantial safety risk. Therefore, no impact would occur.

Mitigation Measures: No mitigation is required.

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

Less Than Significant Impact. The proposed Project would include for the Well No. 12 site: relocation of the existing driveway to the eastern boundary of the property with a 25-foot-wide driveway to allow access for delivery and fire trucks. An additional 13-foot-wide driveway will be constructed on the west side of the property to allow for maintenance vehicle access adjacent to the well. For the Well No. 14 site: the existing 24-foot-wide driveway will be protected in place to allow access for delivery and fire trucks and an additional 13-foot-wide driveway will be constructed in the middle of the site to allow for maintenance vehicle access adjacent to the well. Changes to adjacent roads will include pavement replacement over the pipeline trenches. These changes are not expected to result in any design features that would increase hazards, and impacts would be less than significant.

Mitigation Measures: No mitigation is required.

e. Would the project result in inadequate emergency access?



No Impact. The proposed Project would not result in inadequate emergency access. The Project is the development of water wells and supporting facilities, and will maintain adequate emergency access; therefore, no impact would occur.

Mitigation Measures: No mitigation is required.

f. Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. The proposed Project would not involve or interfere with any public transit, bicycle, or pedestrian facilities; therefore, no impact would occur.

Mitigation Measures: No mitigation is required.

3.4.17 Tribal Cultural Resources

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
cha resc sect culti defi land	ald the project cause a substantial adverse nge in the significance of a tribal cultural purce, defined in Public Resources Code tion 21074 as either a site, feature, place, ural landscape that is geographically ned in terms of the size and scope of the dscape, sacred place, or object with cultural te to a California Native American tribe, and 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				X
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, the lead agency shall consider the significance of the resource to a California Native American tribe.				×

Public Resources Code section 21074 defines tribal resources as follows:

- (a) "Tribal cultural resources" are either of the following:
- (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
- (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
- (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
- (2) 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 purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
- (b) 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.
- (c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).



Existing Conditions:

As specified in the Public Resources Code Section 21080.31,⁴ as amended by AB 52, Gatto, lead agencies must provide notice inviting consultation to California Native American tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if the Tribe has submitted a request in writing to be notified of proposed projects. Mesa Water District was contacted by the Juaneno Band of Mission Indians/Acjachemen Nation in August of 2015 through AB 52 to be notified of Mesa Water District's proposed projects.

Discussion:

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, 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 a California Native American tribe, and that is 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)?

No Impact. The project is located in a highly urbanized area of the City. As discussed in Section 3.4.5, Cultural Resources, above, the Project Site is currently developed with industrial uses and does not contain any historic resource either listed or eligible for listing in the California Register or in a local register of historical resources. The potential for discovery of unknown archaeological cultural resources beneath the ground surface was also evaluated above in Section 3.4.5, Cultural Resources. With implementation of Mitigation Measure Cul-1, impacts to unknown archaeological cultural resources would be reduced to less than significant.

As specified in AB 52, Mesa Water District provided written notification on December 5, 2018 to the Juaneno Band of Mission Indians/Acjachemen Nation representatives regarding the Proposed Project. The Juaneno Band of Mission Indians/Acjachemen Nation must respond in writing within 30 days of Mesa Water District's notice of the Proposed Project. Should the Juaneno Band of Mission Indians/Acjachemen Nation request consultation regarding the project site, in accordance with AB 52, Mesa Water District as Lead Agency would facilitate such consultation. The Juaneno Band of Mission Indians/Acjachemen Nation did not respond in writing within 30 days of Mesa Water District's notice of the Proposed Project.

On January 15, 2019, Joyce Stanfield Perry, President of the Juaneno Band of Mission Indians/Acjachemen Nation requested continued consultation regarding the Project and the results of the record searches. On January 31, 2019, Mesa Water District provided the Juaneno Band of Mission Indians/Acjachemen Nation with the results of the record searches (Appendix B).

Mesa Water District has completed the requirements for AB52. No impacts are expected.

b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, 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 a California Native American tribe, and that is 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, the lead agency shall consider the significance of the resource to a California Native American tribe.

Page 3-63

February 2019



⁴ Public Resources Code, Division 13, Chapter 2.6, Section 21.080.3.1.

No Impact. As specified in AB 52, Mesa Water District provided written notification on December 5, 2018 to the Juaneno Band of Mission Indians/Acjachemen Nation representatives regarding the Proposed Project. The Juaneno Band of Mission Indians/Acjachemen Nation must respond in writing within 30 days of Mesa Water District's notice of the Proposed Project. Should the Juaneno Band of Mission Indians/Acjachemen Nation request consultation regarding the project site, in accordance with AB 52, Mesa Water District as Lead Agency would facilitate such consultation. The Juaneno Band of Mission Indians/Acjachemen Nation did not respond in writing within 30 days of Mesa Water District's notice of the Proposed Project.

On January 15, 2019, Joyce Stanfield Perry, President of the Juaneno Band of Mission Indians/Acjachemen Nation requested continued consultation regarding the Project and the results of the record searches. On January 31, 2019, Mesa Water District provided the Juaneno Band of Mission Indians/Acjachemen Nation with the results of the record searches (Appendix B).

Mesa Water District has completed the requirements for AB52. No impacts are expected.

3.4.18 Utilities and Service Systems

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wou	ıld the project:				
a.	Exceed wastewater treatment requirements of the applicable regional water quality control board?				Х
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			×	
C.	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			x	
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?				Х
e.	Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				Х
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			Х	
g.	Comply with federal, state, and local statutes and regulations related to solid waste?				Х

Existing Conditions:

The City of Santa Ana's sewer collection system consists of approximately 450 miles of sewer mains, including approximately 60 miles of Orange County Sanitation District trunk sewers within the City (City of Santa Ana 2016).

The City of Santa Ana is served by two primary flood control and drainage systems: City-operated and -maintained storm drain system, including catch basins and storm drain pipes; and flood control facilities operated and maintained by the Orange County Flood Control District, including the large flood control channels in the City (City of Santa Ana 2015). The NPDES Stormwater Permit issued to the County of Orange and its co-permittees requires development projects to incorporate appropriate best management practices to minimize pollutant levels in runoff (County of Orange 2017).

Mesa Water District provides potable water for a population of approximately 110,000 within an 18-square mile service area which includes the City of Costa Mesa, portions of the City of



Newport Beach, and portions of unincorporated Orange County. Mesa Water District distributes a combination of imported water and local groundwater and maintains five clear water wells, two tinted water wells (the water from which is treated by the Mesa Water Reliability Facility to remove color), and two reservoirs with a combined capacity of 28 million gallons.

The City of Santa Ana Public Works Agency coordinates the collection and recycling of solid waste. In 2016, nearly 90 percent of the solid waste landfilled from the City of Santa Ana was disposed of at the Frank Bowerman Landfill (Calrecycle 2017).

Discussion:

a. Would the project exceed wastewater treatment requirements of the applicable regional water quality control board?

No Impact. The proposed Project is the construction and operation of a potable water well. It would not require wastewater treatment and therefore no impact would occur.

Mitigation Measures: No mitigation is required.

b. Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant Impact. The proposed Project is the construction and operation of two water wells. Construction of the wells also includes establishment of the associated housing structure, ancillary facilities, and perimeter wall. Construction of the well facilities would result in temporary and minor impacts to air, noise, and traffic during construction activities, but these have been reduced through mitigation, where necessary, to maintain impacts at a less than significant level. All impacts from well operations are less than significant or no impact. Overall, impacts from construction and operation of the wells would be less than significant.

Mitigation Measures: No mitigation is required.

c. Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant Impact. For Well No. 12, an 18-inch storm drain will convey site storm water and pump waste discharge from Well No. 12 to an existing City of Santa Ana 18-inch storm drain catch basin on the north side of West Chandler Avenue.

For Well No. 14, approximately 535 linear feet of 18-inch storm drain will be constructed to convey site stormwater and pump waste discharge from Well No. 14 to an existing City of Santa Ana 27-inch storm drain catch basin on the west side of Croddy Way approximately 500 feet to the south of the Well No. 14 site.

The storm drains will be constructed based on Regional Water Quality Control Board Non-Stormwater discharge requirements. Upon adherence to these existing requirements, short term impacts to water quality standards and waste discharge requirements would be less than significant.

Mitigation Measures: No mitigation is required.

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

No Impact. Mesa Water District's water system currently meets its potable water demand through utilization of groundwater supplemented with imported water. In 2014, Mesa Water District Board of Directors adopted a policy for local water reliability to be 115 percent of demand. This policy provides Mesa Water District with additional assurance to meet peak water



demands with local groundwater supplies when other water production facilities undergo routine maintenance. The proposed Project would enable the use of Wells No. 12 and No. 14 to provide additional local water reliability.

Implementation of the wells would not result in any exceedance of Mesa Water District's existing water entitlements. Rather, it would improve reliability and efficiency of the supply system. As such, no impacts would occur.

Mitigation Measures: No mitigation is required.

e. Has the wastewater treatment provider that serves or may serve the project determined that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. The proposed Project is the construction and operation of a potable water well. It would not require wastewater treatment and therefore, no impact would occur.

Mitigation Measures: No mitigation is required.

f. Is the project served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less than Significant Impact. The Project would not include any habitable structures and would not have the capability to produce solid waste during long-term operations. Although the Project may require the disposal of construction/demolition debris during the construction process (soil, asphalt, demolished materials, etc.), the generation of these materials would be short-term in nature and would not have the capability to substantially affect the capacity of regional landfills; therefore, impacts would be less than significant.

Mitigation Measures: No mitigation is required.

g. Would the project comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. The proposed Project would comply with all federal, State, and local statutes and regulations related to solid waste, including the California Integrated Waste Management Act and City requirements for solid waste generated during the construction process; therefore, no impact would occur.

Mitigation Measures: No mitigation is required.



3.4.19 Mandatory Findings of Significance

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Mar	datory Findings of Significance	T			
a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?		X		
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.)			X	
C.	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?			Х	

Discussion:

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

Less than Significant Impact with Mitigation Incorporated. As discussed in Section 3.4.4, Biological Resources, the Project is located in an urban area and does not provide biological habitat for species of concern or for federally listed species. The Project will involve the removal of the trees on site. If these trees are removed during breeding bird nesting season (typically from February 15 through September 15), implementation of mitigation measure BIO-1, provided in the event that any nesting birds are found at the project site location, will reduce impacts to less than significant.

In addition, as discussed in Section 3.4.5, Cultural Resources, the Project Site and surrounding area has been completely disturbed by development and has been subject to extensive ground disturbance in the past. As such, any historical, archaeological, and paleontological resources which may have existed in the Project site would have likely been disturbed. However, adherence to Mitigation Measures **CUL-1** and **CUL-2** would be required in the event



unexpected resources are uncovered during the grading and excavation process. With implementation of recommended mitigation, the proposed Project is not expected to eliminate important examples of the major periods of California history or prehistory, and impacts would be less than significant.

Mitigation Measures: Implement Mitigation Measures BIO-1, CUL-1 and CUL-2.

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.)

Less than Significant Impact. Since the Project would supplement existing well production, the Project would serve to enhance the efficiency and reliability of the Mesa Water District water supply system. The Project would not result in substantial population growth within the area, either directly or indirectly. Although the Project may incrementally affect other resources at a less than significant level, the Project's contribution to these effects is not considered "cumulatively considerable", in consideration of the relatively nominal impacts of the Project and the mitigation measures provided to lessen impacts. Therefore, cumulative impacts would be considered less than significant.

Mitigation Measures: No mitigation required.

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

Less than Significant Impact. Previous sections of this Initial Study/Mitigated Negative Declaration reviewed the proposed Project's potential impacts related to aesthetics, air quality, geology and soils, greenhouse gases, hydrology/water quality, noise, hazards and hazardous materials, traffic, and other issues. As concluded in these previous discussions, the proposed Project would result in less than significant environmental impacts; therefore, the proposed Project would not result in environmental impacts that would cause substantial adverse effects on human beings and impacts would be less than significant.

Mitigation Measures: No mitigation required...

4.0 LIST OF PREPARERS

Mesa Water District (Lead Agency)

Karyn Igar, P.E., Project Manager

Tetra Tech, Inc. (Technical Assistance)

Derrick Coleman, Ph.D., Environmental Task Manager Paula Fell, Senior Environmental Planner Kevin Fowler, INCE, Senior Acoustical Engineer Weyman Kam P.E., Engineer V DeeAnna Garcia, Word Processor/Editor Daniel Keady, Mapping/Graphics

5.0 REFERENCES

Airport Land Use Commission (ALUC)

2005 Airport Land Use Commission for Orange County Airport Planning Areas, Figure 1. July 21.

California Code of Regulations

Title 14. Natural Resources, Division 6. Resources Agencies, Chapter 3. Guidelines for Implementation of the California Environmental Quality Act, Article 6. Negative Declaration Process, Sections 15070 to 15075. URL: http://leginfo.legislature.ca.gov/.

California Department of Conservation

2018 Division of Land Resource Protection. 2018. California Important Farmland Finder. https://maps.conservation.ca.gov/.

California Department of Finance

2018 E-1: City/County/State population Estimates with Annual Percent Change January 1, 2017 and 2018. URL: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-1/documents/E-1 2018PressRelease.pdf.

California Department of Transportation (Caltrans)

2018 California Scenic Highway Mapping System. URL: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.

California Department of Conservation

2018 Jurisdiction Disposal by Facility, Disposal during 2016 for Santa Ana.

California Emergency Management Agency

2009 Tsunami Inundation Map for Emergency Planning, Newport Beach Quadrangle. March 15, 2009.

CalRecycle

2017 Jurisdiction Disposal by Facility, Disposal during 2017 for Santa Ana. URL: http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=ReportYear%3d 2017%26ReportName%3dReportEDRSJurisDisposalByFacility%26OriginJurisdic tionIDs%3d461 Accessed August 6, 2016.

Centec Engineering 2017a

- 2017a Phase I Environmental Site Assessment 3120 South Croddy Way, Santa Ana, California 92704, Centec Project #0717052. July 26, 2017.
- 2017b Phase I Environmental Site Assessment 4011 W. Chandler Avenue, Santa Ana, California 92704, Centec Project #0117003. February 23, 2017.

City of Santa Ana

- 1982a City of Santa Ana General Plan, Scenic Corridors Element. Adopted September 20, 1982.
- 1982b City of Santa Ana General Plan, Conservation Element. Adopted September 20, 1982.



- 1982c City of Santa Ana General Plan, Seismic Safety Element. Adopted September 20, 1982.
- 1982d City of Santa Ana General Plan, Public Safety Element. Adopted September 20, 1982.
- 1982e City of Santa Ana General Plan, Public Facilities Element. Adopted September 20, 1982.
- 1982f City of Santa Ana General Plan, Open Space, Parks and Recreation Element. Adopted September 20, 1982.
- 1988 City of Santa Ana General Plan, Education Element. Adopted January 19, 1988.
- 1998 City of Santa Ana General Plan, Land Use Element. Adopted February 2, 1998.
- 2010 City of Santa Ana General Plan, Open Space, Parks and Recreation Element. Adopted September 20, 1982.
- 2014 City of Santa Ana General Plan, 2014-2021 Housing Use Element. Adopted January 2014.
- 2015 City of Santa Ana Storm Drain Master Plan. December 2015.
- 2016 City of Santa Ana Sewer Master Plan Update Final Report. December 2016.
- 2018 City of Santa Ana Municipal Code, https://library.municode.com/ca/santa_ana/codes/code_of_ordinances Accessed August 9, 2018).

County of Orange

- 2012 Orange County General Plan. Amended 2012.
- 2017 Drainage Area Management Plan (DAMP). URL: http://www.ocwatersheds.com/documents/damp

Federal Emergency Management Agency (FEMA)

2009 Flood Insurance Rate Map, City of Santa Ana, California, Map Number 06059C0258J, Effective Date December 3, 2009.

Federal Transit Administration

2006 Transit Noise and Vibration Impact Assessment Manual. Chapter 12: Noise and Vibration during Construction. FTA-VA-90-1003-06. May.

Intergovernmental Panel on Climate Change (IPCC)

2007 Summary for Policymakers, contained in: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.

JCP-LGS

2017 Natural Hazards Disclosure Report, 3120 S. Croddy Way, Santa Ana, Orange County CA 92704, July 6, 2017.



Leighton Consulting, Inc. (Leighton)

2018 Geotechnical Exploration Report Mesa Water District West Chandler Avenue Well and Pipeline Project, city of Santa Ana, California, May 14, 2018.

Orange County Fire Authority (OCFA)

2018 Orange County Fire Authority website. URL: http://ocfa.org/ Accessed August 9, 2018.

Governor's Office of Planning and Research (OPR).

2007 Climate Change and CEQA, Presentation to the Climate Action Team, Cynthia Bryant, Director, OPR. September 19, 2007.

IPCC 2007. Intergovernmental Panel on Climate Change (IPCC)

Santa Ana Police Department (SAPD)

2018 Santa Ana Police Department website. URL: http://www.ci.santa-ana.ca.us/pd/ Accessed August 9, 2018.

South Coast Air Quality Management District (SCAQMD)

2017 Final 2016 Air Quality Management Plan. March.

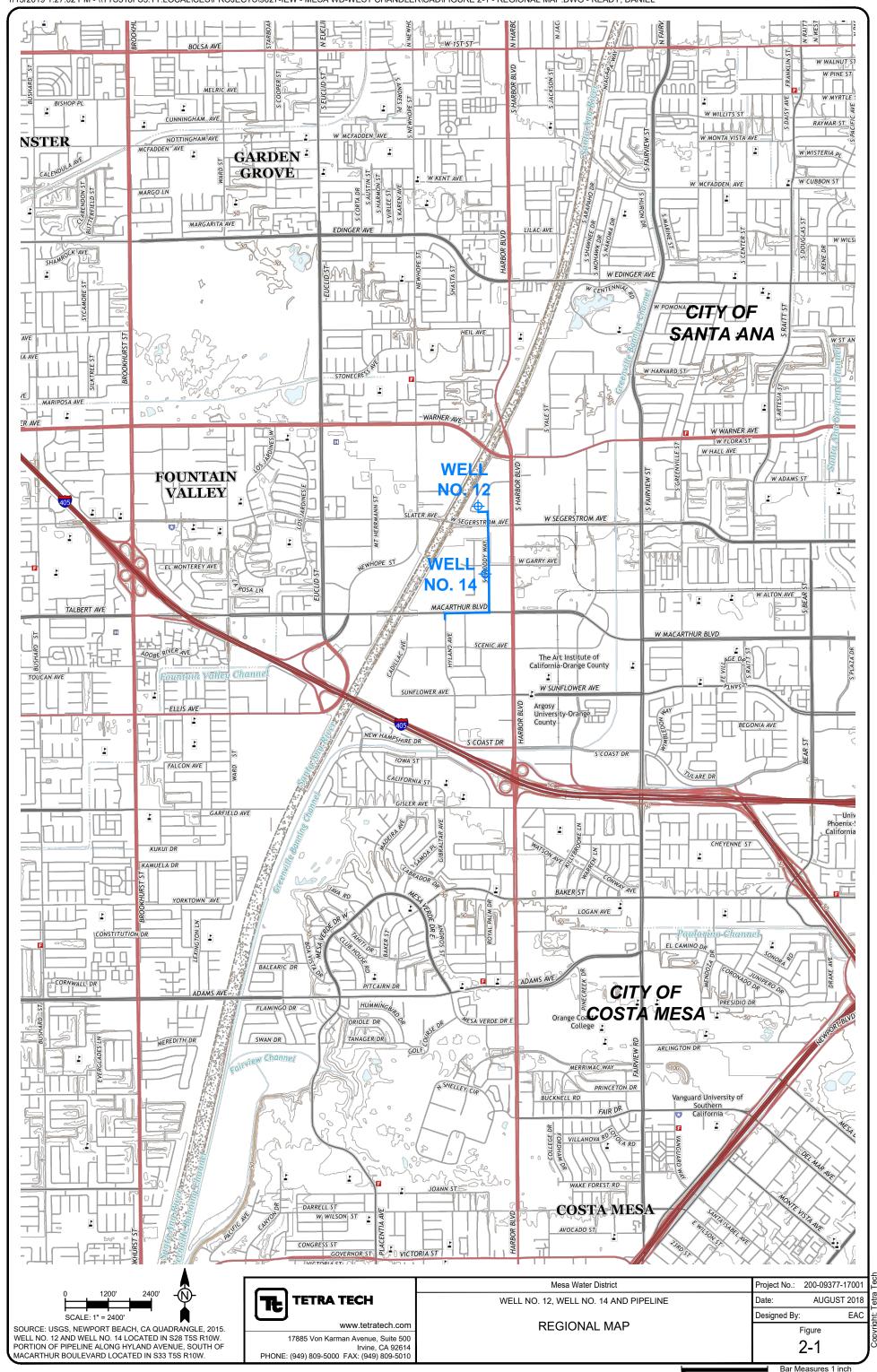
U.S. Fish and Wildlife Service (USFWS)

2018 National Wetlands Inventory, https://www.fws.gov/wetlands/data/mapper.html Accessed August 4, 2018.

U.S. Geological Survey

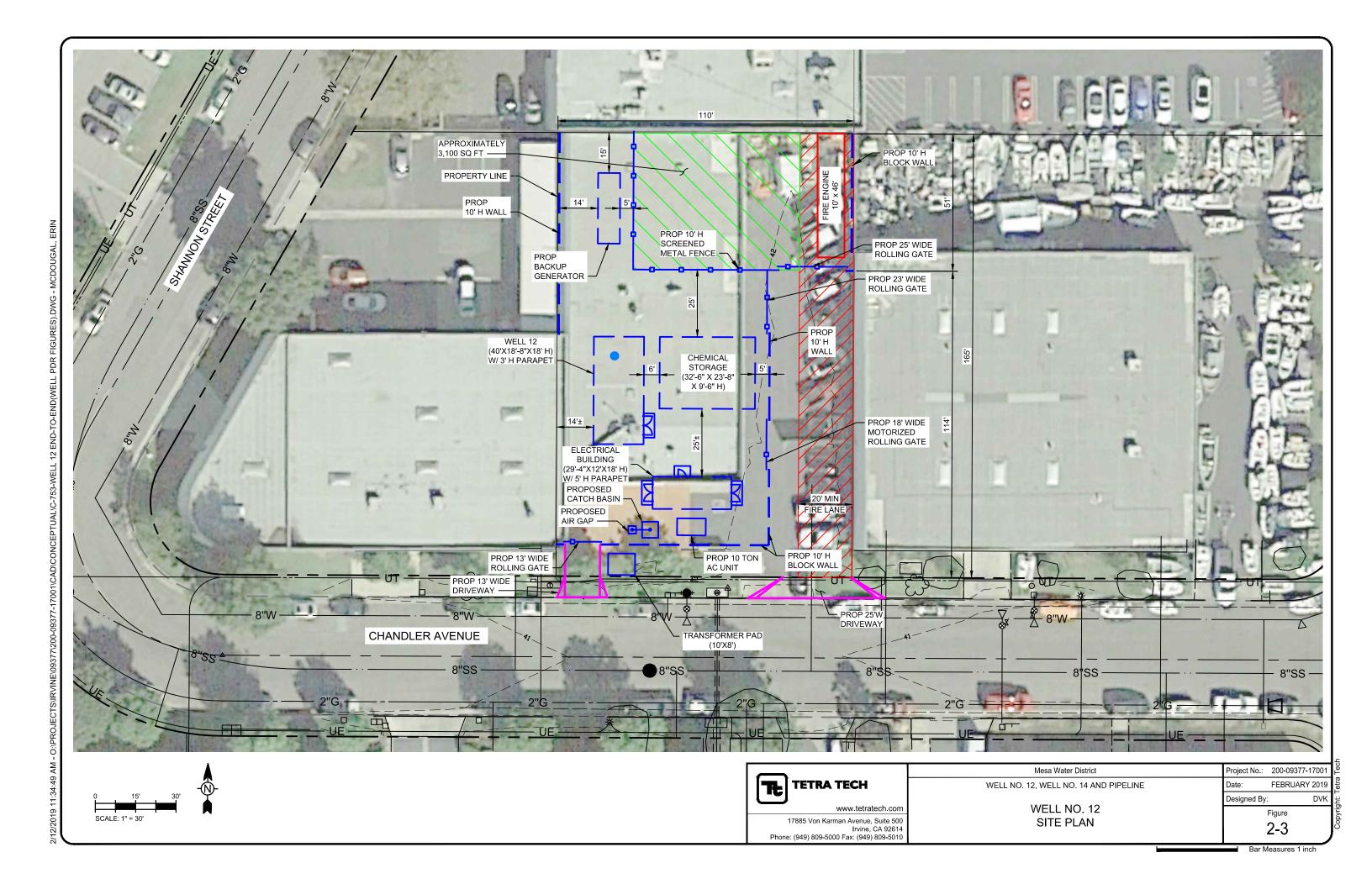
2015 Newport Beach, California, U.S. Geological Survey 7.5-minute Quadrangle Map

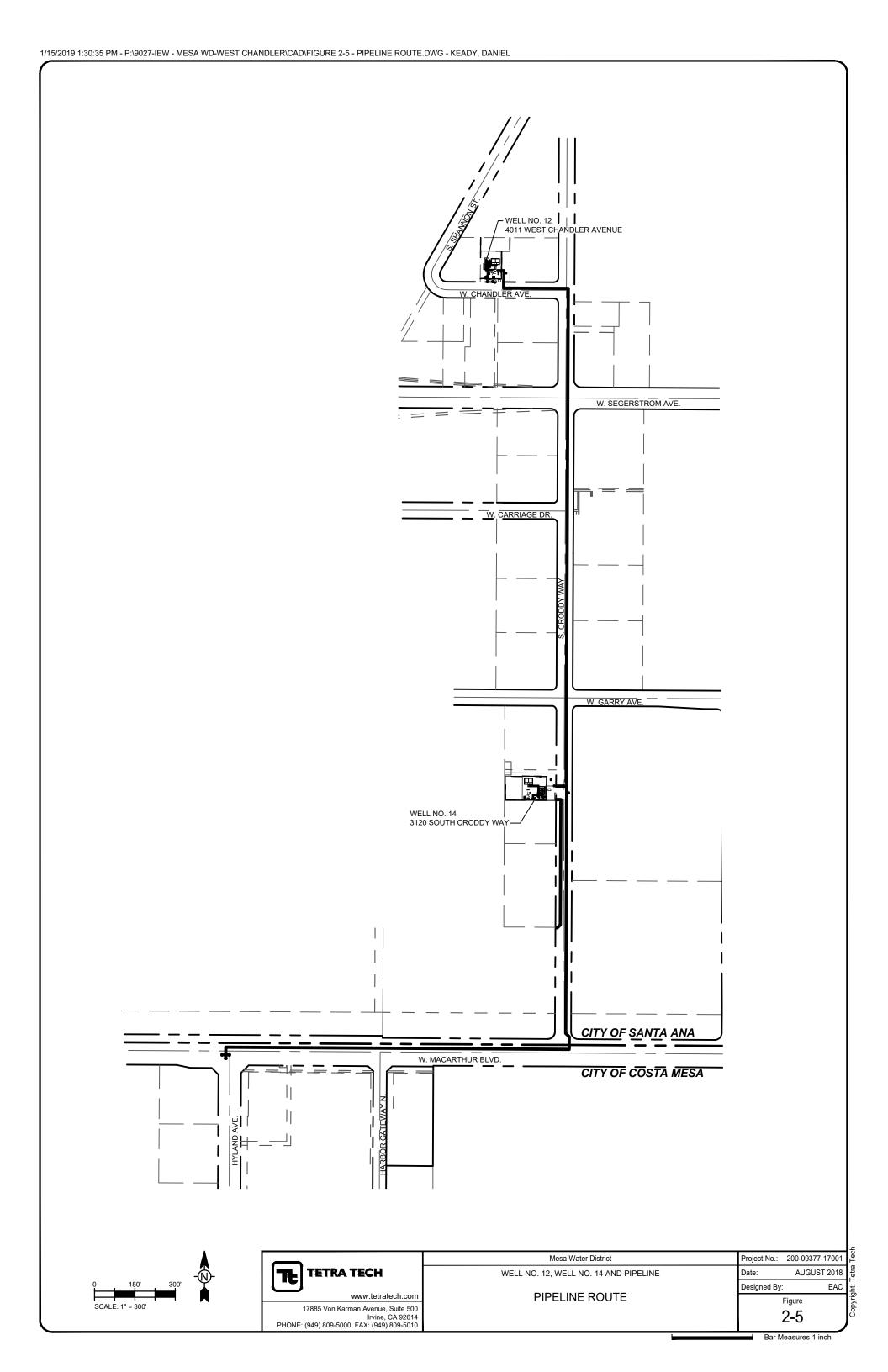
FIGURES

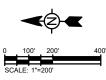


SOURCE: GOOGLE EARTH PRO, SANTA ANA, CA, 2017











www.tetratech.com

17885 Von Karman Avenue, Suite 500 Irvine, CA 92614 Phone: (949) 809-5000 Fax: (949) 809-5010

N	Лesa	Wate	er Dis	trict

WELL NO. 12, WELL NO. 14 AND PIPELINE

WATER PIPELINE CONSTRUCTION TRAFFIC DETOUR ROUTES WELL NO. 12 TO WELL NO. 14
 Project No.:
 200-09377-17001

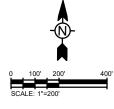
 Date:
 AUGUST 2018

 Designed By:
 DVK

 Figure

Figure 2-6

Bar Measures 1 inch





17885 Von Karman Avenue, Suite 500 Irvine, CA 92614 Phone: (949) 809-5000 Fax: (949) 809-5010

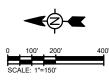
N	lesa	Water	Distric
11	ICJU	vvator	Distric

WELL NO. 12, WELL NO. 14 AND PIPELINE

WATER PIPELINE CONSTRUCTION TRAFFIC DETOUR ROUTES WELL NO. 14 TO HYLAND AVENUE

Project No.: 200-09377-17001 AUGUST 2018 Designed By: Figure

2-7





STORM DRAIN CONSTRUCTION TRAFFIC DETOUR ROUTES

WELL NO. 12, WELL NO. 14 AND PIPELINE STORM DRAIN CONSTRUCTION

Mesa Water District

Project No.: 200-09377-17001

Date: AUGUST 2018

Designed By: DVK

Figure

2-8

APPENDIX A AIR QUALITY AND GREENHOUSE GAS TECHNICAL REPORT

This page intentionally left blank



MESA WATER DISTRICT WELLS NOS. 12 AND 14 AND PIPELINE PROJECT

Air Quality and Greenhouse Gas Technical Report

Prepared for

Mesa Water District 1965 Placentia Avenue Costa Mesa, CA 92627

Prepared by



Tetra Tech, Inc. 17885 Von Karman Ave. Suite 500 Irvine, CA

January 2019

TABLE OF CONTENTS

2.1	Purpose	
2.2	Site Location	
2.3	Project Description	
2.4	Existing Air Quality	
	2.4.1 Air Pollutants	
	2.4.2 Air Pollutant Constituents and Attainment Status	
2.5	Existing Regional Air Quality Emissions	
AIR	QUALITY THRESHOLD OF SIGNIFICANCE	
3.1	Criteria Pollutants	
3.2	Greenhouse Gases and State Standards	
AIR	QUALITY IMPACT ASSESSMENT	
4.1	Overview of the Analysis Methodology	
4.2	Air Quality Impact from Construction	
	4.2.1 Regional Impacts	
	4.2.2 Localized Impacts	
	4.2.3 Federal Air Quality Impacts	
4.3	Air Quality Impacts from Operation	
4.4	Greenhouse Gas Emissions	
4.5	Odors	
4.6	Consistency with Regional Air Quality Plan	
4.7	Cumulative Impacts	

List of Tables

Table 2. Criteria Pollutants Attainment Status in the South Coast Air Basin14Table 3. Significant Emission Thresholds16Table 4. Construction Equipment Mix and Offsite Haul Truck Data22Table 5. Construction Emissions Summary24Table 6. Construction Emissions vs. SCAQMD Regional and Localized Emissions Thresholds26Table 7. Construction Emissions and NEPA Thresholds27Table 8. Operation Emissions Summary29Table 9. Operation Emissions vs. SCAQMD Regional and Localized Emissions Thresholds29Table 10. GHG Emissions30List of Figures30Figure 1. Project Location4Figure 2. Well No. 12 Site Plan5Figure 3. Well No. 14 Site Plan6Figure 4. Pipeline Route7	Table 1.	State and Federal Air Quality Standards	9
Table 4. Construction Equipment Mix and Offsite Haul Truck Data22Table 5. Construction Emissions Summary24Table 6. Construction Emissions vs. SCAQMD Regional and Localized Emissions Thresholds26Table 7. Construction Emissions and NEPA Thresholds27Table 8. Operation Emissions Summary29Table 9. Operation Emissions vs. SCAQMD Regional and Localized Emissions Thresholds29Table 10. GHG Emissions30List of Figures30Figure 2. Well No. 12 Site Plan5Figure 3. Well No. 14 Site Plan6	Table 2.	Criteria Pollutants Attainment Status in the South Coast Air Basin	14
Table 5. Construction Emissions Summary 24 Table 6. Construction Emissions vs. SCAQMD Regional and Localized Emissions Thresholds 26 Table 7. Construction Emissions and NEPA Thresholds 27 Table 8. Operation Emissions Summary 29 Table 9. Operation Emissions vs. SCAQMD Regional and Localized Emissions Thresholds 29 Table 10. GHG Emissions 30 List of Figures Figure 1. Project Location 4 Figure 2. Well No. 12 Site Plan 5 Figure 3. Well No. 14 Site Plan 6	Table 3.	Significant Emission Thresholds	16
Table 5. Construction Emissions Summary 24 Table 6. Construction Emissions vs. SCAQMD Regional and Localized Emissions Thresholds 26 Table 7. Construction Emissions and NEPA Thresholds 27 Table 8. Operation Emissions Summary 29 Table 9. Operation Emissions vs. SCAQMD Regional and Localized Emissions Thresholds 29 Table 10. GHG Emissions 30 List of Figures Figure 1. Project Location 4 Figure 2. Well No. 12 Site Plan 5 Figure 3. Well No. 14 Site Plan 6	Table 4.	Construction Equipment Mix and Offsite Haul Truck Data	22
Table 6. Construction Emissions vs. SCAQMD Regional and Localized Emissions Thresholds			
Emissions Thresholds		•	
Table 7. Construction Emissions and NEPA Thresholds27Table 8. Operation Emissions Summary29Table 9. Operation Emissions vs. SCAQMD Regional and Localized Emissions Thresholds29Table 10. GHG Emissions30List of Figures4Figure 1. Project Location4Figure 2. Well No. 12 Site Plan5Figure 3. Well No. 14 Site Plan6			26
Table 8. Operation Emissions Summary	Table 7.		
Table 9. Operation Emissions vs. SCAQMD Regional and Localized Emissions Thresholds			
Emissions Thresholds		± •	
Table 10. GHG Emissions			29
Figure 1. Project Location	Table 10.	GHG Emissions	30
Figure 1. Project Location			
Figure 1. Project Location			
Figure 2. Well No. 12 Site Plan	List of Fi	<u>igures</u>	
Figure 2. Well No. 12 Site Plan			
Figure 3. Well No. 14 Site Plan6	Figure 1.	Project Location	4
	Figure 3.	Well No. 14 Site Plan	6

Appendices

A. CALEEDMOD OUTPUT FILES

ABBREVIATIONS

AQMD Air Quality Management District AQMP Air Quality Management Plan

CAA Clean Air Act

CAAQS California Ambient Air Quality Standards (CAAQS)

CARB California Air Resources Board

CEQA California Environmental Quality Act

CO Carbon monoxide CO₂ Carbon dioxide

CO₂e Carbon dioxide equivalent DPM Diesel Particulate Matter

EPA Environmental Protection Agency

GHG Greenhouse Gases

HRA Health Risk Assessment

H₂S Hydrogen sulfide

LST Localized Significance Thresholds

MMP mitigation monitoring plan

NAAQS National Ambient Air Quality Standards
NEPA National Environmental Protection Act

NO₂ Nitrogen dioxide

O₃ Ozone Pb Lead

PM₁₀ fine particulate matter equal to or less than 10 microns PM_{2.5} fine particulate matter equal to or less than 2.5 microns

ROG Reactive organic gases
RUNEX Running Exhaust
SCAB South Coast Air Basin

SCAQMD South Coast Air Quality Management District

SO₂ Sulfur dioxide

TACs Toxic Air Contaminants
TSP Total suspended particulate

SECTION 1

EXECUTIVE SUMMARY

This Air Quality/Greenhouse Gas Technical Report provides an analysis of the potential environmental impacts associated with the Mesa Water District's proposed installation and operation of two new potable water wells on approximately 0.89 acre of land located in the City of Santa Ana, California

The air quality impacts are analyzed with the requirements of the California Environmental Quality Act (CEQA) and the National Environmental Protection Act (NEPA). All analyses have been conducted based on the methodologies recommended by the South Coast Air Quality Management District (SCAQMD) for air quality assessments in support of CEQA and NEPA. The findings of the analyses are as follows:

- Project construction would not cause an exceedance of daily regional emission thresholds, and would not expose off-site receptors to significant levels of toxic air contaminants.
- Project operations would not cause an exceedance of daily regional or local emission thresholds set forth by the SCAQMD.
- Project operations would not expose off-site receptors to significant levels of toxic air contaminants.
- Project operations would result in a minimal increase in Statewide greenhouse gas (GHG) emissions; this would not contribute significantly to global climate change.
- The project would not result in cumulatively significant impacts during construction or operation.

SECTION 2

DESCRIPTION OF PROJECT

2.1 Purpose

This Air Quality/Greenhouse Gas Technical Report provides an analysis of the potential environmental impacts associated with the Mesa Water District's proposed installation and operation of two potable water wells in the City of Santa Ana, California.

2.2 Site Location

The proposed project is located in the City of Santa Ana, Orange County, California. Figure 1 shows the proposed project location. The Project's well sites and new pipeline are located within a commercial/light industrial area of the City of Santa Ana, the area bounded by the Santa Ana River on the west, Warner Ave. on the north, Harbor Blvd. on the east, and MacArthur Blvd. on the south. This area adjoins the City of Costa Mesa, which is south of MacArthur Blvd.

The Well No. 12 site is located at 4011 W. Chandler Avenue, Santa Ana, California. It consists of a rectangular-shaped parcel of land approximately 0.426 acres in size. Figure 2 shows the site plan. The site is currently improved with one, two-story office building along the south perimeter which is attached to a larger light-industrial/warehouse building that totals approximately 8,450 square feet of building improvements, asphalt-paved driveway surface along the east perimeter, drainage features, and associated landscaping (Centec Engineering 2017a).

The Well No. 14 site is located at 3120 S. Croddy Way, Santa Ana, California. It consists of a rectangular-shaped parcel of approximately 0.468 acres in size. Figure 3 shows the site plan. The site is currently developed with a concrete tilt-up light-industrial building of approximately 6,944 square feet with associated drive and parking areas.

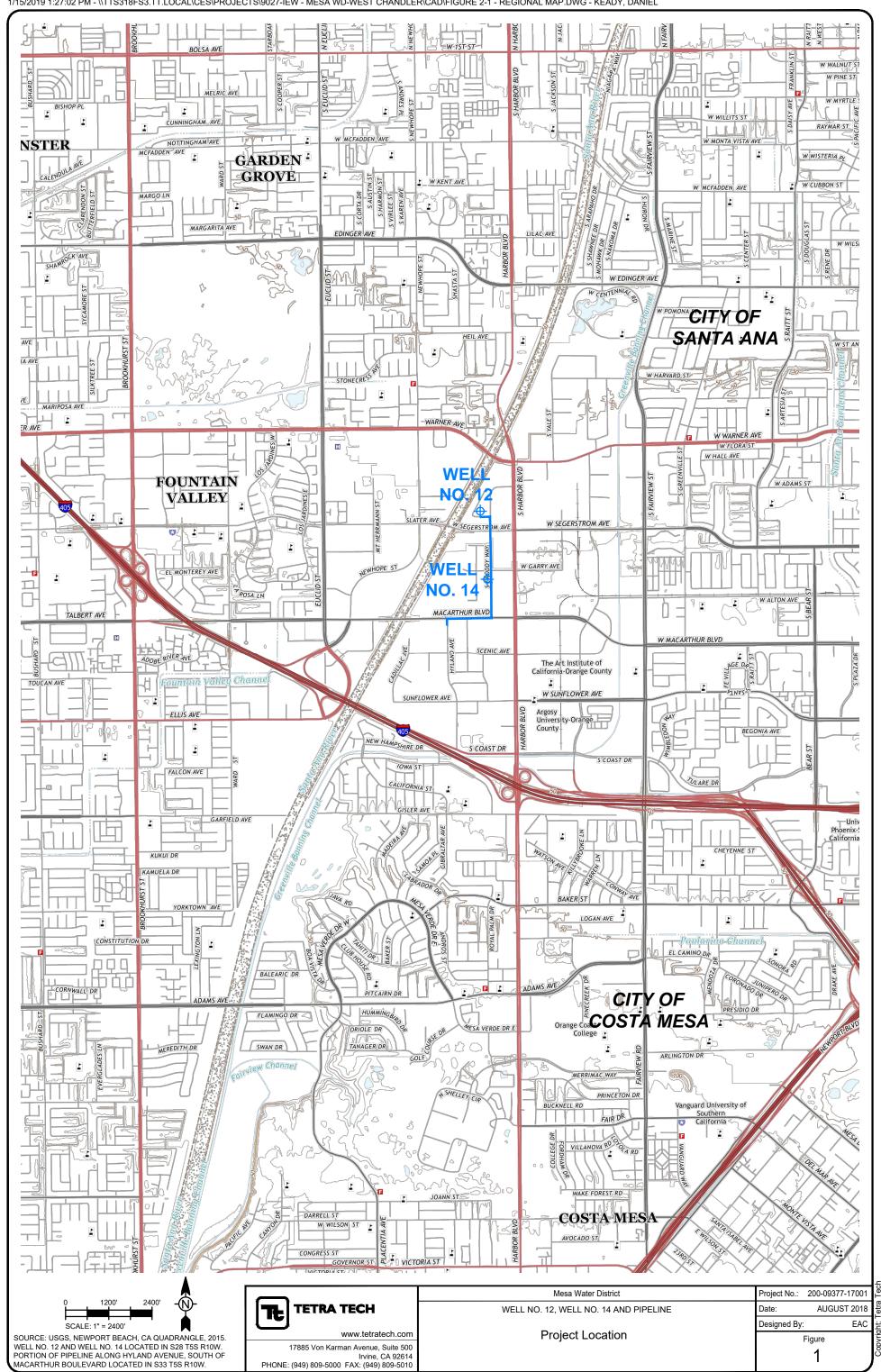
2.3 Project Description

The Mesa Water District is proposing to construct two new potable water wells on approximately 0.89 acre of land located in the City of Santa Ana, California. Mesa Water District provides potable water for a population of approximately 110,000 within an 18-square mile service area which includes the City of Costa Mesa, portions of the City of Newport Beach, and portions of unincorporated Orange County. Mesa Water distributes a combination of imported water and local groundwater and maintains five clear water wells, two tinted water wells which is treated by the Mesa Water Reliability Facility to remove color, and two reservoirs with a combined capacity of 28 million gallons. In 2014, the Mesa Water Board of Directors adopted a policy for local water reliability to be 115 percent of demand. This policy provides Mesa Water with additional assurance to meet peak water demands with local groundwater supplies when other water production facilities undergo routine maintenance.

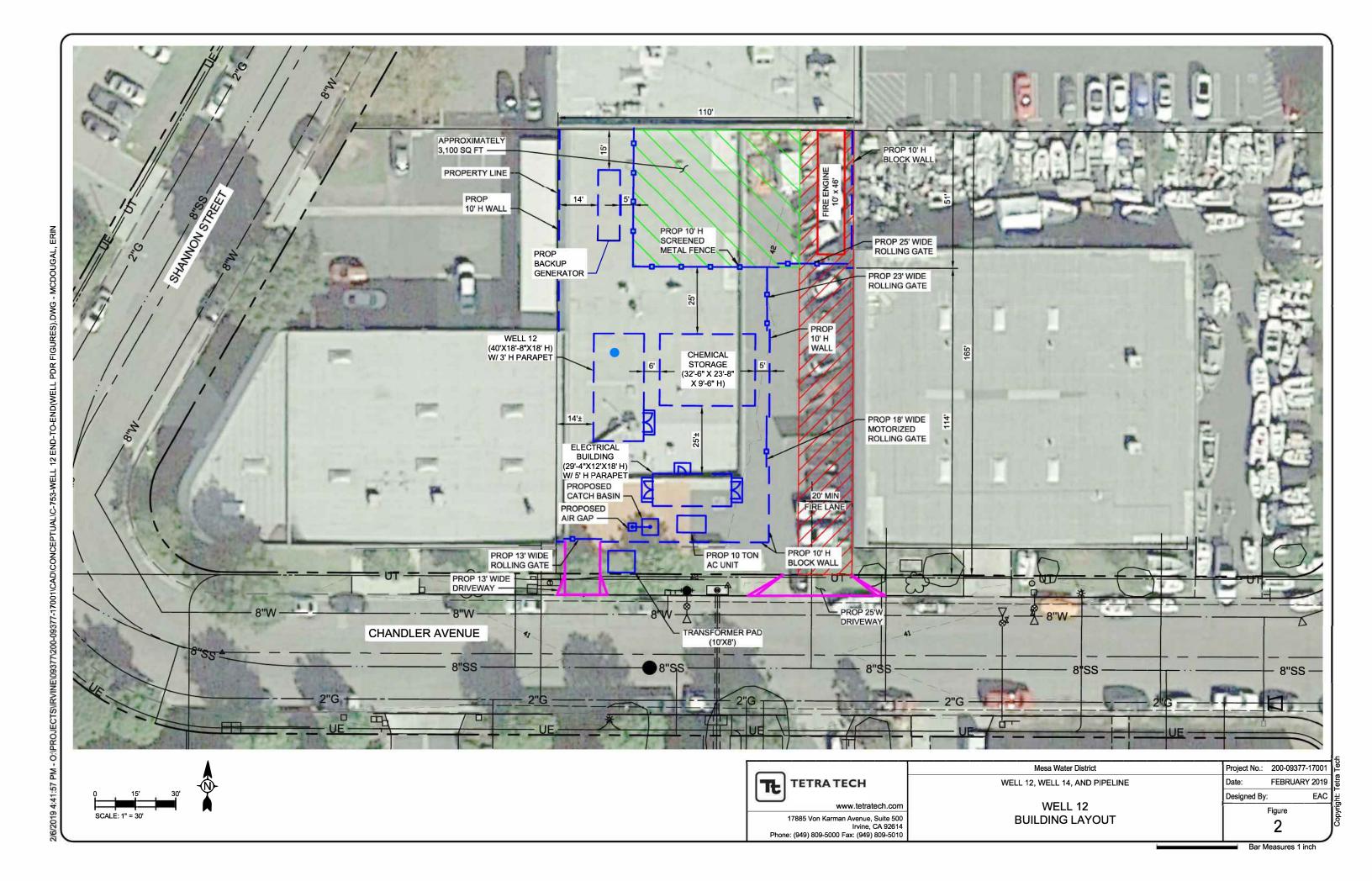
In order to provide additional local water reliability, Mesa Water purchased two properties within the City of Santa Ana to be used as groundwater well sites. Proposed Well No. 12 and associated structures and equipment would be constructed within a 0.43–acre site. Proposed Well No. 14 and associated structures and equipment would be constructed within a 0.46–acre site. Each well site will include a well building, electrical building, SCE transformer, chemical storage area, and a well water waste air gap.

Both wells are located outside of Mesa Water's service area and will require the construction of approximately 4,500 feet of pipeline to connect the proposed wells to Mesa Water District's existing system. Construction is anticipated to begin in the first quarter of 2020 and last approximately 24 months to the fourth quarter of 2021. Once operational, Well Nos. 12 and 14 can potentially provide an additional 6 to 8 million gallons per day of safe and reliable drinking water.

The Project includes drilling, constructing, developing, testing, and equipping of Well No. 12 and Well No. 14, plus construction of facilities at the sites for operation of the wells. In addition, approximately 4,500 feet of pipeline will connect the two wells to the Mesa Water distribution system traversing Chandler Avenue to Croddy Way to W. MacArthur Boulevard to Hyland Avenue. Figure 3 shows the pipeline route.



Bar Measures 1 inch





SOURCE: GOOGLE EARTH PRO, SANTA ANA, CA, 2017

2.4 Existing Air Quality

2.4.1 Air Pollutants

Air pollutant emissions within the South Coast Air Basin (SCAB) are generated from stationary, mobile, and natural sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at an identified location and are usually associated with manufacturing and industry. Examples are boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and produce many small emissions. Examples of area sources include residential and commercial water heaters, painting operations, portable generators, lawn mowers, agricultural fields, landfills, and consumer products such as barbeque lighter fluid and hair spray. Construction activities that create fugitive dust such as excavation and grading also contribute to area source emissions. Mobile sources refer to emissions from on- and off-road motor vehicles, including tailpipe and evaporative emissions. Onroad sources may be legally operated on roadways and highways. Off-road sources include aircraft, trains, and construction equipment. Mobile sources account for the majority of the air pollutant emissions within the air basin. Air pollutants can also be generated by the natural environment such as when fine dust particles are pulled off the ground surface and suspended in the air during high winds.

To protect the public health and welfare, the federal and State governments have identified five criteria air pollutants and a host of air toxics, and have established ambient air quality standards through the Federal Clean Air Act and the California Clean Air Act. The air pollutants for which federal and State standards have been promulgated and which are most relevant to air quality planning and regulation in the air basins include ozone, carbon monoxide, suspended particulate matter, sulfur dioxide, and lead.

Air pollutants are typically classified as primary or secondary pollutants. Carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter (PM), Sulfur Dioxide (SO₂), and Lead (Pb) are considered primary pollutants because they are emitted directly into the atmosphere. Ozone (O₃), a secondary pollutant, is formed through a photochemical reaction in the atmosphere with reactive organic compounds (ROGs) and nitrogen oxides (NO_x) in the presence of sunlight.

Both the federal and State governments have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect public health, as shown in Table 1. The national and State ambient air quality standards have been set at levels whose concentrations could be generally harmful to human health and welfare and to protect the most sensitive persons from illness or discomfort with a margin of safety. While ambient air quality standards have been developed specifically for O₃ and NO_x, there is no State or federal ambient air quality standard for ROGs. ROGs include many compounds of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and methane, among others. While the State and federal entities have not established ambient attainment levels for ROGs, they have for O₃. Because ROGs react with NO_x through photochemical reactions to form ozone, air districts, including SCAQMD, have provided ROG significance thresholds for project-level analysis in order to further limit the levels of ROGs available in the atmosphere that can be converted to ozone.

Table 1. State and Federal Air Quality Standards

Pollutant	Averaging	Califor	nia Standards ^a		Federal Stand	ards ^b
Time		Concentration ^c	Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g
Ozone (O ₃)	1 Hour 8 Hour	0.09 ppm (180 μg/m³) 0.070 ppm (137 μg/m³)	Ultraviolet Photometry	0.070 ppm (137	Same as Primary Standard	Ultraviolet Photometry
Respirable Particulate Matter (PM ₁₀)	24 Hour Annual Arithmetic Mean	50 μg/m ³ 20 μg/m ³	Gravimetric or Beta Attenuation	μg/m³) 150 μg/m³ —	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
Fine Particulate Matter (PM _{2.5})	24 Hour Annual Arithmetic Mean	No Separa 12 μg/m ³	te State Standard Gravimetric or Beta Attenuation	35 μg/m ³ 12 μg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
Carbon Monoxide	8 Hour 1 Hour	9 ppm (10mg/m³) 20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry	9 ppm (10 mg/m³) 35 ppm (40	None	Non-Dispersive Infrared Photometry (NDIR)
(CO)	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)	(NDIR)	mg/m³) —		_
Nitrogen Dioxide (NO2)	Annual Arithmetic Mean 1 Hour	0.03 ppm (56 μg/m³) 0.18 ppm (339 μg/m³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m³) 0.10 ppm	Same as Primary Standard None	Gas Phase Chemi- luminescence
Sulfur Dioxide (SO ₂)	24 Hour	0.04 ppm (105 μg/m³)	Ultraviolet Fluorescence	0.14 ppm (365 μg/m³)	_	Ultraviolet Fluorescence; Spectrophoto-
	3 Hour	_		_	0.5 ppm (1300 μg/m³)	metry (Pararosaniline Method) ⁹
	1 Hour	0.25 ppm (655 μg/m ³)		0.075 ppm (196 µg/m³)	_	
Lead (Pb) ^h	30 Day Average Calendar Quarter Rolling 3- Month Average	1.5 μg/m³ —	Atomic Absorption	 1.5 μg/m ³ 0.15 μg/m ³	Same as Primary Standard	High Volume Sampler and Atomic Absorption

Pollutant	Averaging	California Standards ^a		Federal Standards ^b		ards ^b
ronutant	Time	Concentration c	Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal		
Sulfates (SO ₄)	24 Hour	25 μg/m ³	Ion Chromatography		Standard	ds
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride ^h	24 Hour	0.01 ppm (26 μg/m ³)	Gas Chromatography			

- ^a California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter (PM₁₀, and PM_{2.5}) 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.
- 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 μg/m3 is equal to or less than one. For PM_{2.5}, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
- ^c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- ^d Any equivalent procedure which can be shown to the satisfaction of the California Air Resources Board (CARB) to give equivalent results at or near the level of the air quality standard may be used.
- e National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- 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.
- h CARB 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.

Source: CARB 2018

2.4.2 Air Pollutant Constituents and Attainment Status

A state or region is given the status of "attainment" or "unclassified" if ambient air quality standards have not been exceeded. A status of "nonattainment" for particular criteria pollutants is assigned if the ambient air quality standard for that pollutant has been exceeded. Once designated as nonattainment, attainment status may be achieved after three years of data showing non-exceedance of the standard. When an area is reclassified from nonattainment to attainment, it is designated as a maintenance area, indicating the requirement to establish and enforce a plan to maintain attainment with the standard. Following is a short description of the regulated air pollutants and their effect on human health.

Ozone

Ozone (O₃) is a colorless toxic gas that irritates the lungs and damages materials and vegetation. During the summer's long daylight hours, plentiful sunshine provides the energy needed to fuel photochemical reactions between NO₂ and ROGs which result in the formation of O₃. Conditions that lead to high levels of O₃ are adequate sunshine, early morning stagnation in source areas, high surface temperatures, strong and low morning inversions, greatly restricted vertical mixing during the day, and daytime subsidence that strengthens the inversion layer (all of which are characteristic of Southern California). Short-term exposures (lasting for a few hours) to ozone at levels typically observed in Southern California can result in changes in breathing patterns, reductions in lung capacity, and increased susceptibility to respiratory illnesses. O₃ is a problematic air contaminant in the SCAB. Maximum ozone concentrations in the SCAB usually are recorded during summer months.

Nitrogen Dioxides

The forms of nitrogen oxide that are important in air pollution are nitric oxide (NO) and nitrogen dioxide (NO₂). NO is a colorless, odorless gas formed by a combination of nitrogen and oxygen when combustion takes place under high temperatures and pressures. NO₂ is a reddish-brown gas formed by the combination of NO with oxygen. Combustion in motor vehicle engines, power plants, refineries and other industrial operations, as well as ships, railroads and aircraft, are the primary sources of NO. NO₂ at atmospheric concentrations is a potential irritant and can cause coughing in healthy persons, due to increased resistance to air flow and airway contraction. Larger decreases in lung functions are observed in individuals with preexisting respiratory illness. Long-term exposure to NO₂ can potentially lead to increased levels of respiratory illness in children. NOx is one of the main ingredients involved in the formation of ground-level ozone, which can trigger serious respiratory problems.

Carbon Monoxide

Carbon monoxide (CO) is a product of inefficient combustion, principally from automobiles and other mobile sources of pollution. In many areas of California, CO emissions from sources such as wood-burning stoves and fireplaces also can be measurable contributors during cold-weather months. Industrial sources of pollution generally contribute less than 10 percent of ambient CO levels. Peak CO levels occur typically during winter months because of a combination of seasonal contributions from home heating devices and stagnant weather conditions. CO reduces the oxygen-carrying capacity of the blood and in high concentrations can cause death. At lower concentrations, people exposed experience dizziness and headaches.

Sulfur Dioxide

Sulfur dioxide (SO₂) is produced when any sulfur-containing fuel is burned. Chemical plants that treat or refine sulfur or sulfur-containing chemicals also emit SO₂. Because of the complexity of the chemical reactions that convert SO₂ to other compounds (such as sulfates), peak concentrations of SO₂ occur at different times of the year in different parts of the State, depending on local fuel characteristics, weather, and topography. SO₂ can cause bronchia constriction and may aggravate

respiratory diseases. In moist environments, SO₂ may combine with water to form sulfuric acid, a component of acid deposition.

Fine Particulates (PM₁₀, PM_{2.5})

Particulate matter in the air is composed of windblown fugitive dust; particles emitted from combustion sources (usually carbon particles); and organic, sulfate, and nitrate aerosols formed in the air from emitted hydrocarbons, sulfur oxides, and oxides of nitrogen. In 1984, the California Air Resources Board (CARB) adopted standards for fine particulate (PM₁₀ - particulate matter of less than 10 microns), and phased out the total suspended particulate (TSP) standards used up to that time. PM₁₀ standards were substituted for TSP standards because PM₁₀ corresponds to the size range of inhalable particulate related to human health. In 1987, EPA also replaced national TSP standards with PM₁₀ standards. In July 1997, the Environmental Protection Agency (EPA) adopted new standards for fine particulate matter less than 2.5 microns in diameter (PM_{2.5}).

Particulates are a public health and welfare concern for several reasons. Particulates may be intrinsically toxic because of their inherent chemical and/or physical characteristics. Particulate matter may interfere with one or more of the mechanisms that normally clear the respiratory tract. Finally, fine particulates, which are easily carried deep into the lungs, may act as carriers of absorbed toxic substances. Thus, elevated particulate concentrations may exacerbate pre-existing respiratory diseases such as bronchitis. Particulate matter, especially fine particulate, also interferes with visibility.

The SCAB currently exceeds both the federal and State PM_{2.5} standards. It is classified as attainment for the federal PM₁₀ standard and non-attainment for the State PM₁₀ standard.

Lead

Lead is found in old paints and coatings, plumbing, and various other materials. Once in the blood stream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) are a diverse group of air pollutants that can affect human health, but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed above, but because their effects tend to be local rather than regional. CARB has designated nearly 200 compounds as TACs. Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to a relatively few compounds, the most important being particulate matter from dieselfueled engines. Inhaling TACs may increase the chances of experiencing various health problems, such as cancer, respiratory tract irritation, birth defects, etc. .

2.5 Existing Regional Air Quality Emissions

Measurements of ambient concentrations of criteria pollutants are used by the United States EPA and the ARB to assess and classify the air quality of each air basin, county, or, in some cases, a specific developed area. The classification is determined by comparing monitoring data with national and California air quality standards. If a pollutant concentration in an area is lower than the standard, the area is classified as being in "attainment." If the pollutant exceeds the standard, the area is in marginal, moderate, serious, severe, or extreme "nonattainment," depending on the magnitude of the air quality standard exceedance. If there are not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified."

South Coast Air Basin

The SCAB is surrounded by mountains trapping the air and its pollutants in the valleys or basins below. This area, also known as the Basin, includes all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. Bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, the SCAB is an area of high air pollution potential. The regional climate within the Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. Air quality within the Basin is influenced by a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, and industry.

The annual average temperature varies throughout the Basin. Annual temperature in Orange County ranges from the low 50°F to over 110°F during the summer. The hottest months are July and August, and the coldest months are December and January.

The majority of annual rainfall in the Basin occurs between December and March. Summer rainfall is minimal and generally limited to scattered thundershowers in coastal regions. The annual average total of rainfall in the SCAB area of the Los Angeles County is 15 inches. The Basin experiences a persistent temperature inversion, which is characterized by increasing temperature with increasing altitude. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. Aside from a persistent temperature inversion, the vertical dispersion of air contaminants in the Basin is also affected by wind conditions. The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. Conversely, on days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas in the Basin are transported eastward, predominantly into Riverside and San Bernardino Counties. Santa Ana winds, which are strong and dry north or northeasterly winds that occur during the fall and winter months, disperse air contaminants differently through the Basin, generally resulting in worse air conditions in the western parts of the Basin. Santa Ana conditions tend to last for several days at a time.

SCAB has very low average wind speeds; the dominant daily wind pattern is an onshore 8 to 12 mph during the day and offshore 3 to 5 mph winds during the night. These wind patterns are disrupted occasionally by winter storms or strong northeasterly Santa Ana winds from the mountains and deserts northeast of the SCAB. Table 2 lists criteria air pollutants and their attainment status in the SCAB.

Table 2. Criteria Pollutants Attainment Status in the South Coast Air Basin

Air Pollutants	State	Federal
Ozone (1-Hour)	Nonattainment	-
Ozone (8-Hour)	Nonattainment	Nonattainment
$PM_{2.5}$	Nonattainment/Unclassified	Nonattainment
PM_{10}	Nonattainment	Nonattainment
NO_2	Attainment	Unclassified/Attainment
CO	Attainment	Unclassified/Attainment
SO_2	Attainment	Attainment
		Unclassified/Attainment
Lead	Attainment	(Orange County)
Lead	Attaniment	Nonattainment (portion of Los
		Angeles County)
Sulfates	Attainment	-
Hydrogen Sulfide	Unclassified	-
Visibility Reducing Particles	Unclassified	-

Source: CARB 2018

SECTION 3

AIR QUALITY THRESHOLDS OF SIGNIFICANCE

This section discusses the applicable significance thresholds for air quality assessment. The air quality guidance recommended by the SCAQMD is used to assess air quality impacts from the proposed project.

3.1. Criteria Pollutants

SCAQMD has published thresholds of significance for air quality. A project has a significant air quality impact if it does one of the following:

- Generates total emissions that exceed the thresholds shown in Table 3; and/or
- Maximum daily localized emissions are greater than the Localized Significance Thresholds (LST), resulting in predicted ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for CO and NO₂; and/or
- Maximum localized PM₁₀ or PM_{2.5} emissions during construction are greater than the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the site to exceed 50 μg/m³ over five hours (SCAQMD Rule 403 control requirement); and/or
- The project would not be compatible with SCAQMD and Southern California Association of Governments (SCAG) air quality policies. The project is not compatible with SCAQMD and SCAG air quality policies if it:
 - Causes an increase in the frequency or severity of existing air quality violations;
 - Causes or contributes to new air quality violations;
 - Delays timely attainment of air quality standards or the interim emission reductions specified in the SCAQMD's Air Quality Management Plan (AQMP); or
 - Exceeds the assumptions utilized in the SCAQMD's AQMP.

Table 3. . Significant Emission Thresholds

	Mass Daily Thres	cholds ^(a)			
Pollutant	Construction ^(b)	Operation ^(c)			
Nitrogen Oxide (NOx)	100 lbs/day 55 lbs/day				
Reactive Organic Gas (ROG)	75 lbs/day	55 lbs/day			
Particle Pollution (PM ₁₀)	150 lbs/day	150 lbs/day			
Particle Pollution (PM _{2.5})	55 lbs/day	55 lbs/day			
Sulfur Oxides (SOx)	150 lbs/day	150 lbs/day			
Carbon Monoxide (CO)	550 lbs/dav	550 lbs/day			
Lead	3 lbs/day	3 lbs/day			
Toxic Air Con	taminants (TACs), Odor, and G	reenhouse Gas (GHG) Thresholds			
TACs (including carcinogens and non-carcinogens)					
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402				
GHG 10,000 MT/yr Carbon Dioxide (CO ₂) eq for industrial facilities					
Ambient Air Quality for Criteria Pollutants ^(d)					
NOx In attainment; significant if project causes or contributes to an exceedance of any standards.					
1-hour average	0.18 ppm (State)				
Annual average	0.03 ppm (State) and 0.0534 ppm (federal)			
PM ₁₀					
24-hour average	$10.4 \ \mu g/m^3 (cor$	nstruction) and 2.5 µg/m³(operation)			
Annual average		1.0 g/m^3			
PM _{2.5}					
24-hour average	10.4 μg/m³ (cor	nstruction) and 2.5 µg/m³ (operation)			
SO ₂					
1-hour average	0.255 ppm (State)	and 0.075 ppm federal - 99 th percentile)			
24-hour average		0.04 ppm (State)			
Sulfate		25 (2(3))			
	24-hour average 25 μg/m³ (State)				
CO	In attainment; significant if project causes or contributes to an exceedance of any standard:				
1-hour average	20 ppm (State) and 35 ppm (federal)				
8-hour average	9	0.0 ppm (State/federal)			
Lead 30-day average		1.5 µg/m³ (State)			
Rolling 3-month average		$0.15 \mu\text{g/m}^3 (\text{federal})$			
6b ³	ļ	()			

Source: SCAQMD CEQA Handbook

 $ppm=parts\ per\ million;\ \mu g/m^3=microgram\ per\ cubic\ meter;\ lbs/day=pounds\ per\ day;\ MT/yr\ C0_{2eq}=metric\ tons\ per\ year\ of\ CO_2\ equivalents.$

Construction thresholds apply to both the South Coast Air Basin (SCAB) and Coachella Valley (Salton Sea and Mojave Desert Air Basin). b)

For Coachella Valley; the mass daily thresholds for operation are the same as the construction thresholds. SCAQMD Rule 1303 Table A-2 unless otherwise stated.

3.2 Greenhouse Gases and State Standards

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena; however, data indicate that current global conditions differ from past climate changes in rate and magnitude. According to the Intergovernmental Panel on Climate Change (IPCC), the increase in atmospheric GHGs is largely the result of human activities, namely fossil fuel combustion, land use changes and agriculture (IPCC 2007). GHGs are those compounds in the Earth's atmosphere that play a critical role in determining the Earth's surface temperature. Specifically, these gases allow high-frequency solar radiation to enter the Earth's atmosphere, but retain the low frequency energy which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. Increased concentrations of GHGs in the Earth's atmosphere have been linked to global climate change and such conditions as rising surface temperatures, melting icebergs and snowpack, rising sea levels, and the increased frequency and magnitude of severe weather conditions.

GHGs include carbon dioxide (CO₂), methane (CH₄), ozone (O₃), water vapor, nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Carbon dioxide is the most abundant GHG in the atmosphere. GHGs are the result of both natural and anthropogenic activities. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions.

In September 2006, Governor Arnold Schwarzenegger signed the California Global Warming Solutions Act of 2006, also known as AB 32, into law. AB 32 commits the State to achieving the following:

- 2000 GHG emission levels by 2010 (which represents an approximately 11 percent reduction from business as usual)
- 1990 levels by 2020 (approximately 25 percent below business as usual)

To achieve these goals, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce Statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved

The CEQA Guidelines, Section 15064.7, define a threshold of significance as an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. CEQA gives wide latitude to lead agencies in determining what impacts are significant and does not prescribe thresholds of significance, analytical methodologies, or specific mitigation measures

(OPR 2007). CEQA leaves the determination of significance to the reasonable discretion of the lead agency and encourages lead agencies to develop and publish thresholds of significance to use in determining the significance of environmental effects.

The SCAQMD released a draft guidance document regarding interim CEQA GHG significance thresholds in October 2008. SCAQMD proposed a tiered approach, whereby the level of detail and refinement needed to determine significance increases with a project's total GHG emissions. In December 2008, SCAQMD adopted interim CEQA GHG significance thresholds for use only when SCAQMD is the lead agency on projects. These thresholds apply to industrial projects only, and include a 10,000 metric ton CO₂e screening level. For purposes of this analysis, the 10,000 metric ton CO₂e threshold for industrial projects is applied to this project.

While it is difficult to predict the specific impact of one project's incremental contribution to the global effects of GHG emissions due to a variety of factors, including the complex and long term nature of such effects and the global scale of climate change, it is possible to determine whether a project is implementing design strategies consistent with the guidance that is available. Thus, if a project implements design strategies consistent with the goals of AB 32, the project will not be considered to have a significant impact with respect to global climate change, either on a project-specific basis or with respect to its contribution to a cumulative impact on global climate change.

SECTION 4

AIR QUALITY IMPACT ASSESSMENT

4.1 Overview of the Analysis Methodology

California Environmental Quality Act (CEQA)

To determine whether or not air quality impacts from the proposed project are significant, impacts will be evaluated and compared to the significance criteria in Table 3. If impacts equal or exceed any of the criteria in Table 3, they will be considered significant. Significance determinations for construction impacts are based on the maximum or peak daily emissions during the construction period, which provides a "worst-case" analysis of the construction emissions. Similarly, significance determinations for operational emissions are based on the maximum or peak daily allowable emissions during the operational phase.

Regional and localized emissions were calculated using the SCAQMD-approved California Emissions Estimator Model (CalEEMod). The model was developed by the SCAQMD in collaboration with other air districts in California to estimate criteria air pollutant and greenhouse gas emissions from a variety of land use development projects (SCAQMD). It can be used in air quality analysis to estimate impacts for compliance with regulations, such as CEQA, NEPA and local air quality rules and regulations.

In addition to the CalEEMod model, the SCAQMD's localized significance threshold (LST) methodology is used to analyze localized construction emissions (SCAQMD LST Methodology). The LST methodology uses look-up thresholds for projects which disturb five acres or less per day. Since each site will disturb approximately one acre or less per day, the look-up thresholds were used.

NEPA

To determine whether or not air quality impacts from the proposed project are significant for NEPA, the Environmental Protection Agency (EPA) establishes a threshold for screening purpose. If a proposed project results in any criteria air pollutant emissions of 10 tons per year or less, then the project is deemed insignificant.

4.2 Air Quality Impacts from Construction

Following construction activities are planned at the sites:

- 1. Demolition of existing building, piping, and site features
- 2. Construction of a new fire hydrant and storm drain piping on South Croddy Way and catch basin on-site (Well 14 only).
- 3. Well Drilling

- 4. Well Development
- 5. Well Equipping
- 6. Pipeline Construction
- 7. Testing
- 8. Final Site Improvements

4.2.1 Regional Impacts

Impacts on regional air quality from project construction activities are evaluated in this section. Construction emissions are expected from the following equipment and processes:

- On-site Fugitive Dust Associated with Site Construction Activities;
- On-site Construction Equipment (dump trucks, backhoes, graders, etc.);
- On-site and Off-site Vehicle Emissions, including Delivery Trucks and Worker Vehicles.

The CalEEMod model divides the construction processes into phases, including demolition, site perparation, grading, building construction, paving, etc. These model settings can be modified to fit applicable features of a specific project. Each construction phase could generate the following emissions:

(1) Fugitive dust emissions resulting from soil disturbance activity.

Construction activities at the site include grading, trenching, and truck filling/dumping. These activities generate dust emissions. Vehicles and trucks traveling on paved and unpaved roads are also a source of fugitive emissions during the construction period.

During construction, the proposed project would be subject to SCAQMD Rules 403 (Fugitive Dust). The purpose of Rule 403 is to reduce man-made fugitive dust. Rule 403 requires implementing control measures to prevent, reduce, or mitigate fugitive dust emissions and includes a performance standard that prohibits visible emissions from crossing any property line (SCAQMD Rule 403). Dust control measures, such as water application on dry soil and reduced vehicles travelling on unpaved roads, are standard mitigation techniques. Project construction will be required to comply with Rule 403. Implementing the dust suppression techniques specified in Rule 403 can reduce the fugitive dust generation (and thus the PM₁₀ component) by 50 percent or more. Therefore, the estimation of fugitive dust emissions during project construction assumes Rule 403 compliance.

(2) Emissions of air pollutants from fuel combustion in construction equipment

On-site construction equipment will be a source of combustion emissions. Construction equipment is expected to include excavator, tractor, loader, scraper, crane, water truck, paver, and compactor. Table 4 shows the typical construction equipment mix used at each site.

(3) Emissions of air pollutants from fuel combustion in vehicles and trucks

Vehicles used for worker commute and delivery trucks for material delivery to the site, and haul trucks used for construction debris disposal will be a source of combustion emissions. Primary emissions generated will include combustion emissions from engines during idling and while operating. Emissions are based on the estimated number of trips per day and the round trip travel distances. Table 4 provides the worker commute and haul truck information.

Data presented in Table 4 were input into the CalEEMod model. Construction activities result in emissions of CO, ROGs, NOx, SOx, PM₁₀, and PM_{2.5}. and GHGs. Appendix A provides the CalEEMod model output files.

Construction emissions are summarized in Table 5. Table 6 compares the project element emissions with the SCAQMD's regional and localized construction significance threshold levels. As Table 6 shows, construction-related daily (short-term) emissions would not exceed SCAQMD regional significance thresholds for ROGS, NOx, CO, SO₂, and PM. Thus, project construction emissions would result in a less than significant regional impact.

4.2.2 Localized Impacts

In addition to the SCAQMD's regional significance threshold, the SCAQMD has also developed localized significance thresholds (LSTs) that identify daily emissions levels at a project construction site that could cause or contribute to adverse localized air quality impacts to the nearest sensitive receptors.

For projects with a daily construction footprint larger than five acres, SCAQMD recommends that the localized air quality impact analysis be performed using an appropriate air dispersion model. For projects with a daily construction footprint of five acres or less, the SCAQMD has developed the LST methodology to determine localized impacts. This LST Methodology consists of mass emission rate look-up tables. If the calculated emissions for the construction activity are below the emission level found in the LST lookup tables, the construction activity is not considered significant. The screening tables were developed using conservative assumptions, including the worst meteorological conditions. If localized emissions exceed the values in the lookup tables, dispersion modeling, which is more precise, may be performed.

Since the maximum daily construction footprint for each site would be less than five acres, the LST Methodology would be applicable. LSTs apply only to the following criteria pollutants: NOx, CO, PM₁₀, and PM_{2.5}, and apply only to emissions generated on site. LSTs represent the maximum on-site 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 standards and are developed based on the ambient concentrations of that pollutant in that area.

Table 6 summarizes the localized impacts from the construction activities for each site, together with the SCAQMD's daily construction LST significance threshold levels.

As Table 6 shows, construction-related daily (short-term) emissions would not exceed SCAQMD localized significance thresholds for NOx, CO, and PM. Thus, project construction emissions would result in a less than significant localized impact.

Table 4. Construction Equipment Mix and Offsite Haul Truck Data

Well 12

Off-road Equipment Type	Quantity	Usage Hours	Horse Power	Load Factor
Bore/Drill Rigs	1	24	600	0.5
Cement and Mortar Mixers	4	6	10	0.56
Concrete/Industrial Saws	1	8	81	0.73
Cranes	1	18	275	0.29
Excavators	2	8	168	0.38
Forklifts	2	6	45	0.2
Generator Sets	1	10	200	0.74
Other General Industrial Equipment	1	8	238	0.34
Pavers	1	7	100	0.42
Pumps	1	24	500	0.5
Rollers	1	7	95	0.38
Rubber Tired Dozers	1	8	247	0.4
Tractors/Loaders/Backhoes	2	12	108	0.37

Truck Trips	
Truck Trips per Day	10
Roundtrip Length (mi)	5
Daily Vehicle Mile Travelled (VMT)	50
Total Trips	250

Well 14

Off-road Equipment Type	Quantity	Usage Hours	Horse Power	Load Factor
Bore/Drill Rigs	1	24	600	0.5
Cement and Mortar Mixers	4	6	10	0.56
Concrete/Industrial Saws	1	8	81	0.73
Cranes	1	18	275	0.29
Excavators	2	8	168	0.38
Forklifts	2	6	45	0.2
Generator Sets	1	10	200	0.74
Other General Industrial Equipment	1	8	238	0.34
Pavers	1	7	100	0.42
Pumps	1	24	500	0.5
Rollers	1	7	95	0.38
Rubber Tired Dozers	1	8	247	0.4
Tractors/Loaders/Backhoes	2	12	108	0.37

Truck Trips	
Truck Trips per Day	10
Roundtrip Length (mi)	5
Daily Vehicle Mile Travelled (VMT)	50
Total Trips	250

Well Pipeline

Off-road Equipment Type	Quantity	Usage Hours	Horse Power	Load Factor
Concrete/Industrial Saws	1	8	81	0.73
Crushing/Proc. Equipment	1	6	85	0.5
Pavers	1	7	130	0.42
Plate Compactors	1	8	8	0.43
Rollers	1	7	80	0.38
Sweepers/Scrubbers	1	8	250	0.35
Tractors/Loaders/Backhoes	2	6	108	0.37
Welders	1	8	46	0.45

Truck Trips	
Truck Trips per Day	50
Roundtrip Length (mi)	5
Daily Vehicle Mile Travelled (VMT)	250
Total Trips	750

Table 5. Construction Emissions Summary

Well No. 12 Construction Phase

Construction Phases	CO (lbs/day)	NOx (lbs/day)	ROG (lbs/day)	SO ₂ (lbs/day)	PM ₁₀ Total (lbs/day)	PM _{2.5} Total (lbs/day)	CO2e (ton/yr)
Demolition	11.62	18.1	1.85	0.02	2.02	1.072	8.77
Demolition (Hauling)	0.99	2.34	0.12	0.06	1.326	0.178	2.93
Well (drilling)	44.5	66.2	6.42	0.184	2.3	2.19	223.7
Well (developing)	26.7	28.9	2.83	0.066	1.31	1.24	115.5
Well (Hauling)	0.70	0.50	0.083	0.002	0.425	0.076	3.26
Well Equipping	13.4	13.7	1.55	0.020	0.794	0.735	102.2

Well No. 14 Construction Phase

Construction Phases	CO (lbs/day)	NOx (lbs/day)	ROG (lbs/day)	SO ₂ (lbs/day)	PM ₁₀ Total (lbs/day)	PM _{2.5} Total (lbs/day)	CO2e (ton/yr)
Demolition	11.62	18.14	1.85	0.020	2.02	1.07	8.77
Demolition (Hauling)	0.76	2.32	0.096	0.006	1.26	0.16	2.629
Well (drilling)	44.5	66.2	6.42	0.184	2.30	2.19	223.7
Well (developing)	26.69	28.88	2.83	0.066	1.31	1.235	115.5
Well (Hauling)	0.688	0.548	0.083	0.002	0.193	0.052	3.26
Well Equipping	14.46	14.48	1.65	0.022	0.887	0.783	112.2

Table 5. Construction Emissions Summary (Cont.)

Well Nos. 12, 14, Storm Drain and Pipeline Construction Phase

Construction Phases	CO (lbs/day)	NOx (lbs/day)	ROG (lbs/day)	SO ₂ (lbs/day)	PM ₁₀ Total (lbs/day)	PM _{2.5} Total (lbs/day)	CO2e (ton/yr)
Storm Drain	13.32	14.30	1.733	0.025	0.772	0.731	16.29
Well Drilling	0.605	0.055	0.072	0.001	0.177	0.048	1.186
Storm Drain Paving	8.520	8.160	0.892	0.012	0.480	0.452	2.834
Pipeline	5.322	12.98	1.603	0.025	0.669	0.646	385.5
Pipeline Hauling	0.194	0.018	0.023	0.001	0.057	0.015	9.01
Pipeline Paving	8.244	7.289	0.791	0.013	0.411	0.387	4.94

Table 6. Construction Emissions vs. SCAQMD Regional and Localized Emissions Thresholds

Air Pollutants	ROG	NOx	CO	SO ₂	PM_{10}	PM _{2.5}	GHG		
Emissions Unit		lbs/day							
Max. Overlapping Emissions	6.4	66.2	44.5	0.2	2.3	2.19	544		
Regional Construction Emissions Threshold	75	100	550	150	150	55	10,000		
Over (Under)	(68.6)	(33.8)	(505.5)	(149.8)	(147.7)	(52.8)	(9,456)		
Exceed Threshold (Yes/No)	No	No	No	No	No	No	No		
Localized Construction Emissions Thresholds		81	485		4	3			
Over (Under)		(14.8)	(440.5)		(1.7)	(0.81)			
Exceed Threshold (Yes/No)	No	No	No	No	No	No	No		

4.2.3 Federal Air Quality Impacts

Table 7 summarizes the air quality impacts from construction activities together with the NEPA significance thresholds. As shown, the proposed construction-related annual emissions would not exceed NEPA significance thresholds. Thus, project construction emissions would result in a less than significant impact.

Air Pollutants/Year	ROG	NOx	CO	SO ₂	PM ₁₀	PM _{2.5}
Max. Overlapping Emissions, tons/year (2020)	1.24	4.18	3.43	0.010	0.22	0.18
Max. Overlapping Emissions, tons/year (2021)	3.22	3.08	3.26	0.372	0.19	0.16
NEPA Emissions Threshold, tons/yr	10	10	10	10	10	10
Exceed Threshold (Yes/No)	No	No	No	No	No	No

Table 7. Construction Emissions and NEPA Thresholds

4.3 Air Quality Impacts from Operation

During operation, the two wells will include chloramination to disinfect the groundwater prior to distribution. Chloramine is formed when chlorine reacts with ammonia. The well will be equipped with a dedicated chemical storage, dosing and containment area for sodium hypochlorite and aqueous ammonia.

Sodium hypochlorite is injected directly into a static mixer at the discharge of each wellhead. The chemical metering pumps will be flow-paced to maintain an operator adjustable dosing rate. The total chlorine will be monitored downstream of chemical dosing. Downstream of the sodium hypochlorite injection, aqueous ammonia is injected directly into a static mixer. The chemical metering pumps will be flow-paced to maintain an operator adjustable dosing rate. Monochloramine will be monitored downstream of chemical dosing. The chemical storage area for the sodium hypochlorite and ammonia tanks at each well will be covered with a canopy roof.

The normal operation of the well will require one vehicle trip daily for one worker to monitor the operation of the well facilities. Maintenance and tank filling will require one bi-weekly vehicle trip. Periodic maintenance activities will include replacement of the sodium hypochlorite or aqueous ammonia tanks and testing and maintaining equipment, including an emergency generator. During filling of the tanks, District personnel will be present to guard against spillage. Strict procedures will be in place and adhered to at all times. Wash down/containment facilities will also be in place in the event of a spill. Frequent inspections will be made by the District to ensure protection of the public health, safety, and general welfare.

For the air quality impact analyses of the operation phase, the CalEEMod model is run to quantify emissions from the worker daily trip and bi-weekly trip and monthly testing of the emergency generator. Appendix A provides the CalEEMod output files.

Table 8 shows the CalEEMod results for operational emission. Table 9 shows the comparison of the operational emission vs the SCAQMD Regional and Localized Thresholds. As shown in Table 9, the project is less than significant impact.

4.4 Greenhouse Gas Emissions

GHG emissions from this proposed project are from two major sources: Fuel combustion in construction equipment and truck hauling. The CalEEMod model was run to determine the GHG emissions. Table 10 shows the total GHG emissions together with the SCAQMD's significance thresholds. As shown in Table 10, GHG emissions are below SCAQMD significance thresholds of 10,000 Metric tons per year.

Table 8. Operation Emissions Summary

Location	Operation	CO (lb/day)	NOx (lb/day)	ROG (lb/day)	SO ₂ (lb/day)	PM ₁₀ Total (lb/day)	PM _{2.5} Total (lb/day)	CO2e (ton/day)
Well 12	Maintenance	0.072	0.007	0.004	1.1 x 10 ⁻⁴	0.012	0.003	2.04
Well 12	Emergency Generator Testing	0.287	0.314	0.112	5.48 x10 ⁻⁴	0.017	0.017	9.55
	Maintenance	0.079	0.007	0.005	1.1x10 ⁻⁴	0.013	0.004	2.22
Well 14	Emergency Generator Testing	0.041	0.037	0.011	5.48x10 ⁻⁵	0.002	0.002	0.96

Table 9. Operation Emissions vs. SCAQMD Regional and Localized Emissions Thresholds

	ROG	NOx	CO	SO_2	PM_{10}	PM _{2.5}	GHG
Emissions Unit			lbs.	/day			MT/yr
Total Emissions	0.13	0.36	0.5	0.001	0.04	0.03	14.0
Regional Operation Emissions Threshold	55	55	550	150	150	55	10,000
Over (Under)	(54.9)	(54.6)	(549.5)	(150)	(150)	(150)	(9,986)
Exceed Threshold (Yes/No)	No	No	No	No	No	No	No
Localized Emissions Thresholds		81	485		4	3	
Over (Under)		(80.6)	(484.5)		(3.96)	(2.97)	
Exceed Threshold (Yes/No)		No	No		No	No	

	10		
I ahle	10	GHG En	ancione
Labic	1 V •		113310113

Phases	CO2e (Metric Tons/yr)	SCAQMD Significance Threshold	Exceed Threshold (Yes/No)		
Construction	544	10,000	No		
Operation	14	10,000	No		

4.5 Odors

Potential sources that may emit odors during construction activities include the use of coating and solvents, and diesel-powered equipment. Due to relatively small footprint of the construction sites, limited use of odorous solvent and coating, and few pieces of diesel-powered equipment operating simultaneously, odor impacts would be less than significant. During operation, all odorous chemicals will be properly stored and handled, odor impact would be less than significant.

4.6 Consistency with Regional Air Quality Plan

The SCAQMD is required, pursuant to the Clean Air Act, to reduce emissions of certain pollutants for which the Basin is in non-attainment (i.e., ozone and PM₁₀). The project would be subject to the SCAQMD's Air Quality Management Plan (AQMP). The AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections.

The determination of AQMP consistency is primarily concerned with the long-term influence of the project on air quality in the Basin. Neither the development of the project nor its operation would result in short-term and long-term regional impacts. The project would comply with SCAQMD Rule 403 and would implement all feasible mitigation measures for control of PM₁₀ and PM_{2.5}; the project would be consistent with the goals and policies of the AQMP for control of fugitive dust. The proposed project is not expected in conflict with the AQMP.

4.7 **Cumulative Impacts**

With respect to the project's air quality emissions and cumulative Basin-wide conditions, the SCAQMD has developed strategies to reduce regional-impact pollutant emissions, as outlined in the AQMP pursuant to federal Clean Air Act mandates. As such, the proposed project would comply with all applicable SCAQMD requirements and implement all feasible mitigation measures.

No cumulatively significant effects are anticipated for the proposed project. Long term operation and maintenance of the project improvements to be implemented would result in minimal air

quality impacts and would not contribute to cumulatively significant air quality impacts in the project vicinity. Therefore, no cumulatively significant effects from long-term operation are anticipated from implementation of the proposed project.

Within the context of CEQA, it is generally accepted that a single project does not typically generate enough GHG emissions to significantly influence global climate change. For the proposed project, no cumulatively significant GHG impacts will be experienced.

SECTION 5

MITIGATION MEASURES

Public Resources Code, Section 21081.6 (PRC 21081.6) requires that mitigation measures identified in environmental review documents prepared in accordance with California Environmental Quality Act (CEQA) are implemented after a project is approved. A Mitigation Monitoring and Reporting Program (MMRP) is intended to address the potential environmental impacts, and where appropriate, recommends measures to mitigate these impacts. As such, an MMP is required to guarantee that the adopted mitigation measures are successfully implemented. This plan lists each mitigation measure, describes the methods for implementation and verification, and identifies the responsible party or parties.

This air quality impact analysis found that the proposed project has less than significant impact. The MMP for the proposed project shall be in place to ensure compliance with SCAQMD Rules 402, 403 and all applicable permit conditions.

SECTION 6

REFERENCES

CARB 2018. California Air Resources Board, www.arb.ca.gov/design/adm/adm.htm

OPR 2007. Governor's Office of Planning and Research (OPR). 2007. Climate Change and CEQA, Presentation to the Climate Action Team, Cynthia Bryant, Director, OPR., September 19.

IPCC 2007. Intergovernmental Panel on Climate Change (IPCC) 2007. Summary for Policymakers, contained in: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.

IPCC 2006. 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 5: Waste, http://www.ipcc-nggip.iges.or.jp/public/2006gl

CEQA Handbook 2018. SCAQMD CEQA Handbook, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook,

CalEEMod 2016. South Coast Air Quality Management District, www.CalEEMod.com July 2016.

LST 2016. South Coast Air Quality Management LST Methodology.http://www.aqmd.gov/ceqa/handbook/lst/Method_final.pdf

SCAQMD Rule 403. South Coast Air Quality Management District Rule 403.

PBC 21018.6 Public Resource Code Section 21018.6, https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC§ionNum=21081.6.

APPENDIXA CALEEMOD OUTPUT FILES

CalEEMod Version: CalEEMod.2016.3.2 Page 1 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

Mesa Water District - Well No. 12 South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	18.15	1000sqft	0.42	18,150.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2020
Utility Company	Southern California Edi	ison			
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Size - 0.42 AC

Construction Phase - Demolition 1/6/2020 to 1/17/2020

Well Drilling (24hr/day) 2/3/2020 to 2/28/2020

Well Drilling (08hr/day) 3/2/2020 to 4/24/2020

Well Equipping 12/7/2020 to 5/21/2021

Off-road Equipment - 1 Concrete/Industrial Saw - 81 HP

1 Rubber Tired Dozer - 357 HP

2 Tractors/Loaders/Backhoes - 108 HP

Off-road Equipment - 1 Cranes - 226 HP

2 Forklifts - 89 HP

2 Tractors/Loaders/Backhoes - 180 HP

Off-road Equipment - 1 Drill Rigs - 600 HP

Date: 1/8/2019 4:12 PM

1 Diesel Generator - 200 HP

1 Tractors/Loaders/Backhoes - 108 HP

1 Crane - 275 HP

1 Pump - 500 HP Off-road Equipment - 1 Drill Rigs - 600 HP

1 Diesel Generator - 200 HP

1 Tractors/Loaders/Backhoes - 108

1 Crane - 275 HP

1 Pump - 84 HP

Off-road Equipment - 4 Cement and Mortar Mixer (10hp)

1 Crane (275hp)

2 Forklifts (89hp)

1 Paver (100hp)

1 Roller (95hp)

2 Tractor/Loaders/Backhoes (108hp)

Trips and VMT - Demo: 8 workers per day x 2 for round trip

Well Drilling (Phase 1): 8 workers per day x 2 for round trip

Well Drilling (Phase 2): 8 workers per day x 2 for round trip

Well Equipping: 8 workers per day x 2 for round trip

On-road Fugitive Dust - 99% Paved

Demolition - 800 CY x 1.35 = 1080 tons

Grading - 450 cy exported

Vehicle Trips - 1 Maintence trip/month

Road Dust -

Consumer Products - No operation

Area Coating -

Construction Off-road Equipment Mitigation -

Fleet Mix - 1 LDT1

Stationary Sources - Emergency Generators and Fire Pumps - Emergency generator - 4hr/month, 50hr/yr

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	100.00	120.00

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

Page 3 of 31

tblConstructionPhase	NumDays	2.00	26.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	1.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.8620e-003	0.00
tblFleetMix	MCY	4.7770e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	9.5600e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.0370e-003	0.00
tblFleetMix	SBUS	7.0500e-004	0.00
tblFleetMix	UBUS	1.9440e-003	0.00
tblGrading	MaterialExported	0.00	450.00
tblOffRoadEquipment	HorsePower	231.00	275.00
tblOffRoadEquipment	HorsePower	89.00	45.00
tblOffRoadEquipment	HorsePower	247.00	180.00
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	221.00	600.00
tblOffRoadEquipment	HorsePower	221.00	600.00
tblOffRoadEquipment	HorsePower	9.00	10.00
tblOffRoadEquipment	HorsePower	231.00	275.00
tblOffRoadEquipment	HorsePower	231.00	275.00

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

Page 4 of 31

11000 15 1	· · · · · · · · · · · · · · · · · · ·		
tblOffRoadEquipment	HorsePower	158.00	168.00
tblOffRoadEquipment	HorsePower	84.00	200.00
tblOffRoadEquipment	HorsePower	88.00	238.00
tblOffRoadEquipment	HorsePower	130.00	100.00
tblOffRoadEquipment	HorsePower	84.00	500.00
tblOffRoadEquipment	HorsePower	80.00	95.00
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	LoadFactor	0.74	0.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	12.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	500.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	4.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	5.00
tblTripsAndVMT	HaulingTripLength	20.00	5.00
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripNumber	107.00	160.00
tblTripsAndVMT	HaulingTripNumber	56.00	90.00

Page 5 of 31

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

tblTripsAndVMT	VendorTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	16.00
tblTripsAndVMT	WorkerTripNumber	13.00	16.00
tblTripsAndVMT	WorkerTripNumber	20.00	16.00
tblTripsAndVMT	WorkerTripNumber	8.00	16.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.10

2.0 Emissions Summary

CalEEMod Version: CalEEMod.2016.3.2 Page 6 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

2.1 Overall Construction Unmitigated Construction

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year		tons/yr								MT/yr						
2020	0.1690	1.6898	1.3315	4.1100e- 003	0.0289	0.0695	0.0984	4.9500e- 003	0.0657	0.0706	0.0000	373.1252	373.1252	0.0784	0.0000	375.0857
2021	0.0805	0.6870	0.7030	1.0900e- 003	8.8600e- 003	0.0393	0.0482	2.3500e- 003	0.0364	0.0387	0.0000	93.1314	93.1314	0.0261	0.0000	93.7848
Maximum	0.1690	1.6898	1.3315	4.1100e- 003	0.0289	0.0695	0.0984	4.9500e- 003	0.0657	0.0706	0.0000	373.1252	373.1252	0.0784	0.0000	375.0857

Mitigated Construction

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr								MT/yr							
2020	0.1690	1.6898	1.3315	4.1100e- 003	0.0225	0.0695	0.0920	3.9900e- 003	0.0657	0.0697	0.0000	373.1248	373.1248	0.0784	0.0000	375.0853
	0.0805	0.6870	0.7030	1.0900e- 003	8.8600e- 003	0.0393	0.0482	2.3500e- 003	0.0364	0.0387	0.0000	93.1313	93.1313	0.0261	0.0000	93.7847
Maximum	0.1690	1.6898	1.3315	4.1100e- 003	0.0225	0.0695	0.0920	3.9900e- 003	0.0657	0.0697	0.0000	373.1248	373.1248	0.0784	0.0000	375.0853
	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	16.88	0.00	4.35	13.15	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00

Page 7 of 31

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-6-2020	4-5-2020	1.4463	1.4463
2	4-6-2020	7-5-2020	0.2160	0.2160
4	10-6-2020	1-5-2021	0.1753	0.1753
5	1-6-2021	4-5-2021	0.4887	0.4887
6	4-6-2021	7-5-2021	0.2496	0.2496
		Highest	1.4463	1.4463

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Area	0.0740	0.0000	2.3000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.5000e- 004	4.5000e- 004	0.0000	0.0000	4.8000e- 004
Energy	2.0500e- 003	0.0186	0.0156	1.1000e- 004		1.4100e- 003	1.4100e- 003		1.4100e- 003	1.4100e- 003	0.0000	69.1089	69.1089	2.4100e- 003	7.9000e- 004	69.4040
Mobile	7.9000e- 004	1.1900e- 003	0.0132	2.0000e- 005	2.1400e- 003	2.0000e- 005	2.1600e- 003	5.7000e- 004	2.0000e- 005	5.9000e- 004	0.0000	2.0361	2.0361	1.0000e- 004	0.0000	2.0387
Stationary	0.0205	0.0573	0.0523	1.0000e- 004		3.0200e- 003	3.0200e- 003		3.0200e- 003	3.0200e- 003	0.0000	9.5199	9.5199	1.3300e- 003	0.0000	9.5533
Waste						0.0000	0.0000		0.0000	0.0000	4.5693	0.0000	4.5693	0.2700	0.0000	11.3203
Water						0.0000	0.0000		0.0000	0.0000	1.3316	17.4132	18.7447	0.1375	3.3800e- 003	23.1885
Total	0.0974	0.0771	0.0813	2.3000e- 004	2.1400e- 003	4.4500e- 003	6.5900e- 003	5.7000e- 004	4.4500e- 003	5.0200e- 003	5.9009	98.0786	103.9795	0.4114	4.1700e- 003	115.5053

CalEEMod Version: CalEEMod.2016.3.2 Page 8 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tor	ns/yr							MT	Γ/yr		
Area	0.0740	0.0000	2.3000e- 004	0.0000	:	0.0000	0.0000		0.0000	0.0000	0.0000	4.5000e- 004	4.5000e- 004	0.0000	0.0000	4.8000e- 004
Liloigy	2.0500e- 003	0.0186	0.0156	1.1000e- 004	, : : :	1.4100e- 003	1.4100e- 003		1.4100e- 003	1.4100e- 003	0.0000	69.1089	69.1089	2.4100e- 003	7.9000e- 004	69.4040
WOODIIC	7.9000e- 004	1.1900e- 003	0.0132	2.0000e- 005	2.1400e- 003	2.0000e- 005	2.1600e- 003	5.7000e- 004	2.0000e- 005	5.9000e- 004	0.0000	2.0361	2.0361	1.0000e- 004	0.0000	2.0387
Clationary	0.0205	0.0573	0.0523	1.0000e- 004	,	3.0200e- 003	3.0200e- 003	1 1 1 1	3.0200e- 003	3.0200e- 003	0.0000	9.5199	9.5199	1.3300e- 003	0.0000	9.5533
Wasie	6,	,		y : : :		0.0000	0.0000	1 1 1 1	0.0000	0.0000	4.5693	0.0000	4.5693	0.2700	0.0000	11.3203
Water	6;	,	 	y : : : :	, : : :	0.0000	0.0000		0.0000	0.0000	1.3316	17.4132	18.7447	0.1375	3.3800e- 003	23.1885
Total	0.0974	0.0771	0.0813	2.3000e- 004	2.1400e- 003	4.4500e- 003	6.5900e- 003	5.7000e- 004	4.4500e- 003	5.0200e- 003	5.9009	98.0786	103.9795	0.4114	4.1700e- 003	115.5053

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e	
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

3.0 Construction Detail

Construction Phase

Page 9 of 31

Date: 1/8/2019 4:12 PM

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/6/2020	1/17/2020	5	10	
2	Well Drilling (Phase 1)	Grading	2/3/2020	2/28/2020	7	26	
3	Well Drilling (Phase 2)	Trenching	3/2/2020	4/24/2020	5	40	
4	Well Equipping	Building Construction	12/7/2020	5/21/2021	5	120	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

Page 10 of 31

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	108	0.37
Well Drilling (Phase 1)	Bore/Drill Rigs		24.00	600	0.50
Well Drilling (Phase 1)	Concrete/Industrial Saws	0	8.00	81	0.73
Well Drilling (Phase 1)	Cranes	 1	18.00	275	0.29
Well Drilling (Phase 1)	Generator Sets	 1	10.00	200	0.74
Well Drilling (Phase 1)	Pumps	 	24.00	500	0.50
Well Drilling (Phase 1)	Rubber Tired Dozers	0	1.00	180	0.40
Well Drilling (Phase 1)	Tractors/Loaders/Backhoes	 1	12.00	108	0.37
Well Drilling (Phase 2)	Bore/Drill Rigs	 	8.00	600	0.50
Well Drilling (Phase 2)	Cranes	 1	6.00	275	0.29
Well Drilling (Phase 2)	Excavators	2	8.00	168	0.38
Well Drilling (Phase 2)	Generator Sets	1	8.00	84	0.74
Well Drilling (Phase 2)	Other General Industrial Equipment	1	8.00	238	0.34
Well Drilling (Phase 2)	Pumps	 1	8.00	84	0.74
Well Drilling (Phase 2)	Tractors/Loaders/Backhoes	 1	8.00	108	0.37
Well Equipping	Cement and Mortar Mixers	4	6.00	10	0.56
Well Equipping	Cranes	 1	4.00	275	0.29
Well Equipping	Forklifts	2	6.00	45	0.20
Well Equipping	Pavers	1	7.00	100	0.42
Well Equipping	Rollers	1	7.00	95	0.38
Well Equipping	Tractors/Loaders/Backhoes	2	8.00	108	0.37

Trips and VMT

Page 11 of 31

Date: 1/8/2019 4:12 PM

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	16.00	0.00	160.00	14.70	6.90	5.00	LD_Mix	HDT_Mix	HHDT
Well Drilling (Phase 1)	5	16.00	0.00	90.00	14.70	6.90	5.00	LD_Mix	HDT_Mix	HHDT
Well Drilling (Phase 2)	8	16.00	0.00	0.00	14.70	6.90	0.00	LD_Mix	HDT_Mix	HHDT
Well Equipping	11	16.00	0.00	0.00	14.70	6.90	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust	11 11 11		 		0.0116	0.0000	0.0116	1.7500e- 003	0.0000	1.7500e- 003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2400e- 003	0.0907	0.0581	1.0000e- 004		4.8800e- 003	4.8800e- 003	 	4.5700e- 003	4.5700e- 003	0.0000	8.7195	8.7195	2.1200e- 003	0.0000	8.7725
Total	9.2400e- 003	0.0907	0.0581	1.0000e- 004	0.0116	4.8800e- 003	0.0164	1.7500e- 003	4.5700e- 003	6.3200e- 003	0.0000	8.7195	8.7195	2.1200e- 003	0.0000	8.7725

CalEEMod Version: CalEEMod.2016.3.2 Page 12 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

3.2 Demolition - 2020

<u>Unmitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	2.6000e- 004	0.0114	1.9100e- 003	2.0000e- 005	5.7300e- 003	2.0000e- 005	5.7500e- 003	6.3000e- 004	2.0000e- 005	6.5000e- 004	0.0000	2.1296	2.1296	2.1000e- 004	0.0000	2.1349
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e- 004	2.7000e- 004	3.0300e- 003	1.0000e- 005	8.8000e- 004	1.0000e- 005	8.8000e- 004	2.3000e- 004	1.0000e- 005	2.4000e- 004	0.0000	0.7901	0.7901	2.0000e- 005	0.0000	0.7907
Total	6.2000e- 004	0.0117	4.9400e- 003	3.0000e- 005	6.6100e- 003	3.0000e- 005	6.6300e- 003	8.6000e- 004	3.0000e- 005	8.9000e- 004	0.0000	2.9197	2.9197	2.3000e- 004	0.0000	2.9256

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					5.2000e- 003	0.0000	5.2000e- 003	7.9000e- 004	0.0000	7.9000e- 004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2400e- 003	0.0907	0.0581	1.0000e- 004		4.8800e- 003	4.8800e- 003		4.5700e- 003	4.5700e- 003	0.0000	8.7195	8.7195	2.1200e- 003	0.0000	8.7725
Total	9.2400e- 003	0.0907	0.0581	1.0000e- 004	5.2000e- 003	4.8800e- 003	0.0101	7.9000e- 004	4.5700e- 003	5.3600e- 003	0.0000	8.7195	8.7195	2.1200e- 003	0.0000	8.7725

CalEEMod Version: CalEEMod.2016.3.2 Page 13 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	2.6000e- 004	0.0114	1.9100e- 003	2.0000e- 005	5.7300e- 003	2.0000e- 005	5.7500e- 003	6.3000e- 004	2.0000e- 005	6.5000e- 004	0.0000	2.1296	2.1296	2.1000e- 004	0.0000	2.1349
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e- 004	2.7000e- 004	3.0300e- 003	1.0000e- 005	8.8000e- 004	1.0000e- 005	8.8000e- 004	2.3000e- 004	1.0000e- 005	2.4000e- 004	0.0000	0.7901	0.7901	2.0000e- 005	0.0000	0.7907
Total	6.2000e- 004	0.0117	4.9400e- 003	3.0000e- 005	6.6100e- 003	3.0000e- 005	6.6300e- 003	8.6000e- 004	3.0000e- 005	8.9000e- 004	0.0000	2.9197	2.9197	2.3000e- 004	0.0000	2.9256

3.3 Well Drilling (Phase 1) - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					3.0000e- 005	0.0000	3.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0835	0.8607	0.5784	2.3900e- 003		0.0299	0.0299	 	0.0285	0.0285	0.0000	222.7549	222.7549	0.0398	0.0000	223.7489
Total	0.0835	0.8607	0.5784	2.3900e- 003	3.0000e- 005	0.0299	0.0300	0.0000	0.0285	0.0285	0.0000	222.7549	222.7549	0.0398	0.0000	223.7489

CalEEMod Version: CalEEMod.2016.3.2 Page 14 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

3.3 Well Drilling (Phase 1) - 2020 <u>Unmitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	1.5000e- 004	6.4100e- 003	1.0700e- 003	1.0000e- 005	3.2200e- 003	1.0000e- 005	3.2300e- 003	3.6000e- 004	1.0000e- 005	3.7000e- 004	0.0000	1.1979	1.1979	1.2000e- 004	0.0000	1.2009
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3000e- 004	7.1000e- 004	7.8800e- 003	2.0000e- 005	2.2800e- 003	2.0000e- 005	2.3000e- 003	6.1000e- 004	2.0000e- 005	6.2000e- 004	0.0000	2.0544	2.0544	6.0000e- 005	0.0000	2.0558
Total	1.0800e- 003	7.1200e- 003	8.9500e- 003	3.0000e- 005	5.5000e- 003	3.0000e- 005	5.5300e- 003	9.7000e- 004	3.0000e- 005	9.9000e- 004	0.0000	3.2522	3.2522	1.8000e- 004	0.0000	3.2567

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0835	0.8607	0.5784	2.3900e- 003		0.0299	0.0299		0.0285	0.0285	0.0000	222.7546	222.7546	0.0398	0.0000	223.7486
Total	0.0835	0.8607	0.5784	2.3900e- 003	1.0000e- 005	0.0299	0.0299	0.0000	0.0285	0.0285	0.0000	222.7546	222.7546	0.0398	0.0000	223.7486

CalEEMod Version: CalEEMod.2016.3.2 Page 15 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

3.3 Well Drilling (Phase 1) - 2020 Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	1.5000e- 004	6.4100e- 003	1.0700e- 003	1.0000e- 005	3.2200e- 003	1.0000e- 005	3.2300e- 003	3.6000e- 004	1.0000e- 005	3.7000e- 004	0.0000	1.1979	1.1979	1.2000e- 004	0.0000	1.2009
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3000e- 004	7.1000e- 004	7.8800e- 003	2.0000e- 005	2.2800e- 003	2.0000e- 005	2.3000e- 003	6.1000e- 004	2.0000e- 005	6.2000e- 004	0.0000	2.0544	2.0544	6.0000e- 005	0.0000	2.0558
Total	1.0800e- 003	7.1200e- 003	8.9500e- 003	3.0000e- 005	5.5000e- 003	3.0000e- 005	5.5300e- 003	9.7000e- 004	3.0000e- 005	9.9000e- 004	0.0000	3.2522	3.2522	1.8000e- 004	0.0000	3.2567

3.4 Well Drilling (Phase 2) - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.0566	0.5775	0.5337	1.3100e- 003		0.0262	0.0262		0.0247	0.0247	0.0000	114.7515	114.7515	0.0311	0.0000	115.5293
Total	0.0566	0.5775	0.5337	1.3100e- 003		0.0262	0.0262		0.0247	0.0247	0.0000	114.7515	114.7515	0.0311	0.0000	115.5293

CalEEMod Version: CalEEMod.2016.3.2 Page 16 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

3.4 Well Drilling (Phase 2) - 2020 <u>Unmitigated Construction Off-Site</u>

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e- 003	1.1000e- 003	0.0121	3.0000e- 005	3.5100e- 003	3.0000e- 005	3.5400e- 003	9.3000e- 004	2.0000e- 005	9.6000e- 004	0.0000	3.1605	3.1605	9.0000e- 005	0.0000	3.1628
Total	1.4300e- 003	1.1000e- 003	0.0121	3.0000e- 005	3.5100e- 003	3.0000e- 005	3.5400e- 003	9.3000e- 004	2.0000e- 005	9.6000e- 004	0.0000	3.1605	3.1605	9.0000e- 005	0.0000	3.1628

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.0566	0.5775	0.5337	1.3100e- 003		0.0262	0.0262		0.0247	0.0247	0.0000	114.7514	114.7514	0.0311	0.0000	115.5292
Total	0.0566	0.5775	0.5337	1.3100e- 003	·	0.0262	0.0262		0.0247	0.0247	0.0000	114.7514	114.7514	0.0311	0.0000	115.5292

CalEEMod Version: CalEEMod.2016.3.2 Page 17 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

3.4 Well Drilling (Phase 2) - 2020 Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e- 003	1.1000e- 003	0.0121	3.0000e- 005	3.5100e- 003	3.0000e- 005	3.5400e- 003	9.3000e- 004	2.0000e- 005	9.6000e- 004	0.0000	3.1605	3.1605	9.0000e- 005	0.0000	3.1628
Total	1.4300e- 003	1.1000e- 003	0.0121	3.0000e- 005	3.5100e- 003	3.0000e- 005	3.5400e- 003	9.3000e- 004	2.0000e- 005	9.6000e- 004	0.0000	3.1605	3.1605	9.0000e- 005	0.0000	3.1628

3.5 Well Equipping - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
	0.0159	0.1404	0.1296	1.9000e- 004		8.4300e- 003	8.4300e- 003		7.7900e- 003	7.7900e- 003	0.0000	16.0657	16.0657	4.8800e- 003	0.0000	16.1876
Total	0.0159	0.1404	0.1296	1.9000e- 004		8.4300e- 003	8.4300e- 003		7.7900e- 003	7.7900e- 003	0.0000	16.0657	16.0657	4.8800e- 003	0.0000	16.1876

CalEEMod Version: CalEEMod.2016.3.2 Page 18 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

3.5 Well Equipping - 2020

Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.8000e- 004	5.2000e- 004	5.7600e- 003	2.0000e- 005	1.6700e- 003	1.0000e- 005	1.6800e- 003	4.4000e- 004	1.0000e- 005	4.5000e- 004	0.0000	1.5013	1.5013	4.0000e- 005	0.0000	1.5023
Total	6.8000e- 004	5.2000e- 004	5.7600e- 003	2.0000e- 005	1.6700e- 003	1.0000e- 005	1.6800e- 003	4.4000e- 004	1.0000e- 005	4.5000e- 004	0.0000	1.5013	1.5013	4.0000e- 005	0.0000	1.5023

Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
	0.0159	0.1404	0.1296	1.9000e- 004		8.4300e- 003	8.4300e- 003	i I	7.7900e- 003	7.7900e- 003	0.0000	16.0657	16.0657	4.8800e- 003	0.0000	16.1876
Total	0.0159	0.1404	0.1296	1.9000e- 004		8.4300e- 003	8.4300e- 003		7.7900e- 003	7.7900e- 003	0.0000	16.0657	16.0657	4.8800e- 003	0.0000	16.1876

CalEEMod Version: CalEEMod.2016.3.2 Page 19 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

3.5 Well Equipping - 2020 Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.8000e- 004	5.2000e- 004	5.7600e- 003	2.0000e- 005	1.6700e- 003	1.0000e- 005	1.6800e- 003	4.4000e- 004	1.0000e- 005	4.5000e- 004	0.0000	1.5013	1.5013	4.0000e- 005	0.0000	1.5023
Total	6.8000e- 004	5.2000e- 004	5.7600e- 003	2.0000e- 005	1.6700e- 003	1.0000e- 005	1.6800e- 003	4.4000e- 004	1.0000e- 005	4.5000e- 004	0.0000	1.5013	1.5013	4.0000e- 005	0.0000	1.5023

3.5 Well Equipping - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.0772	0.6845	0.6749	1.0000e- 003		0.0392	0.0392		0.0363	0.0363	0.0000	85.4097	85.4097	0.0259	0.0000	86.0579
Total	0.0772	0.6845	0.6749	1.0000e- 003		0.0392	0.0392		0.0363	0.0363	0.0000	85.4097	85.4097	0.0259	0.0000	86.0579

CalEEMod Version: CalEEMod.2016.3.2 Page 20 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

3.5 Well Equipping - 2021

<u>Unmitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3700e- 003	2.4900e- 003	0.0282	9.0000e- 005	8.8600e- 003	7.0000e- 005	8.9300e- 003	2.3500e- 003	6.0000e- 005	2.4200e- 003	0.0000	7.7217	7.7217	2.1000e- 004	0.0000	7.7269
Total	3.3700e- 003	2.4900e- 003	0.0282	9.0000e- 005	8.8600e- 003	7.0000e- 005	8.9300e- 003	2.3500e- 003	6.0000e- 005	2.4200e- 003	0.0000	7.7217	7.7217	2.1000e- 004	0.0000	7.7269

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.0772	0.6845	0.6749	1.0000e- 003		0.0392	0.0392		0.0363	0.0363	0.0000	85.4096	85.4096	0.0259	0.0000	86.0578
Total	0.0772	0.6845	0.6749	1.0000e- 003		0.0392	0.0392		0.0363	0.0363	0.0000	85.4096	85.4096	0.0259	0.0000	86.0578

CalEEMod Version: CalEEMod.2016.3.2 Page 21 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

3.5 Well Equipping - 2021

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	3.3700e- 003	2.4900e- 003	0.0282	9.0000e- 005	8.8600e- 003	7.0000e- 005	8.9300e- 003	2.3500e- 003	6.0000e- 005	2.4200e- 003	0.0000	7.7217	7.7217	2.1000e- 004	0.0000	7.7269
Total	3.3700e- 003	2.4900e- 003	0.0282	9.0000e- 005	8.8600e- 003	7.0000e- 005	8.9300e- 003	2.3500e- 003	6.0000e- 005	2.4200e- 003	0.0000	7.7217	7.7217	2.1000e- 004	0.0000	7.7269

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Mitigated	7.9000e- 004	1.1900e- 003	0.0132	2.0000e- 005	2.1400e- 003	2.0000e- 005	2.1600e- 003	5.7000e- 004	2.0000e- 005	5.9000e- 004	0.0000	2.0361	2.0361	1.0000e- 004	0.0000	2.0387
Unmitigated	7.9000e- 004	1.1900e- 003	0.0132	2.0000e- 005	2.1400e- 003	2.0000e- 005	2.1600e- 003	5.7000e- 004	2.0000e- 005	5.9000e- 004	0.0000	2.0361	2.0361	1.0000e- 004	0.0000	2.0387

4.2 Trip Summary Information

	Avei	rage Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	1.82	0.00	0.00	5,741	5,741
Total	1.82	0.00	0.00	5,741	5,741

4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	МН
General Light Industry	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

CalEEMod Version: CalEEMod.2016.3.2 Page 23 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	48.8662	48.8662	2.0200e- 003	4.2000e- 004	49.0410
Electricity Unmitigated	ri 11		,			0.0000	0.0000		0.0000	0.0000	0.0000	48.8662	48.8662	2.0200e- 003	4.2000e- 004	49.0410
Mitigated	2.0500e- 003	0.0186	0.0156	1.1000e- 004		1.4100e- 003	1.4100e- 003	,	1.4100e- 003	1.4100e- 003	0.0000	20.2428	20.2428	3.9000e- 004	3.7000e- 004	20.3631
NaturalGas Unmitigated	2.0500e- 003	0.0186	0.0156	1.1000e- 004		1.4100e- 003	1.4100e- 003	,	1.4100e- 003	1.4100e- 003	0.0000	20.2428	20.2428	3.9000e- 004	3.7000e- 004	20.3631

5.2 Energy by Land Use - NaturalGas <u>Unmitigated</u>

	NaturalGa s Use	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							MT	/yr		
General Light Industry	379335	2.0500e- 003	0.0186	0.0156	1.1000e- 004		1.4100e- 003	1.4100e- 003		1.4100e- 003	1.4100e- 003	0.0000	20.2428	20.2428	3.9000e- 004	3.7000e- 004	20.3631
Total		2.0500e- 003	0.0186	0.0156	1.1000e- 004		1.4100e- 003	1.4100e- 003		1.4100e- 003	1.4100e- 003	0.0000	20.2428	20.2428	3.9000e- 004	3.7000e- 004	20.3631

CalEEMod Version: CalEEMod.2016.3.2 Page 24 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

5.2 Energy by Land Use - NaturalGas Mitigated

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							MT	/yr		
General Light Industry	379335	2.0500e- 003	0.0186	0.0156	1.1000e- 004		1.4100e- 003	1.4100e- 003		1.4100e- 003	1.4100e- 003	0.0000	20.2428	20.2428	3.9000e- 004	3.7000e- 004	20.3631
Total		2.0500e- 003	0.0186	0.0156	1.1000e- 004		1.4100e- 003	1.4100e- 003		1.4100e- 003	1.4100e- 003	0.0000	20.2428	20.2428	3.9000e- 004	3.7000e- 004	20.3631

5.3 Energy by Land Use - Electricity <u>Unmitigated</u>

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		MT	/yr	
General Light Industry	153368	48.8662	2.0200e- 003	4.2000e- 004	49.0410
Total		48.8662	2.0200e- 003	4.2000e- 004	49.0410

5.3 Energy by Land Use - Electricity Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		МТ	-/yr	
General Light Industry	153368	48.8662	2.0200e- 003	4.2000e- 004	49.0410
Total		48.8662	2.0200e- 003	4.2000e- 004	49.0410

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Mitigated	0.0740	0.0000	2.3000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.5000e- 004	4.5000e- 004	0.0000	0.0000	4.8000e- 004
Unmitigated	0.0740	0.0000	2.3000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.5000e- 004	4.5000e- 004	0.0000	0.0000	4.8000e- 004

CalEEMod Version: CalEEMod.2016.3.2 Page 26 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

6.2 Area by SubCategory Unmitigated

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							MT	/yr		
Architectural Coating	8.4100e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0656		1 1 1			0.0000	0.0000	1 	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e- 005	0.0000	2.3000e- 004	0.0000		0.0000	0.0000	1 	0.0000	0.0000	0.0000	4.5000e- 004	4.5000e- 004	0.0000	0.0000	4.8000e- 004
Total	0.0740	0.0000	2.3000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.5000e- 004	4.5000e- 004	0.0000	0.0000	4.8000e- 004

Mitigated

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							МТ	⁻ /yr		
Architectural Coating	8.4100e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0656					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e- 005	0.0000	2.3000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.5000e- 004	4.5000e- 004	0.0000	0.0000	4.8000e- 004
Total	0.0740	0.0000	2.3000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.5000e- 004	4.5000e- 004	0.0000	0.0000	4.8000e- 004

7.0 Water Detail

CalEEMod Version: CalEEMod.2016.3.2 Page 27 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category		МТ	√yr	
Willigatou	18.7447	0.1375	3.3800e- 003	23.1885
Ommigatou	18.7447	0.1375	3.3800e- 003	23.1885

7.2 Water by Land Use <u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		МТ	-/yr	
General Light Industry	4.19719 / 0	18.7447	0.1375	3.3800e- 003	23.1885
Total		18.7447	0.1375	3.3800e- 003	23.1885

CalEEMod Version: CalEEMod.2016.3.2 Page 28 of 31 Date: 1/8/2019 4:12 PM

Mesa Water District - Well No. 12 - South Coast AQMD Air District, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e		
Land Use	Mgal	MT/yr					
General Light Industry	4.19719 / 0	18.7447	0.1375	3.3800e- 003	23.1885		
Total		18.7447	0.1375	3.3800e- 003	23.1885		

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e		
	MT/yr					
willigated	4.5693	0.2700	0.0000	11.3203		
Jgatea	4.5693	0.2700	0.0000	11.3203		

8.2 Waste by Land Use <u>Unmitigated</u>

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		МТ	-/yr	
General Light Industry	22.51	4.5693	0.2700	0.0000	11.3203
Total		4.5693	0.2700	0.0000	11.3203

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		MT	-/yr	
General Light Industry	22.51	4.5693	0.2700	0.0000	11.3203
Total		4.5693	0.2700	0.0000	11.3203

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	4	50	500	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
, , , , , , ,		, ,		ŭ	· · · · · · · · · · · · · · · · · · ·

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr								MT/yr							
Emergency Generator - Diesel (300 - 600 HP)	1 1 1	0.0573	0.0523	1.0000e- 004		3.0200e- 003	3.0200e- 003		3.0200e- 003	3.0200e- 003	0.0000	9.5199	9.5199	1.3300e- 003	0.0000	9.5533
Total	0.0205	0.0573	0.0523	1.0000e- 004		3.0200e- 003	3.0200e- 003		3.0200e- 003	3.0200e- 003	0.0000	9.5199	9.5199	1.3300e- 003	0.0000	9.5533

11.0 Vegetation

CalEEMod Version: CalEEMod.2016.3.2 Page 1 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

Mesa Water District - Well No. 14 South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	19.77	1000sqft	0.45	19,770.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2020
Utility Company	Southern California Edisc	on			
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Size - 0.45 AC

Construction Phase - Demolition 1/20/2020 to 1/31/2020

Well Drilling (24hr/day) 5/4/2020 to 5/29/2020

Well Drilling (08hr/day) 6/1/2020 to 7/24/2020

Well Equipping 4/7/2021 to 10/1/2021

Off-road Equipment - 1 Concrete/Industrial Saw - 81 HP

1 Rubber Tired Dozer - 357 HP

2 Tractors/Loaders/Backhoes - 108 HP

Off-road Equipment - 1 Cranes - 226 HP

2 Forklifts - 89 HP

2 Tractors/Loaders/Backhoes - 180 HP

Off-road Equipment - 1 Drill Rigs - 600 HP

Date: 1/8/2019 4:17 PM

1 Diesel Generator - 200 HP

1 Tractors/Loaders/Backhoes - 108 HP

1 Crane - 275 HP

1 Pump - 500 HP Off-road Equipment - 1 Drill Rigs - 600 HP

1 Diesel Generator - 200 HP

1 Tractors/Loaders/Backhoes - 108

1 Crane - 275 HP

1 Pump - 84 HP

Off-road Equipment - 4 Cement and Mortar Mixer (10hp)

1 Crane (275hp)

2 Forklifts (89hp)

1 Paver (100hp)

1 Roller (95hp)

2 Tractor/Loaders/Backhoes (108hp)

Trips and VMT - Demo: 8 workers per day x 2 for round trip

Well Drilling (Phase 1): 8 workers per day x 2 for round trip

Well Drilling (Phase 2): 8 workers per day x 2 for round trip

Well Equipping: 8 workers per day x 2 for round trip

On-road Fugitive Dust - 99% Paved

Demolition - 800 CY x 1.35 = 1080 tons

Grading - 450 cy exported

Vehicle Trips - 1 Maintence trip/month

Road Dust -

Consumer Products - No operation

Area Coating -

Construction Off-road Equipment Mitigation -

Fleet Mix - 1 LDT1

Stationary Sources - Emergency Generators and Fire Pumps - Emergency generator - 4hr/month, 50hr/yr

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	100.00	120.00

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

Date: 1/8/2019 4:17 PM

Page 3 of 29

tblConstructionPhase	NumDays	2.00	26.00		
tblConstructionPhase	NumDaysWeek	5.00	7.00		
tblFleetMix	HHD	0.03	0.00		
tblFleetMix	LDA	0.55	0.00		
tblFleetMix	LDT1	0.04	1.00		
tblFleetMix	LDT2	0.20	0.00		
tblFleetMix	LHD1	0.02	0.00		
tblFleetMix	LHD2	5.8620e-003	0.00		
tblFleetMix	MCY	4.7770e-003	0.00		
tblFleetMix	MDV	0.12	0.00		
tblFleetMix	MH	9.5600e-004	0.00		
tblFleetMix	MHD	0.02	0.00		
tblFleetMix	OBUS	2.0370e-003	0.00		
tblFleetMix	SBUS	7.0500e-004	0.00		
tblFleetMix	UBUS	1.9440e-003	0.00		
tblGrading	MaterialExported	0.00	450.00		
tblOffRoadEquipment	HorsePower	97.00	108.00		
tblOffRoadEquipment	HorsePower	221.00	600.00		
tblOffRoadEquipment	HorsePower	231.00	275.00		
tblOffRoadEquipment	HorsePower	84.00	200.00		
tblOffRoadEquipment	HorsePower	84.00	500.00		
tblOffRoadEquipment	HorsePower	247.00	180.00		
tblOffRoadEquipment	HorsePower	97.00	108.00		
tblOffRoadEquipment	HorsePower	221.00	600.00		
tblOffRoadEquipment	HorsePower	231.00	275.00		
tblOffRoadEquipment	HorsePower	158.00	168.00		
tblOffRoadEquipment	HorsePower	88.00	238.00		

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

Date: 1/8/2019 4:17 PM

Page 4 of 29

tblOffRoadEquipment	HorsePower	97.00	108.00		
tblOffRoadEquipment	HorsePower	9.00	10.00		
tblOffRoadEquipment	HorsePower	231.00	275.00		
tblOffRoadEquipment	HorsePower	89.00	45.00		
tblOffRoadEquipment	HorsePower	130.00	100.00		
tblOffRoadEquipment	HorsePower	80.00	95.00		
tblOffRoadEquipment	HorsePower	97.00	108.00		
tblOffRoadEquipment	LoadFactor	0.74	0.50		
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00		
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00		
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00		
tblOffRoadEquipment	UsageHours	1.00	8.00		
tblOffRoadEquipment	UsageHours	6.00	12.00		
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	500.00		
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	4.00		
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00		
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00		
tblTripsAndVMT	HaulingTripLength	20.00	5.00		
tblTripsAndVMT	HaulingTripLength	20.00	5.00		
tblTripsAndVMT	HaulingTripLength	20.00	0.00		
tblTripsAndVMT	HaulingTripLength	20.00	0.00		
tblTripsAndVMT	HaulingTripNumber	107.00	160.00		
tblTripsAndVMT	HaulingTripNumber	56.00	90.00		
tblTripsAndVMT	VendorTripNumber	3.00	0.00		
tblTripsAndVMT	WorkerTripNumber	10.00	16.00		
tblTripsAndVMT	WorkerTripNumber	13.00	16.00		
tblTripsAndVMT	WorkerTripNumber	20.00	16.00		

Page 5 of 29

Date: 1/8/2019 4:17 PM

tblTripsAndVMT	WorkerTripNumber	8.00	16.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.10

2.0 Emissions Summary

CalEEMod Version: CalEEMod.2016.3.2 Page 6 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

2.1 Overall Construction Unmitigated Construction

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					ton	s/yr							MT	/yr		
2020	0.1524	1.5488	1.1962	3.9100e- 003	0.0188	0.0611	0.0799	3.6700e- 003	0.0579	0.0616	0.0000	355.5583	355.5583	0.0735	0.0000	357.3958
2021	0.1021	0.8707	0.8910	1.3800e- 003	0.0112	0.0498	0.0610	2.9800e- 003	0.0461	0.0491	0.0000	118.0280	118.0280	0.0331	0.0000	118.8560
Maximum	0.1524	1.5488	1.1962	3.9100e- 003	0.0188	0.0611	0.0799	3.6700e- 003	0.0579	0.0616	0.0000	355.5583	355.5583	0.0735	0.0000	357.3958

Mitigated Construction

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr												М	T/yr		
2020	0.1524	1.5488	1.1962	3.9100e- 003	0.0124	0.0611	0.0735	2.7100e- 003	0.0579	0.0606	0.0000	355.5579	355.5579	0.0735	0.0000	357.3954
2021	0.1021	0.8707	0.8910	1.3800e- 003	0.0112	0.0498	0.0610	2.9800e- 003	0.0461	0.0491	0.0000	118.0278	118.0278	0.0331	0.0000	118.8559
Maximum	0.1524	1.5488	1.1962	3.9100e- 003	0.0124	0.0611	0.0735	2.9800e- 003	0.0579	0.0606	0.0000	355.5579	355.5579	0.0735	0.0000	357.3954
	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	21.22	0.00	4.52	14.44	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00

Page 7 of 29

Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-6-2020	4-5-2020	0.0960	0.0960
2	4-6-2020	7-5-2020	1.3501	1.3501
3	7-6-2020	10-5-2020	0.2160	0.2160
6	4-6-2021	7-5-2021	0.4884	0.4884
7	7-6-2021	9-30-2021	0.4721	0.4721
		Highest	1.3501	1.3501

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr											МТ	/yr			
Area	0.0806	0.0000	2.5000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.9000e- 004	4.9000e- 004	0.0000	0.0000	5.2000e- 004
Energy	2.2300e- 003	0.0203	0.0170	1.2000e- 004		1.5400e- 003	1.5400e- 003		1.5400e- 003	1.5400e- 003	0.0000	75.2773	75.2773	2.6200e- 003	8.6000e- 004	75.5988
Mobile	8.6000e- 004	1.3000e- 003	0.0144	2.0000e- 005	2.3300e- 003	3.0000e- 005	2.3600e- 003	6.2000e- 004	2.0000e- 005	6.4000e- 004	0.0000	2.2178	2.2178	1.1000e- 004	0.0000	2.2206
Stationary	0.0205	0.0573	0.0523	1.0000e- 004		3.0200e- 003	3.0200e- 003		3.0200e- 003	3.0200e- 003	0.0000	9.5199	9.5199	1.3300e- 003	0.0000	9.5533
Waste			1			0.0000	0.0000		0.0000	0.0000	4.9753	0.0000	4.9753	0.2940	0.0000	12.3261
Water			1 1 1			0.0000	0.0000		0.0000	0.0000	1.4504	18.9674	20.4178	0.1498	3.6800e- 003	25.2582
Total	0.1042	0.0789	0.0839	2.4000e- 004	2.3300e- 003	4.5900e- 003	6.9200e- 003	6.2000e- 004	4.5800e- 003	5.2000e- 003	6.4257	105.9830	112.4087	0.4479	4.5400e- 003	124.9576

CalEEMod Version: CalEEMod.2016.3.2 Page 8 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	ns/yr							МТ	T/yr		
Area	0.0806	0.0000	2.5000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.9000e- 004	4.9000e- 004	0.0000	0.0000	5.2000e- 004
Energy	2.2300e- 003	0.0203	0.0170	1.2000e- 004	1	1.5400e- 003	1.5400e- 003	,	1.5400e- 003	1.5400e- 003	0.0000	75.2773	75.2773	2.6200e- 003	8.6000e- 004	75.5988
Mobile	8.6000e- 004	1.3000e- 003	0.0144	2.0000e- 005	2.3300e- 003	3.0000e- 005	2.3600e- 003	6.2000e- 004	2.0000e- 005	6.4000e- 004	0.0000	2.2178	2.2178	1.1000e- 004	0.0000	2.2206
Stationary	0.0205	0.0573	0.0523	1.0000e- 004)	3.0200e- 003	3.0200e- 003		3.0200e- 003	3.0200e- 003	0.0000	9.5199	9.5199	1.3300e- 003	0.0000	9.5533
Waste			i	 	1	0.0000	0.0000		0.0000	0.0000	4.9753	0.0000	4.9753	0.2940	0.0000	12.3261
Water			i	i	i	0.0000	0.0000	,	0.0000	0.0000	1.4504	18.9674	20.4178	0.1498	3.6800e- 003	25.2582
Total	0.1042	0.0789	0.0839	2.4000e- 004	2.3300e- 003	4.5900e- 003	6.9200e- 003	6.2000e- 004	4.5800e- 003	5.2000e- 003	6.4257	105.9830	112.4087	0.4479	4.5400e- 003	124.9576

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

3.0 Construction Detail

0.00

0.00

0.00

0.00

0.00

0.00

Construction Phase

Percent

Reduction

Page 9 of 29

Date: 1/8/2019 4:17 PM

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/20/2020	1/31/2020	5	10	
2	Well Drilling (Phase 1)	Grading	5/4/2020	5/29/2020	7	26	
3	Well Drilling (Phase 2)	Trenching	6/1/2020	7/24/2020	5	40	
4	Well Equipping	Building Construction	4/7/2021	10/1/2021	5	120	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Page 10 of 29

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

Date: 1/8/2019 4:17 PM

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	108	0.37
Well Drilling (Phase 1)	Bore/Drill Rigs	1	24.00	600	0.50
Well Drilling (Phase 1)	Concrete/Industrial Saws	0	8.00	81	0.73
Well Drilling (Phase 1)	Cranes	1	18.00	275	0.29
Well Drilling (Phase 1)	Generator Sets	1	10.00	200	0.74
Well Drilling (Phase 1)	Pumps	1	24.00	500	0.50
Well Drilling (Phase 1)	Rubber Tired Dozers	0	1.00	180	0.40
Well Drilling (Phase 1)	Tractors/Loaders/Backhoes	1	12.00	108	0.37
Well Drilling (Phase 2)	Bore/Drill Rigs	1	8.00	600	0.50
Well Drilling (Phase 2)	Cranes	1	6.00	275	0.29
Well Drilling (Phase 2)	Excavators	2	8.00	168	0.38
Well Drilling (Phase 2)	Generator Sets	1	8.00	84	0.74
Well Drilling (Phase 2)	Other General Industrial Equipment	1	8.00	238	0.34
Well Drilling (Phase 2)	Pumps	1	8.00	84	0.74
Well Drilling (Phase 2)	Tractors/Loaders/Backhoes	1	8.00	108	0.37
Well Equipping	Cement and Mortar Mixers	4	6.00	10	0.56
Well Equipping	Cranes	1	4.00	275	0.29
Well Equipping	Forklifts	2	6.00	45	0.20
Well Equipping	Pavers	1	7.00	100	0.42
Well Equipping	Rollers	1	7.00	95	0.38
Well Equipping	Tractors/Loaders/Backhoes	2	8.00	108	0.37

Trips and VMT

Page 11 of 29

Date: 1/8/2019 4:17 PM

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	16.00	0.00	160.00	14.70	6.90	5.00	LD_Mix	HDT_Mix	HHDT
Well Drilling (Phase 1)	5	16.00	0.00	90.00	14.70	6.90	5.00	LD_Mix	HDT_Mix	HHDT
Well Drilling (Phase 2)	8	16.00	0.00	0.00	14.70	6.90	0.00	LD_Mix	HDT_Mix	HHDT
Well Equipping	11	16.00	0.00	0.00	14.70	6.90	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					0.0116	0.0000	0.0116	1.7500e- 003	0.0000	1.7500e- 003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2400e- 003	0.0907	0.0581	1.0000e- 004		4.8800e- 003	4.8800e- 003	 	4.5700e- 003	4.5700e- 003	0.0000	8.7195	8.7195	2.1200e- 003	0.0000	8.7725
Total	9.2400e- 003	0.0907	0.0581	1.0000e- 004	0.0116	4.8800e- 003	0.0164	1.7500e- 003	4.5700e- 003	6.3200e- 003	0.0000	8.7195	8.7195	2.1200e- 003	0.0000	8.7725

CalEEMod Version: CalEEMod.2016.3.2 Page 12 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

3.2 Demolition - 2020

<u>Unmitigated Construction Off-Site</u>

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	2.6000e- 004	0.0114	1.9100e- 003	2.0000e- 005	3.5000e- 004	2.0000e- 005	3.7000e- 004	9.0000e- 005	2.0000e- 005	1.1000e- 004	0.0000	2.1296	2.1296	2.1000e- 004	0.0000	2.1349
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e- 004	2.7000e- 004	3.0300e- 003	1.0000e- 005	8.8000e- 004	1.0000e- 005	8.8000e- 004	2.3000e- 004	1.0000e- 005	2.4000e- 004	0.0000	0.7901	0.7901	2.0000e- 005	0.0000	0.7907
Total	6.2000e- 004	0.0117	4.9400e- 003	3.0000e- 005	1.2300e- 003	3.0000e- 005	1.2500e- 003	3.2000e- 004	3.0000e- 005	3.5000e- 004	0.0000	2.9197	2.9197	2.3000e- 004	0.0000	2.9256

Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	-/yr		
Fugitive Dust	ii ii		i i		5.2000e- 003	0.0000	5.2000e- 003	7.9000e- 004	0.0000	7.9000e- 004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Oli Rodd	9.2400e- 003	0.0907	0.0581	1.0000e- 004		4.8800e- 003	4.8800e- 003		4.5700e- 003	4.5700e- 003	0.0000	8.7195	8.7195	2.1200e- 003	0.0000	8.7725
Total	9.2400e- 003	0.0907	0.0581	1.0000e- 004	5.2000e- 003	4.8800e- 003	0.0101	7.9000e- 004	4.5700e- 003	5.3600e- 003	0.0000	8.7195	8.7195	2.1200e- 003	0.0000	8.7725

CalEEMod Version: CalEEMod.2016.3.2 Page 13 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

3.2 Demolition - 2020 Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	2.6000e- 004	0.0114	1.9100e- 003	2.0000e- 005	3.5000e- 004	2.0000e- 005	3.7000e- 004	9.0000e- 005	2.0000e- 005	1.1000e- 004	0.0000	2.1296	2.1296	2.1000e- 004	0.0000	2.1349
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e- 004	2.7000e- 004	3.0300e- 003	1.0000e- 005	8.8000e- 004	1.0000e- 005	8.8000e- 004	2.3000e- 004	1.0000e- 005	2.4000e- 004	0.0000	0.7901	0.7901	2.0000e- 005	0.0000	0.7907
Total	6.2000e- 004	0.0117	4.9400e- 003	3.0000e- 005	1.2300e- 003	3.0000e- 005	1.2500e- 003	3.2000e- 004	3.0000e- 005	3.5000e- 004	0.0000	2.9197	2.9197	2.3000e- 004	0.0000	2.9256

3.3 Well Drilling (Phase 1) - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					3.0000e- 005	0.0000	3.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0835	0.8607	0.5784	2.3900e- 003		0.0299	0.0299		0.0285	0.0285	0.0000	222.7549	222.7549	0.0398	0.0000	223.7489
Total	0.0835	0.8607	0.5784	2.3900e- 003	3.0000e- 005	0.0299	0.0300	0.0000	0.0285	0.0285	0.0000	222.7549	222.7549	0.0398	0.0000	223.7489

CalEEMod Version: CalEEMod.2016.3.2 Page 14 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

3.3 Well Drilling (Phase 1) - 2020 <u>Unmitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	1.5000e- 004	6.4100e- 003	1.0700e- 003	1.0000e- 005	1.9000e- 004	1.0000e- 005	2.1000e- 004	5.0000e- 005	1.0000e- 005	6.0000e- 005	0.0000	1.1979	1.1979	1.2000e- 004	0.0000	1.2009
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3000e- 004	7.1000e- 004	7.8800e- 003	2.0000e- 005	2.2800e- 003	2.0000e- 005	2.3000e- 003	6.1000e- 004	2.0000e- 005	6.2000e- 004	0.0000	2.0544	2.0544	6.0000e- 005	0.0000	2.0558
Total	1.0800e- 003	7.1200e- 003	8.9500e- 003	3.0000e- 005	2.4700e- 003	3.0000e- 005	2.5100e- 003	6.6000e- 004	3.0000e- 005	6.8000e- 004	0.0000	3.2522	3.2522	1.8000e- 004	0.0000	3.2567

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0835	0.8607	0.5784	2.3900e- 003		0.0299	0.0299		0.0285	0.0285	0.0000	222.7546	222.7546	0.0398	0.0000	223.7486
Total	0.0835	0.8607	0.5784	2.3900e- 003	1.0000e- 005	0.0299	0.0299	0.0000	0.0285	0.0285	0.0000	222.7546	222.7546	0.0398	0.0000	223.7486

CalEEMod Version: CalEEMod.2016.3.2 Page 15 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

3.3 Well Drilling (Phase 1) - 2020 Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	1.5000e- 004	6.4100e- 003	1.0700e- 003	1.0000e- 005	1.9000e- 004	1.0000e- 005	2.1000e- 004	5.0000e- 005	1.0000e- 005	6.0000e- 005	0.0000	1.1979	1.1979	1.2000e- 004	0.0000	1.2009
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3000e- 004	7.1000e- 004	7.8800e- 003	2.0000e- 005	2.2800e- 003	2.0000e- 005	2.3000e- 003	6.1000e- 004	2.0000e- 005	6.2000e- 004	0.0000	2.0544	2.0544	6.0000e- 005	0.0000	2.0558
Total	1.0800e- 003	7.1200e- 003	8.9500e- 003	3.0000e- 005	2.4700e- 003	3.0000e- 005	2.5100e- 003	6.6000e- 004	3.0000e- 005	6.8000e- 004	0.0000	3.2522	3.2522	1.8000e- 004	0.0000	3.2567

3.4 Well Drilling (Phase 2) - 2020

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.0566	0.5775	0.5337	1.3100e- 003		0.0262	0.0262		0.0247	0.0247	0.0000	114.7515	114.7515	0.0311	0.0000	115.5293
Total	0.0566	0.5775	0.5337	1.3100e- 003		0.0262	0.0262		0.0247	0.0247	0.0000	114.7515	114.7515	0.0311	0.0000	115.5293

CalEEMod Version: CalEEMod.2016.3.2 Page 16 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

3.4 Well Drilling (Phase 2) - 2020 <u>Unmitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e- 003	1.1000e- 003	0.0121	3.0000e- 005	3.5100e- 003	3.0000e- 005	3.5400e- 003	9.3000e- 004	2.0000e- 005	9.6000e- 004	0.0000	3.1605	3.1605	9.0000e- 005	0.0000	3.1628
Total	1.4300e- 003	1.1000e- 003	0.0121	3.0000e- 005	3.5100e- 003	3.0000e- 005	3.5400e- 003	9.3000e- 004	2.0000e- 005	9.6000e- 004	0.0000	3.1605	3.1605	9.0000e- 005	0.0000	3.1628

Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
	0.0566	0.5775	0.5337	1.3100e- 003		0.0262	0.0262		0.0247	0.0247	0.0000	114.7514	114.7514	0.0311	0.0000	115.5292
Total	0.0566	0.5775	0.5337	1.3100e- 003		0.0262	0.0262		0.0247	0.0247	0.0000	114.7514	114.7514	0.0311	0.0000	115.5292

CalEEMod Version: CalEEMod.2016.3.2 Page 17 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

3.4 Well Drilling (Phase 2) - 2020 Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4300e- 003	1.1000e- 003	0.0121	3.0000e- 005	3.5100e- 003	3.0000e- 005	3.5400e- 003	9.3000e- 004	2.0000e- 005	9.6000e- 004	0.0000	3.1605	3.1605	9.0000e- 005	0.0000	3.1628
Total	1.4300e- 003	1.1000e- 003	0.0121	3.0000e- 005	3.5100e- 003	3.0000e- 005	3.5400e- 003	9.3000e- 004	2.0000e- 005	9.6000e- 004	0.0000	3.1605	3.1605	9.0000e- 005	0.0000	3.1628

3.5 Well Equipping - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.0978	0.8675	0.8553	1.2700e- 003		0.0497	0.0497		0.0460	0.0460	0.0000	108.2420	108.2420	0.0329	0.0000	109.0635
Total	0.0978	0.8675	0.8553	1.2700e- 003		0.0497	0.0497		0.0460	0.0460	0.0000	108.2420	108.2420	0.0329	0.0000	109.0635

CalEEMod Version: CalEEMod.2016.3.2 Page 18 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

3.5 Well Equipping - 2021
Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1	4.2700e- 003	3.1500e- 003	0.0357	1.1000e- 004	0.0112	8.0000e- 005	0.0113	2.9800e- 003	8.0000e- 005	3.0600e- 003	0.0000	9.7860	9.7860	2.6000e- 004	0.0000	9.7925
Total	4.2700e- 003	3.1500e- 003	0.0357	1.1000e- 004	0.0112	8.0000e- 005	0.0113	2.9800e- 003	8.0000e- 005	3.0600e- 003	0.0000	9.7860	9.7860	2.6000e- 004	0.0000	9.7925

Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
- Cirricad	0.0978	0.8675	0.8553	1.2700e- 003		0.0497	0.0497	 	0.0460	0.0460	0.0000	108.2419	108.2419	0.0329	0.0000	109.0634
Total	0.0978	0.8675	0.8553	1.2700e- 003		0.0497	0.0497		0.0460	0.0460	0.0000	108.2419	108.2419	0.0329	0.0000	109.0634

CalEEMod Version: CalEEMod.2016.3.2 Page 19 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

3.5 Well Equipping - 2021 Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2700e- 003	3.1500e- 003	0.0357	1.1000e- 004	0.0112	8.0000e- 005	0.0113	2.9800e- 003	8.0000e- 005	3.0600e- 003	0.0000	9.7860	9.7860	2.6000e- 004	0.0000	9.7925
Total	4.2700e- 003	3.1500e- 003	0.0357	1.1000e- 004	0.0112	8.0000e- 005	0.0113	2.9800e- 003	8.0000e- 005	3.0600e- 003	0.0000	9.7860	9.7860	2.6000e- 004	0.0000	9.7925

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	-/yr		
. 5	8.6000e- 004	1.3000e- 003	0.0144	2.0000e- 005	2.3300e- 003	3.0000e- 005	2.3600e- 003	6.2000e- 004	2.0000e- 005	6.4000e- 004	0.0000	2.2178	2.2178	1.1000e- 004	0.0000	2.2206
1 3	8.6000e- 004	1.3000e- 003	0.0144	2.0000e- 005	2.3300e- 003	3.0000e- 005	2.3600e- 003	6.2000e- 004	2.0000e- 005	6.4000e- 004	0.0000	2.2178	2.2178	1.1000e- 004	0.0000	2.2206

4.2 Trip Summary Information

	Avei	rage Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	1.98	0.00	0.00	6,253	6,253
Total	1.98	0.00	0.00	6,253	6,253

4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	se %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	МН
General Light Industry	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

CalEEMod Version: CalEEMod.2016.3.2 Page 21 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

5.1 Mitigation Measures Energy

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	53.2278	53.2278	2.2000e- 003	4.5000e- 004	53.4182
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	53.2278	53.2278	2.2000e- 003	4.5000e- 004	53.4182
NaturalGas Mitigated	2.2300e- 003	0.0203	0.0170	1.2000e- 004		1.5400e- 003	1.5400e- 003		1.5400e- 003	1.5400e- 003	0.0000	22.0496	22.0496	4.2000e- 004	4.0000e- 004	22.1806
NaturalGas Unmitigated	2.2300e- 003	0.0203	0.0170	1.2000e- 004		1.5400e- 003	1.5400e- 003		1.5400e- 003	1.5400e- 003	0.0000	22.0496	22.0496	4.2000e- 004	4.0000e- 004	22.1806

5.2 Energy by Land Use - NaturalGas <u>Unmitigated</u>

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							MT	/yr		
General Light Industry	413193	2.2300e- 003	0.0203	0.0170	1.2000e- 004		1.5400e- 003	1.5400e- 003		1.5400e- 003	1.5400e- 003	0.0000	22.0496	22.0496	4.2000e- 004	4.0000e- 004	22.1806
Total		2.2300e- 003	0.0203	0.0170	1.2000e- 004		1.5400e- 003	1.5400e- 003		1.5400e- 003	1.5400e- 003	0.0000	22.0496	22.0496	4.2000e- 004	4.0000e- 004	22.1806

CalEEMod Version: CalEEMod.2016.3.2 Page 22 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

5.2 Energy by Land Use - NaturalGas Mitigated

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							MT	/yr		
General Light Industry	413193	2.2300e- 003	0.0203	0.0170	1.2000e- 004		1.5400e- 003	1.5400e- 003		1.5400e- 003	1.5400e- 003	0.0000	22.0496	22.0496	4.2000e- 004	4.0000e- 004	22.1806
Total		2.2300e- 003	0.0203	0.0170	1.2000e- 004		1.5400e- 003	1.5400e- 003		1.5400e- 003	1.5400e- 003	0.0000	22.0496	22.0496	4.2000e- 004	4.0000e- 004	22.1806

5.3 Energy by Land Use - Electricity <u>Unmitigated</u>

	Electricity Use	Total CO2	CH4	N2O	CO2e			
Land Use	kWh/yr	MT/yr						
General Light Industry	167057	53.2278	2.2000e- 003	4.5000e- 004	53.4182			
Total		53.2278	2.2000e- 003	4.5000e- 004	53.4182			

5.3 Energy by Land Use - Electricity Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e		
Land Use	kWh/yr	MT/yr					
General Light Industry	167057	53.2278	2.2000e- 003	4.5000e- 004	53.4182		
Total		53.2278	2.2000e- 003	4.5000e- 004	53.4182		

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category		tons/yr									MT	/yr				
Mitigated	0.0806	0.0000	2.5000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.9000e- 004	4.9000e- 004	0.0000	0.0000	5.2000e- 004
Unmitigated	0.0806	0.0000	2.5000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.9000e- 004	4.9000e- 004	0.0000	0.0000	5.2000e- 004

CalEEMod Version: CalEEMod.2016.3.2 Page 24 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

6.2 Area by SubCategory Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory		tons/yr								MT/yr						
0 41 1	9.1600e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0714		i	 		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e- 005	0.0000	2.5000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.9000e- 004	4.9000e- 004	0.0000	0.0000	5.2000e- 004
Total	0.0806	0.0000	2.5000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.9000e- 004	4.9000e- 004	0.0000	0.0000	5.2000e- 004

Mitigated

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory		tons/yr								MT/yr						
Architectural Coating	9.1600e- 003					0.0000	0.0000	! !	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0714					0.0000	0.0000	1 1 1 1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e- 005	0.0000	2.5000e- 004	0.0000		0.0000	0.0000	1 1 1 1	0.0000	0.0000	0.0000	4.9000e- 004	4.9000e- 004	0.0000	0.0000	5.2000e- 004
Total	0.0806	0.0000	2.5000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.9000e- 004	4.9000e- 004	0.0000	0.0000	5.2000e- 004

7.0 Water Detail

CalEEMod Version: CalEEMod.2016.3.2 Page 25 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e				
Category	MT/yr							
Willigatou	20.4178	0.1498	3.6800e- 003	25.2582				
Ommigatou	20.4178	0.1498	3.6800e- 003	25.2582				

7.2 Water by Land Use <u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e		
Land Use	Mgal	MT/yr					
General Light Industry	4.57181 / 0	20.4178	0.1498	3.6800e- 003	25.2582		
Total		20.4178	0.1498	3.6800e- 003	25.2582		

CalEEMod Version: CalEEMod.2016.3.2 Page 26 of 29 Date: 1/8/2019 4:17 PM

Mesa Water District - Well No. 14 - South Coast AQMD Air District, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e		
Land Use	Mgal	MT/yr					
General Light Industry	4.57181 / 0	20.4178	0.1498	3.6800e- 003	25.2582		
Total		20.4178	0.1498	3.6800e- 003	25.2582		

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e				
	MT/yr							
Mitigated	1.0700	0.2940	0.0000	12.3261				
Crimingatod	4.9753	0.2940	0.0000	12.3261				

8.2 Waste by Land Use <u>Unmitigated</u>

	Waste Disposed	Total CO2	CH4	N2O	CO2e		
Land Use	tons	MT/yr					
General Light Industry	24.51	4.9753	0.2940	0.0000	12.3261		
Total		4.9753	0.2940	0.0000	12.3261		

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e		
Land Use	tons	MT/yr					
General Light Industry	24.51	4.9753	0.2940	0.0000	12.3261		
Total		4.9753	0.2940	0.0000	12.3261		

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	4	50	500	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type					ton	s/yr							МТ	/уг		
Emergency Generator - Diesel (300 - 600 HP)		0.0573	0.0523	1.0000e- 004	_	3.0200e- 003	3.0200e- 003		3.0200e- 003	3.0200e- 003	0.0000	9.5199	9.5199	1.3300e- 003	0.0000	9.5533
Total	0.0205	0.0573	0.0523	1.0000e- 004		3.0200e- 003	3.0200e- 003		3.0200e- 003	3.0200e- 003	0.0000	9.5199	9.5199	1.3300e- 003	0.0000	9.5533

11.0 Vegetation

CalEEMod Version: CalEEMod.2016.3.2 Page 1 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

Pipeline Phase For Well 12 and 14 South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	37.90	1000sqft	0.87	37,900.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2020
Utility Company	Southern California Ediso	n			
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

Date: 1/4/2019 11:06 AM

Project Characteristics -

Land Use - 0.87 ac = 37900 sqft

Construction Phase - Stormdrain Pipeline Phase 4/13/20 to 5/1/20

Stormdrain Paving Phase 4/27/20 to 5/1/20

Pipeline Pase 7/27/20 to 12/4/21

Pipeline Pavement 11/23/21 to 12/4/21

Off-road Equipment - 1 Crushing/ Proc/ Equipment (Pavement grinder) 85 HP

1 paver 130 HP

1 Roller 80 HP

Off-road Equipment - 2 Tractors/Loaders/Backhoes - 108 HP

1 Welder 46 HP

1 Sweeper 250 HP

1 Plate Compactors 8 HP

1 Crushing/Proc Equipment (Jackhammer(85 HP) 1 Concrete/Industrial Saw - 81 HP

Trips and VMT - 8 workers x 2 trips/ day = 16 Trips / day

750 hauling trips

On-road Fugitive Dust - 99% paved

Grading - 5300 CY Imported, 5900 CTY Exported

Vehicle Trips -

Off-road Equipment - 2 Tractors/Loaders/Backhoes - 108 HP

1 Welder 46 HP

1 Sweeper 250 HP

1 Plate Compactors 8 HP

1 Crushing/Proc Equipment (Jackhammer(85 HP) 1 Concrete/Industrial Saw - 81 HP

Off-road Equipment - 1 Crushing/ Proc/ Equipment (Pavement grinder) 85 HP

1 paver 130 HP

1 Roller 80 HP

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value		
tblConstructionPhase	NumDays	2.00	15.00		
tblConstructionPhase	NumDays	2.00	355.00		

Date: 1/4/2019 11:06 AM

Page 3 of 30

tblConstructionPhase	NumDays	5.00	9.00
tblGrading	MaterialExported	0.00	2,650.00
tblGrading	MaterialExported	0.00	2,650.00
tblGrading	MaterialImported	0.00	2,650.00
tblGrading	MaterialImported	0.00	2,650.00
tblGrading	MeanVehicleSpeed	7.10	45.00
tblGrading	MeanVehicleSpeed	7.10	45.00
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	64.00	250.00
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	64.00	250.00
tblOffRoadEquipment	LoadFactor	0.78	0.50
tblOffRoadEquipment	LoadFactor	0.78	0.50
tblOffRoadEquipment	LoadFactor	0.78	0.56
tblOffRoadEquipment	LoadFactor	0.46	0.35
tblOffRoadEquipment	LoadFactor	0.46	0.35
tblOffRoadEquipment	LoadFactor	0.78	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00

Page 4 of 30

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

Date: 1/4/2019 11:06 AM

tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblOnRoadDust	HaulingPercentPave	100.00	99.00
tblTripsAndVMT	HaulingTripLength	20.00	5.00
tblTripsAndVMT	HaulingTripLength	20.00	5.00
tblTripsAndVMT	HaulingTripLength	20.00	5.00
tblTripsAndVMT	HaulingTripLength	20.00	5.00
tblTripsAndVMT	HaulingTripNumber	331.00	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	375.00
tblTripsAndVMT	HaulingTripNumber	262.00	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	374.00
tblTripsAndVMT	WorkerTripNumber	18.00	16.00
tblTripsAndVMT	WorkerTripNumber	10.00	16.00
tblTripsAndVMT	WorkerTripNumber	18.00	16.00
tblTripsAndVMT	WorkerTripNumber	10.00	16.00

2.0 Emissions Summary

CalEEMod Version: CalEEMod.2016.3.2 Page 5 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

2.1 Overall Construction Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr						MT/yr									
2020	0.1196	0.9731	0.9254	1.8400e- 003	0.0255	0.0500	0.0755	4.6500e- 003	0.0482	0.0528	0.0000	157.7703	157.7703	0.0303	0.0000	158.5285
2021	0.1981	1.5534	1.6988	3.3700e- 003	0.0353	0.0778	0.1131	7.3000e- 003	0.0751	0.0824	0.0000	289.3598	289.3598	0.0552	0.0000	290.7390
Maximum	0.1981	1.5534	1.6988	3.3700e- 003	0.0353	0.0778	0.1131	7.3000e- 003	0.0751	0.0824	0.0000	289.3598	289.3598	0.0552	0.0000	290.7390

Mitigated Construction

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr								MT/yr							
2020	0.1196	0.9731	0.9254	1.8400e- 003	0.0253	0.0500	0.0754	4.6200e- 003	0.0482	0.0528	0.0000	157.7701	157.7701	0.0303	0.0000	158.5283
	0.1981	1.5534	1.6988	3.3700e- 003	0.0353	0.0778	0.1131	7.3000e- 003	0.0751	0.0824	0.0000	289.3595	289.3595	0.0552	0.0000	290.7387
Maximum	0.1981	1.5534	1.6988	3.3700e- 003	0.0353	0.0778	0.1131	7.3000e- 003	0.0751	0.0824	0.0000	289.3595	289.3595	0.0552	0.0000	290.7387
	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.28	0.00	0.08	0.25	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00

Page 6 of 30

Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-20-2020	6-19-2020	0.1454	0.1454
2	6-20-2020	9-19-2020	0.3174	0.3174
3	9-20-2020	12-19-2020	0.5254	0.5254
4	12-20-2020	3-19-2021	0.8454	0.8454
5	3-20-2021	6-19-2021	0.9169	0.9169
6	6-20-2021	9-19-2021	0.9172	0.9172
7	9-20-2021	9-30-2021	0.1097	0.1097
		Highest	0.9172	0.9172

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr									MT/yr						
Area	0.1546	0.0000	4.9000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e- 004	9.4000e- 004	0.0000	0.0000	1.0000e- 003
Energy	4.2700e- 003	0.0388	0.0326	2.3000e- 004		2.9500e- 003	2.9500e- 003		2.9500e- 003	2.9500e- 003	0.0000	144.3101	144.3101	5.0200e- 003	1.6500e- 003	144.9264
Mobile	0.0778	0.4584	1.1716	4.1600e- 003	0.3357	4.2200e- 003	0.3399	0.0900	3.9600e- 003	0.0939	0.0000	383.7942	383.7942	0.0190	0.0000	384.2683
Waste			1 			0.0000	0.0000		0.0000	0.0000	9.5406	0.0000	9.5406	0.5638	0.0000	23.6364
Water			1 			0.0000	0.0000		0.0000	0.0000	2.7805	36.3614	39.1419	0.2871	7.0500e- 003	48.4212
Total	0.2366	0.4973	1.2047	4.3900e- 003	0.3357	7.1700e- 003	0.3429	0.0900	6.9100e- 003	0.0969	12.3211	564.4666	576.7877	0.8749	8.7000e- 003	601.2532

CalEEMod Version: CalEEMod.2016.3.2 Page 7 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr									MT/yr						
Area	0.1546	0.0000	4.9000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e- 004	9.4000e- 004	0.0000	0.0000	1.0000e- 003
Energy	4.2700e- 003	0.0388	0.0326	2.3000e- 004		2.9500e- 003	2.9500e- 003		2.9500e- 003	2.9500e- 003	0.0000	144.3101	144.3101	5.0200e- 003	1.6500e- 003	144.9264
Mobile	0.0778	0.4584	1.1716	4.1600e- 003	0.3357	4.2200e- 003	0.3399	0.0900	3.9600e- 003	0.0939	0.0000	383.7942	383.7942	0.0190	0.0000	384.2683
Waste			1 			0.0000	0.0000		0.0000	0.0000	9.5406	0.0000	9.5406	0.5638	0.0000	23.6364
Water			1 1 1 1			0.0000	0.0000		0.0000	0.0000	2.7805	36.3614	39.1419	0.2871	7.0500e- 003	48.4212
Total	0.2366	0.4973	1.2047	4.3900e- 003	0.3357	7.1700e- 003	0.3429	0.0900	6.9100e- 003	0.0969	12.3211	564.4666	576.7877	0.8749	8.7000e- 003	601.2532

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Stormdrain Pipeline	Grading	4/13/2020	5/1/2020	5	15	
2	Paving	Paving	4/27/2020	5/1/2020	5	5	
3	pipeline	Grading	7/27/2020	12/4/2021	5	355	
4	pipeline paving	Paving	11/23/2021	12/4/2021	5	9	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Page 9 of 30

Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Stormdrain Pipeline	Concrete/Industrial Saws	1	8.00	81	0.73
Stormdrain Pipeline	Crushing/Proc. Equipment	 1	6.00	85	0.50
Stormdrain Pipeline	Plate Compactors	 1	8.00	8	0.43
Stormdrain Pipeline	Rubber Tired Dozers	0	1.00	247	0.40
Stormdrain Pipeline	Sweepers/Scrubbers	 1	8.00	250	0.35
Stormdrain Pipeline	Tractors/Loaders/Backhoes	2	6.00	108	0.37
Stormdrain Pipeline	Welders	 1	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Crushing/Proc. Equipment	1	6.00	85	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
pipeline paving	Crushing/Proc. Equipment	1	6.00	85	0.50
pipeline paving	Cement and Mortar Mixers	0	6.00	9	0.56
pipeline	Concrete/Industrial Saws	1	8.00	81	0.73
pipeline paving	Pavers	1	7.00	130	0.42
pipeline paving	Rollers	1	7.00	80	0.38
pipeline	Rubber Tired Dozers	0	1.00	247	0.40
pipeline	Tractors/Loaders/Backhoes	2	6.00	108	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
pipeline	Sweepers/Scrubbers	1	8.00	250	0.35
pipeline	Welders	1	8.00	46	0.45
pipeline	Plate Compactors	1	8.00	8	0.43
pipeline	Crushing/Proc. Equipment	1	6.00	85	0.50
pipeline paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

Date: 1/4/2019 11:06 AM

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Stormdrain Pipeline	7	16.00	0.00	0.00	14.70	6.90	5.00	LD_Mix	HDT_Mix	HHDT
Paving	4	16.00	0.00	375.00	14.70	6.90	5.00	LD_Mix	HDT_Mix	HHDT
pipeline	7	16.00	0.00	0.00	14.70	6.90	5.00	LD_Mix	HDT_Mix	HHDT
pipeline paving	4	16.00	0.00	374.00	14.70	6.90	5.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Stormdrain Pipeline - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					3.0000e- 004	0.0000	3.0000e- 004	5.0000e- 005	0.0000	5.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.1073	0.0999	1.9000e- 004		5.6600e- 003	5.6600e- 003	 	5.4600e- 003	5.4600e- 003	0.0000	16.2064	16.2064	3.3500e- 003	0.0000	16.2902
Total	0.0130	0.1073	0.0999	1.9000e- 004	3.0000e- 004	5.6600e- 003	5.9600e- 003	5.0000e- 005	5.4600e- 003	5.5100e- 003	0.0000	16.2064	16.2064	3.3500e- 003	0.0000	16.2902

CalEEMod Version: CalEEMod.2016.3.2 Page 11 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

3.2 Stormdrain Pipeline - 2020 Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e- 004	4.1000e- 004	4.5400e- 003	1.0000e- 005	1.3200e- 003	1.0000e- 005	1.3300e- 003	3.5000e- 004	1.0000e- 005	3.6000e- 004	0.0000	1.1852	1.1852	3.0000e- 005	0.0000	1.1861
Total	5.4000e- 004	4.1000e- 004	4.5400e- 003	1.0000e- 005	1.3200e- 003	1.0000e- 005	1.3300e- 003	3.5000e- 004	1.0000e- 005	3.6000e- 004	0.0000	1.1852	1.1852	3.0000e- 005	0.0000	1.1861

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					1.3000e- 004	0.0000	1.3000e- 004	2.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.1073	0.0999	1.9000e- 004	 	5.6600e- 003	5.6600e- 003		5.4600e- 003	5.4600e- 003	0.0000	16.2064	16.2064	3.3500e- 003	0.0000	16.2902
Total	0.0130	0.1073	0.0999	1.9000e- 004	1.3000e- 004	5.6600e- 003	5.7900e- 003	2.0000e- 005	5.4600e- 003	5.4800e- 003	0.0000	16.2064	16.2064	3.3500e- 003	0.0000	16.2902

CalEEMod Version: CalEEMod.2016.3.2 Page 12 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

3.2 Stormdrain Pipeline - 2020 Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e- 004	4.1000e- 004	4.5400e- 003	1.0000e- 005	1.3200e- 003	1.0000e- 005	1.3300e- 003	3.5000e- 004	1.0000e- 005	3.6000e- 004	0.0000	1.1852	1.1852	3.0000e- 005	0.0000	1.1861
Total	5.4000e- 004	4.1000e- 004	4.5400e- 003	1.0000e- 005	1.3200e- 003	1.0000e- 005	1.3300e- 003	3.5000e- 004	1.0000e- 005	3.6000e- 004	0.0000	1.1852	1.1852	3.0000e- 005	0.0000	1.1861

3.3 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	2.2300e- 003	0.0204	0.0213	3.0000e- 005		1.2000e- 003	1.2000e- 003		1.1300e- 003	1.1300e- 003	0.0000	2.8161	2.8161	7.1000e- 004	0.0000	2.8338
Paving	0.0000					0.0000	0.0000	1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.2300e- 003	0.0204	0.0213	3.0000e- 005		1.2000e- 003	1.2000e- 003		1.1300e- 003	1.1300e- 003	0.0000	2.8161	2.8161	7.1000e- 004	0.0000	2.8338

CalEEMod Version: CalEEMod.2016.3.2 Page 13 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

3.3 Paving - 2020
Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	6.1000e- 004	0.0267	4.4700e- 003	5.0000e- 005	0.0134	5.0000e- 005	0.0135	1.4800e- 003	5.0000e- 005	1.5300e- 003	0.0000	4.9912	4.9912	5.0000e- 004	0.0000	5.0036
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e- 004	1.4000e- 004	1.5100e- 003	0.0000	4.4000e- 004	0.0000	4.4000e- 004	1.2000e- 004	0.0000	1.2000e- 004	0.0000	0.3951	0.3951	1.0000e- 005	0.0000	0.3954
Total	7.9000e- 004	0.0268	5.9800e- 003	5.0000e- 005	0.0139	5.0000e- 005	0.0139	1.6000e- 003	5.0000e- 005	1.6500e- 003	0.0000	5.3862	5.3862	5.1000e- 004	0.0000	5.3989

Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	2.2300e- 003	0.0204	0.0213	3.0000e- 005		1.2000e- 003	1.2000e- 003		1.1300e- 003	1.1300e- 003	0.0000	2.8161	2.8161	7.1000e- 004	0.0000	2.8338
Paving	0.0000					0.0000	0.0000	1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.2300e- 003	0.0204	0.0213	3.0000e- 005		1.2000e- 003	1.2000e- 003		1.1300e- 003	1.1300e- 003	0.0000	2.8161	2.8161	7.1000e- 004	0.0000	2.8338

CalEEMod Version: CalEEMod.2016.3.2 Page 14 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

3.3 Paving - 2020 Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	6.1000e- 004	0.0267	4.4700e- 003	5.0000e- 005	0.0134	5.0000e- 005	0.0135	1.4800e- 003	5.0000e- 005	1.5300e- 003	0.0000	4.9912	4.9912	5.0000e- 004	0.0000	5.0036
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e- 004	1.4000e- 004	1.5100e- 003	0.0000	4.4000e- 004	0.0000	4.4000e- 004	1.2000e- 004	0.0000	1.2000e- 004	0.0000	0.3951	0.3951	1.0000e- 005	0.0000	0.3954
Total	7.9000e- 004	0.0268	5.9800e- 003	5.0000e- 005	0.0139	5.0000e- 005	0.0139	1.6000e- 003	5.0000e- 005	1.6500e- 003	0.0000	5.3862	5.3862	5.1000e- 004	0.0000	5.3989

3.4 pipeline - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	7/yr		
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0989	0.8151	0.7591	1.4500e- 003		0.0430	0.0430		0.0415	0.0415	0.0000	123.1689	123.1689	0.0255	0.0000	123.8056
Total	0.0989	0.8151	0.7591	1.4500e- 003	0.0000	0.0430	0.0430	0.0000	0.0415	0.0415	0.0000	123.1689	123.1689	0.0255	0.0000	123.8056

CalEEMod Version: CalEEMod.2016.3.2 Page 15 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

3.4 pipeline - 2020
Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0700e- 003	3.1200e- 003	0.0345	1.0000e- 004	0.0100	8.0000e- 005	0.0101	2.6600e- 003	7.0000e- 005	2.7300e- 003	0.0000	9.0075	9.0075	2.6000e- 004	0.0000	9.0140
Total	4.0700e- 003	3.1200e- 003	0.0345	1.0000e- 004	0.0100	8.0000e- 005	0.0101	2.6600e- 003	7.0000e- 005	2.7300e- 003	0.0000	9.0075	9.0075	2.6000e- 004	0.0000	9.0140

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0989	0.8151	0.7591	1.4500e- 003		0.0430	0.0430	1 1 1	0.0415	0.0415	0.0000	123.1687	123.1687	0.0255	0.0000	123.8054
Total	0.0989	0.8151	0.7591	1.4500e- 003	0.0000	0.0430	0.0430	0.0000	0.0415	0.0415	0.0000	123.1687	123.1687	0.0255	0.0000	123.8054

CalEEMod Version: CalEEMod.2016.3.2 Page 16 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

3.4 pipeline - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	⁻ /yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0700e- 003	3.1200e- 003	0.0345	1.0000e- 004	0.0100	8.0000e- 005	0.0101	2.6600e- 003	7.0000e- 005	2.7300e- 003	0.0000	9.0075	9.0075	2.6000e- 004	0.0000	9.0140
Total	4.0700e- 003	3.1200e- 003	0.0345	1.0000e- 004	0.0100	8.0000e- 005	0.0101	2.6600e- 003	7.0000e- 005	2.7300e- 003	0.0000	9.0075	9.0075	2.6000e- 004	0.0000	9.0140

3.4 pipeline - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1856	1.4891	1.5876	3.0600e- 003		0.0758	0.0758		0.0731	0.0731	0.0000	260.4073	260.4073	0.0529	0.0000	261.7304
Total	0.1856	1.4891	1.5876	3.0600e- 003	0.0000	0.0758	0.0758	0.0000	0.0731	0.0731	0.0000	260.4073	260.4073	0.0529	0.0000	261.7304

CalEEMod Version: CalEEMod.2016.3.2 Page 17 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

3.4 pipeline - 2021

<u>Unmitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0400e- 003	5.9400e- 003	0.0672	2.0000e- 004	0.0212	1.6000e- 004	0.0213	5.6200e- 003	1.5000e- 004	5.7600e- 003	0.0000	18.4251	18.4251	4.9000e- 004	0.0000	18.4375
Total	8.0400e- 003	5.9400e- 003	0.0672	2.0000e- 004	0.0212	1.6000e- 004	0.0213	5.6200e- 003	1.5000e- 004	5.7600e- 003	0.0000	18.4251	18.4251	4.9000e- 004	0.0000	18.4375

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1856	1.4891	1.5876	3.0600e- 003		0.0758	0.0758		0.0731	0.0731	0.0000	260.4070	260.4070	0.0529	0.0000	261.7301
Total	0.1856	1.4891	1.5876	3.0600e- 003	0.0000	0.0758	0.0758	0.0000	0.0731	0.0731	0.0000	260.4070	260.4070	0.0529	0.0000	261.7301

CalEEMod Version: CalEEMod.2016.3.2 Page 18 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

3.4 pipeline - 2021

<u>Mitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0400e- 003	5.9400e- 003	0.0672	2.0000e- 004	0.0212	1.6000e- 004	0.0213	5.6200e- 003	1.5000e- 004	5.7600e- 003	0.0000	18.4251	18.4251	4.9000e- 004	0.0000	18.4375
Total	8.0400e- 003	5.9400e- 003	0.0672	2.0000e- 004	0.0212	1.6000e- 004	0.0213	5.6200e- 003	1.5000e- 004	5.7600e- 003	0.0000	18.4251	18.4251	4.9000e- 004	0.0000	18.4375

3.5 pipeline paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Oli Rodd	3.5600e- 003	0.0328	0.0371	6.0000e- 005		1.8500e- 003	1.8500e- 003		1.7400e- 003	1.7400e- 003	0.0000	4.9122	4.9122	1.2600e- 003	0.0000	4.9436
Paving	0.0000					0.0000	0.0000	1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.5600e- 003	0.0328	0.0371	6.0000e- 005		1.8500e- 003	1.8500e- 003		1.7400e- 003	1.7400e- 003	0.0000	4.9122	4.9122	1.2600e- 003	0.0000	4.9436

CalEEMod Version: CalEEMod.2016.3.2 Page 19 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

3.5 pipeline paving - 2021

<u>Unmitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	5.8000e- 004	0.0253	4.3400e- 003	5.0000e- 005	0.0134	4.0000e- 005	0.0134	1.4800e- 003	4.0000e- 005	1.5200e- 003	0.0000	4.9271	4.9271	4.8000e- 004	0.0000	4.9391
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e- 004	2.2000e- 004	2.5100e- 003	1.0000e- 005	7.9000e- 004	1.0000e- 005	8.0000e- 004	2.1000e- 004	1.0000e- 005	2.2000e- 004	0.0000	0.6881	0.6881	2.0000e- 005	0.0000	0.6885
Total	8.8000e- 004	0.0255	6.8500e- 003	6.0000e- 005	0.0142	5.0000e- 005	0.0142	1.6900e- 003	5.0000e- 005	1.7400e- 003	0.0000	5.6152	5.6152	5.0000e- 004	0.0000	5.6276

Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	3.5600e- 003	0.0328	0.0371	6.0000e- 005		1.8500e- 003	1.8500e- 003		1.7400e- 003	1.7400e- 003	0.0000	4.9122	4.9122	1.2600e- 003	0.0000	4.9436
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.5600e- 003	0.0328	0.0371	6.0000e- 005		1.8500e- 003	1.8500e- 003		1.7400e- 003	1.7400e- 003	0.0000	4.9122	4.9122	1.2600e- 003	0.0000	4.9436

CalEEMod Version: CalEEMod.2016.3.2 Page 20 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

3.5 pipeline paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
ľ	5.8000e- 004	0.0253	4.3400e- 003	5.0000e- 005	0.0134	4.0000e- 005	0.0134	1.4800e- 003	4.0000e- 005	1.5200e- 003	0.0000	4.9271	4.9271	4.8000e- 004	0.0000	4.9391
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e- 004	2.2000e- 004	2.5100e- 003	1.0000e- 005	7.9000e- 004	1.0000e- 005	8.0000e- 004	2.1000e- 004	1.0000e- 005	2.2000e- 004	0.0000	0.6881	0.6881	2.0000e- 005	0.0000	0.6885
Total	8.8000e- 004	0.0255	6.8500e- 003	6.0000e- 005	0.0142	5.0000e- 005	0.0142	1.6900e- 003	5.0000e- 005	1.7400e- 003	0.0000	5.6152	5.6152	5.0000e- 004	0.0000	5.6276

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Mitigated	0.0778	0.4584	1.1716	4.1600e- 003	0.3357	4.2200e- 003	0.3399	0.0900	3.9600e- 003	0.0939	0.0000	383.7942	383.7942	0.0190	0.0000	384.2683
Unmitigated	0.0778	0.4584	1.1716	4.1600e- 003	0.3357	4.2200e- 003	0.3399	0.0900	3.9600e- 003	0.0939	0.0000	383.7942	383.7942	0.0190	0.0000	384.2683

4.2 Trip Summary Information

	Avei	rage Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	264.16	50.03	25.77	883,514	883,514
Total	264.16	50.03	25.77	883,514	883,514

4.3 Trip Type Information

		Miles			Trip %		Trip Purpose %				
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by		
General Light Industry	16.60 8.40 6.90			59.00 28.00		13.00	92	5	3		

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.547828	0.043645	0.199892	0.122290	0.016774	0.005862	0.020637	0.032653	0.002037	0.001944	0.004777	0.000705	0.000956

5.0 Energy Detail

Historical Energy Use: N

CalEEMod Version: CalEEMod.2016.3.2 Page 22 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	-/yr		
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	102.0401	102.0401	4.2100e- 003	8.7000e- 004	102.4052
Electricity Unmitigated	n		,			0.0000	0.0000		0.0000	0.0000	0.0000	102.0401	102.0401	4.2100e- 003	8.7000e- 004	102.4052
Mitigated	4.2700e- 003	0.0388	0.0326	2.3000e- 004		2.9500e- 003	2.9500e- 003		2.9500e- 003	2.9500e- 003	0.0000	42.2700	42.2700	8.1000e- 004	7.7000e- 004	42.5212
NaturalGas Unmitigated	4.2700e- 003	0.0388	0.0326	2.3000e- 004		2.9500e- 003	2.9500e- 003		2.9500e- 003	2.9500e- 003	0.0000	42.2700	42.2700	8.1000e- 004	7.7000e- 004	42.5212

5.2 Energy by Land Use - NaturalGas <u>Unmitigated</u>

ROG NOx CO SO2 PM10 PM2.5 Bio- CO2 NBio- CO2 Total CO2 CH4 N2O CO2e NaturalGa Fugitive Exhaust Fugitive Exhaust s Use PM10 PM10 PM2.5 PM2.5 Total Total kBTU/yr MT/yr Land Use tons/yr General Light 792110 4.2700e-0.0388 0.0326 2.3000e-2.9500e-2.9500e-2.9500e-2.9500e-0.0000 42.2700 42.2700 8.1000e-7.7000e-42.5212 Industry 004 003 003 003 003 004 004 4.2700e-0.0388 0.0326 2.3000e-2.9500e-2.9500e-2.9500e-2.9500e-0.0000 42.2700 42.2700 8.1000e-7.7000e-42.5212 Total 003 004 003 003 003 003 004 004

CalEEMod Version: CalEEMod.2016.3.2 Page 23 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

5.2 Energy by Land Use - NaturalGas Mitigated

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							MT	/yr		
General Light Industry	792110	4.2700e- 003	0.0388	0.0326	2.3000e- 004		2.9500e- 003	2.9500e- 003		2.9500e- 003	2.9500e- 003	0.0000	42.2700	42.2700	8.1000e- 004	7.7000e- 004	42.5212
Total		4.2700e- 003	0.0388	0.0326	2.3000e- 004		2.9500e- 003	2.9500e- 003		2.9500e- 003	2.9500e- 003	0.0000	42.2700	42.2700	8.1000e- 004	7.7000e- 004	42.5212

5.3 Energy by Land Use - Electricity <u>Unmitigated</u>

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		МТ	/yr	
General Light Industry	320255	102.0401	4.2100e- 003	8.7000e- 004	102.4052
Total		102.0401	4.2100e- 003	8.7000e- 004	102.4052

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

5.3 Energy by Land Use - Electricity Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		MT	-/yr	
General Light Industry	320255	102.0401	4.2100e- 003	8.7000e- 004	102.4052
Total		102.0401	4.2100e- 003	8.7000e- 004	102.4052

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Mitigated	0.1546	0.0000	4.9000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e- 004	9.4000e- 004	0.0000	0.0000	1.0000e- 003
Unmitigated	0.1546	0.0000	4.9000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e- 004	9.4000e- 004	0.0000	0.0000	1.0000e- 003

CalEEMod Version: CalEEMod.2016.3.2 Page 25 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

6.2 Area by SubCategory Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							МТ	-/yr		
Architectural Coating	0.0176					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1370			 		0.0000	0.0000	 	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e- 005	0.0000	4.9000e- 004	0.0000		0.0000	0.0000	1 	0.0000	0.0000	0.0000	9.4000e- 004	9.4000e- 004	0.0000	0.0000	1.0000e- 003
Total	0.1546	0.0000	4.9000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e- 004	9.4000e- 004	0.0000	0.0000	1.0000e- 003

Mitigated

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							МТ	-/yr		
Architectural Coating	0.0176					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1370					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e- 005	0.0000	4.9000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e- 004	9.4000e- 004	0.0000	0.0000	1.0000e- 003
Total	0.1546	0.0000	4.9000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.4000e- 004	9.4000e- 004	0.0000	0.0000	1.0000e- 003

7.0 Water Detail

CalEEMod Version: CalEEMod.2016.3.2 Page 26 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category		МТ	√yr	
	. 00.1110	0.2871	7.0500e- 003	48.4212
	39.1419	0.2871	7.0500e- 003	48.4212

7.2 Water by Land Use <u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		МТ	√yr	
General Light Industry	8.76437 / 0	39.1419	0.2871	7.0500e- 003	48.4212
Total		39.1419	0.2871	7.0500e- 003	48.4212

CalEEMod Version: CalEEMod.2016.3.2 Page 27 of 30 Date: 1/4/2019 11:06 AM

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		МТ	-/yr	
General Light Industry	8.76437 / 0	39.1419	0.2871	7.0500e- 003	48.4212
Total		39.1419	0.2871	7.0500e- 003	48.4212

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e	
	MT/yr				
willigated	9.5406	0.5638	0.0000	23.6364	
Jgatea	9.5406	0.5638	0.0000	23.6364	

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

8.2 Waste by Land Use <u>Unmitigated</u>

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	47	9.5406	0.5638	0.0000	23.6364
Total		9.5406	0.5638	0.0000	23.6364

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	47	9.5406	0.5638	0.0000	23.6364
Total		9.5406	0.5638	0.0000	23.6364

9.0 Operational Offroad

Ed	quipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

Pipeline Phase For Well 12 and 14 - South Coast AQMD Air District, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

This page intentionally left blank

APPENDIX B CULTURAL RESOURCES

This page intentionally left blank

MESA WATER WELL PROJECT RECORD SEARCH RESULTS

GENERAL PROJECT DESCRIPTION

The Mesa Water District is proposing to construct two new potable water wells on approximately 0.89 acre of land located in the City of Santa Ana, California. Well No. 12 is located at 4011 W. Chandler Avenue. Well No. 13 is located at 3120 S. Croddy Way. The Project includes drilling, constructing, developing, testing, and equipping of Well No. 12 and Well No. 13, plus construction of facilities at the sites for operation of the wells. In addition, construction of approximately 4,500 feet of linear pipeline will connect the two wells to the Mesa Water distribution system traversing Chandler Avenue to Croddy Way to W. MacArthur Boulevard to Hyland Avenue. The depth of ground disturbance during construction will vary for the Project and incudes: Well No. 12 is approximately 1,030 feet below ground surface (bgs); Well No. 13 is approximately 990 feet bsg; and the linear pipeline will reach depths up to approximately 18 feet bsg.

The Project also includes demolition of two existing structures: an existing office and storage building at 4011 West Chandler Avenue and an existing office and storage building at 3120 South Croddy Way.

RECORD SEARCH RESULTS

A records search was conducted of the Project's Area of Potential Effect (APE) and surrounding areas via the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System on September 13, 2018 (SCCIC File No.: 19378.5313). For the records search, the study area included a half mile buffer centered on the APE. As part of this records search, the SCCIC database of survey reports and overviews was consulted, as well as documented cultural resources, cultural landscapes, and ethnic resources. Additionally, the search included a review of the following publications and lists: California Office of Historic Preservation (OHP) Historic Properties Directory, National Register of Historical Resources/California Register of Historic Resources (CRHR), California Points of Historical Interest, California Historical Landmarks, and local historic resource inventories. See Enclosure 1 for record search results.

One previously conducted cultural resource survey (VN-00299¹) and no previously recorded cultural resources were identified within the APE. VN-00299 consisted of an overview for archaeological, architectural, and paleontological resources and was conducted in 1975. An additional 16 previous studies have been conducted within a half mile of the APE between 1975 and 2007. These cultural resource investigations are comprised of archaeological and

1

¹ Archaeological Associates 1975. *Compilation of Historical, Archaeological, and Paleontological Data for Costa Mesa.* On file at the SCCIC.

architectural surveys, and literature searches. A map and list of the previously recorded resources within half mile of the APE is provided in Enclosure 1.

Based on the SCCIC record search results, no CRHR or NRHP listed or eligible sites were identified within the APE. One previously recorded historic building (P-30-176943: Ana Mesa Inn) was identified within a half mile of the APE. This building appears unevaluated for the CRHR/NRHP. A list of the previously recorded resources within half mile of the APE is provided in Enclosure 1.

Review of Historic Aerial Photographs

Review of historic aerial photographs provides information regarding potential unrecorded historic features or sites within the APE. Based on the map review², the APE was undeveloped agricultural land from 1953 to 1972. By 1995, the APE appears as a paved north to south trending road with building adjacent east and west, similar as it appears today.

NATIVE AMERICAN HERITAGE COMMISSION SACRED LANDS FILE SEARCH

Tetra Tech, Inc. contacted the California Native American Heritage Commission (NAHC) on August 24, 2018 and requested that the NAHC review its Sacred Lands Files. The NAHC replied on August 27, 2018 that results were negative for Native American Native tribal resources within the APE and provided a list of local Native American contacts with knowledge of the Project area. The NAHC recommends conducting outreach to the listed tribes or individuals as they may have knowledge of cultural resources within or near the Project area. Native American consultation is part of the lead CEQA agency's responsibilities under Assembly Bill 52 (AB52), and CEQA. See Enclosure 2 for NAHC sacred lands file search results.

ARCHAEOLOGICAL AND ARCHITECTUAL SURVEYS

Due to the built environment of the APE (e.g. paved roads, buildings) and lack of visible native ground surface soils, an archaeological survey was not conducted for the Project.

An architectural survey was not conducted for the Project. The two buildings proposed for demolition located at West Chandler Avenue and the other at 3120 South Croddy Way were both constructed post 1977 and are under 45 years of age. As of the date of this document, the buildings are not considered historic resources under CEQA. Projects that could impact buildings or structures, 45 years old or older, may require a historic built environment review and survey by a qualified historian or architectural historian.

2

² Historic Aerials by Netronline 2018. Electronic database located at https://www.historicaerials.com/viewer accessed 9/23/2018.

RECOMMENDATIONS

Although the Project area is relatively densely developed, very few previous archaeological studies have been conducted throughout the region. The surficial deposits within the APE have been subjected to previous ground disturbance. The depth of ground surface disturbance is unknown. The Project area is within the southern end of the broad Coastal Plain of Orange County, specifically the Tustin Plain. Sediments within the APE consist of Holocene (recent to 10,000 years old, 10 to 20 feet in depth) and Pleistocene (10,000 to 2 million years old, 20 feet plus in depth) alluvium deposits derived from the erosion of bedrock out of the Santa Ana Mountain and the San Joaquin Hills. Late Pleistocene and Holocene deposits are generally considered more likely to contain prehistoric deposits. If construction ground disturbance depths range within native soils (approximately 1 to 2 feet in depth and beyond), there would be a potential to impact previously unrecorded subsurface cultural resources.

Existing regulations require that if human remains and/or funerary cultural items defined by the Health and Safety Code, Section 7050.5, are inadvertently discovered, all work in the vicinity of the find would cease and the Orange County Coroner would be contacted immediately. If the remains are found to be Native American as defined by Health and Safety Code, Section 7050.5, the coroner will contact the NAHC by telephone within 24 hours. The NAHC shall immediately notify the person it believes to be the Most Likely Descendant (MLD) as stipulated by California Public Resources Code (PRC, Section 5097.98. The MLD(s), with the permission of the landowner and/or authorized representative, shall inspect the site of the discovered remains and recommend treatment regarding the remains and any associated grave goods. The MLD shall complete their inspection and make their recommendations within 48 hours of notification by the NAHC. Any discovery of human remains would be treated in accordance with Section 5097.98 of the PRC and Section 7050.5 of the Health and Safety Code. Therefore, with compliance with existing regulations, Project impact would be less than significant.

The following archaeological management measures below are recommended for the Project.

CUL-1 Environmental Training – prior to construction of the Project, a qualified archaeologist will provide a cultural resource briefing that includes all applicable laws and penalties pertaining to disturbing cultural resources, a brief discussion of the prehistoric and historic regional context and archaeological sensitivity of the area, types of cultural resources found in the area, instruction that Project workers will halt construction if a cultural resource is inadvertently discovered during construction, and procedures to follow in the event an inadvertent discovery (Inadvertent Discovery Plan) is encountered, including appropriate treatment and respectful behavior of a discovery (e.g., no posting to social media or photographs). If requested, a local tribal representative(s) shall be invited to participate in the environmental training to discuss or provide text from a tribal cultural perspective regarding the cultural resources within the region, and;

CUL 2: Inadvertent Discovery of Archaeological Resources During Construction – A qualified archaeologist shall prepare an Inadvertent Discovery Plan for the Project. During Project-level construction, should subsurface archaeological resources be discovered, all activity in the vicinity of the find shall stop and a qualified archaeologist shall be contacted to assess the significance of the find according to California Environmental Quality Act (CEQA) Guidelines Section 15064.5. If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency and any local Native American groups expressing interest, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, Project re-route or re-design, Project cancellation, or identification of protection measures such as capping or fencing, Consistent with CEOA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2.

ENCLOSURE 1 SCCIC RESULTS

South Central Coastal Information Center

California State University, Fullerton Department of Anthropology MH-426 800 North State College Boulevard Fullerton, CA 92834-6846 657.278.5395 / FAX 657.278.5542 sccic@fullerton.edu

California Historical Resources Information System
Orange, Los Angeles, and Ventura Counties

9/13/2018 Records Search File No.: 19378.5313 Jenna Farrell Tetra Tech, Inc. 2969 Prospect Park Dr. Ste 100 Rancho Cordova, CA 95670 Re: Record Search Results for the Mesa Water Well Project The South Central Coastal Information Center received your records search request for the project area referenced above, located on the Newport Beach, CA USGS 7.5' quadrangle. The following reflects the results of the records search for the project area and a ½-mile radius: As indicated on the data request form, the locations of resources and reports are provided in the following format: □ custom GIS maps ⋈ shape files □ hand-drawn maps Resources within project area: 0 None Resources within ½-mile radius: 1 SEE ATTACHED MAP or LIST Resources listed in the OHP Historic None Properties Directory within project area: 0 Resources listed in the OHP Historic None Properties Directory within ½-mile radius: 0 Reports within project area: 1 OR-00299 Reports within ½-mile radius: 16 SEE ATTACHED MAP or LIST oximes enclosed oximes not requested oximes nothing listed **Resource Database Printout (list): Resource Database Printout (details):** \boxtimes enclosed \square not requested \square nothing listed Resource Digital Database (spreadsheet): \boxtimes enclosed \square not requested \square nothing listed **Report Database Printout (list):** \boxtimes enclosed \square not requested \square nothing listed **Report Database Printout (details):** \boxtimes enclosed \square not requested \square nothing listed Report Digital Database (spreadsheet): \boxtimes enclosed \square not requested \square nothing listed **Resource Record Copies:** \square enclosed \boxtimes not requested \square nothing listed \boxtimes enclosed \square not requested \square nothing listed **Report Copies:**

 \square enclosed \square not requested \boxtimes nothing listed

OHP Historic Properties Directory:

Archaeological Determinations of Eligibility:	\square enclosed \square not requested \boxtimes nothing listed
Los Angeles Historic-Cultural Monuments	\square enclosed \square not requested \boxtimes nothing listed
Historical Maps:	\square enclosed \boxtimes not requested \square nothing listed
Ethnographic Information:	⋈ not available at SCCIC
Historical Literature:	□ not available at SCCIC
GLO and/or Rancho Plat Maps:	□ not available at SCCIC
Caltrans Bridge Survey:	☑ not available at SCCIC; please go to
http://www.dot.ca.gov/hq/structur/strmaint/h	<u>istoric.htm</u>
Shipwreck Inventory:	□ not available at SCCIC; please go to
http://shipwrecks.slc.ca.gov/ShipwrecksDatabas	se/Shipwrecks_Database.asp
Soil Survey Maps: (see below)	⋈ not available at SCCIC; please go to
	10

http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

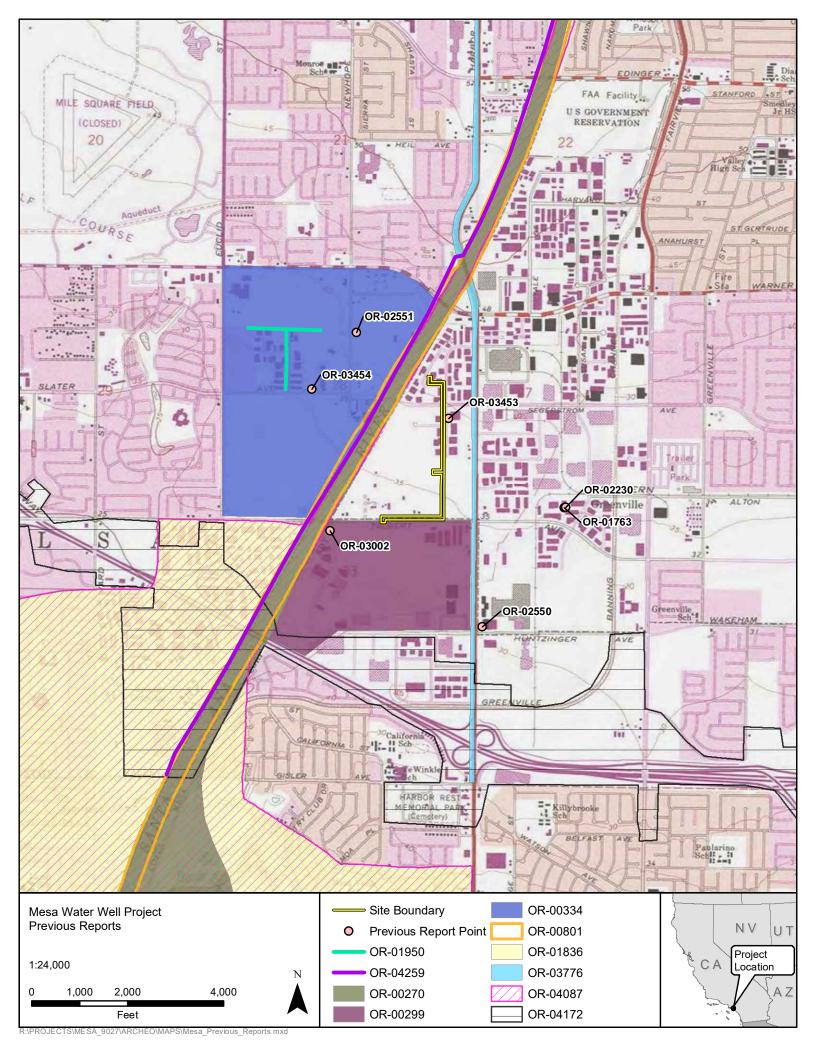
Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

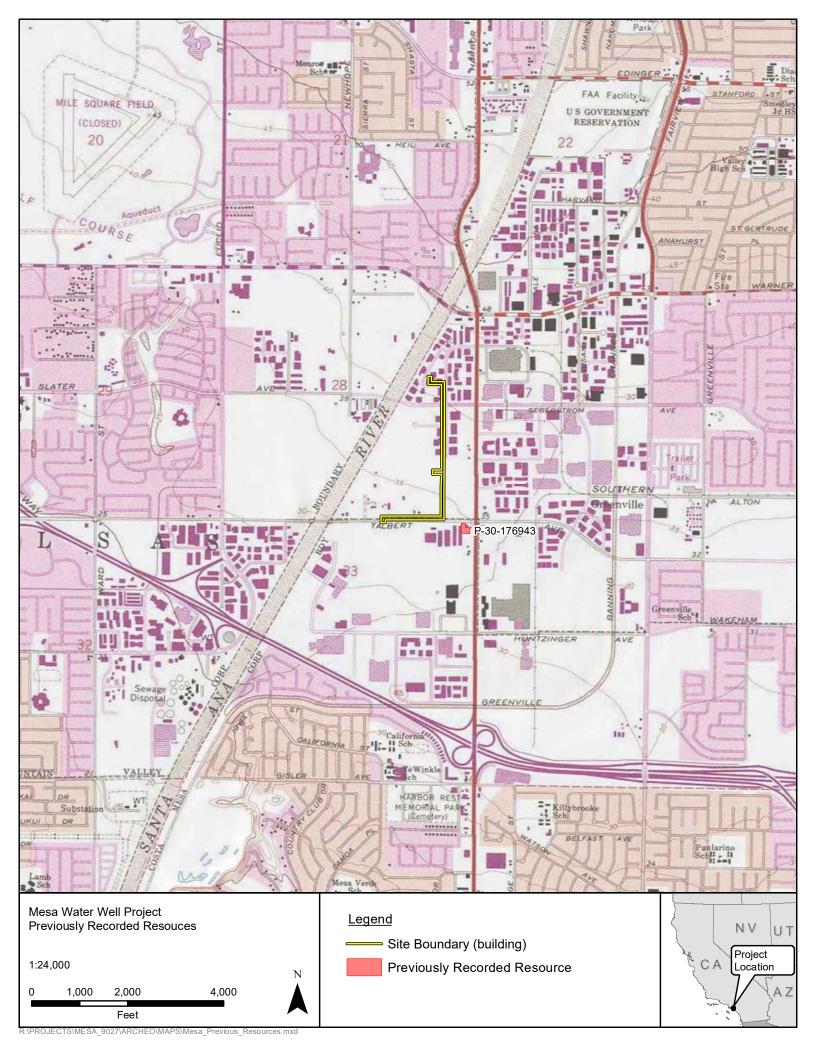
Thank you for using the California Historical Resources Information System,

Isabela Kott GIS Technician/Staff Researcher

Enclosures:

- (X) GIS Shapefiles 18 shapes
- (X) Resource Database Printout (list) 1 page
- (X) Resource Database Printout (details) 1 page
- (X) Resource Digital Database (spreadsheet) 1 line
- (X) Report Database Printout (list) 5 pages
- (X) Report Database Printout (details) 24 pages
- (X) Report Digital Database (spreadsheet) 17 lines
- (X) Report Copies (project area only) 121 pages





Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-00270		1975	Leonard, Nelson N. III and Mathew C. Hall	Description and Evaluation of Cultural Resources Within the US Army Corps of Engineers' Santa Ana River Project	Archaeological Research Unit, UC Riverside	30-000277
OR-00299	Paleo -	1978	Van Horn, David M.	A Compilation of Archaeological, Historical and Paleontological Data for the City of Costa Mesa	Archaeological Associates, Ltd.	30-000058, 30-000076, 30-000163, 30-000165, 30-000174, 30-000297, 30-000357, 30-000506, 30-000687
OR-00334		1974	Leonard, Nelson N. III	An Archaeological Reconnaissance of the Fountain Valley Project	University of California, Los Angeles Archaeological Survey	
OR-00801		1985	Langenwalter, Paul E. and James Brock	Phase Ii Archaeological Studies Prado Basin and the Lower Santa Ana River		30-000089, 30-000817
OR-01763	Cellular -	1998	Bonner, Wayne H.	Cultural Resources Records Search and Literature Review Report for a Pacific Bell Moblie Services Telecommunications Facility: Cm 063-34, in the City of Santa Ana, California	Chambers Group, Inc.	
OR-01836		1998	Padon, Beth	Cultural Resource Review for Groundwater Replenishment System Program EIR/Tier I/EIS, Orange County Water District and County Sanitation Districts of Orange County	Discovery Works, Inc.	
OR-01950		1976	Douglas, Ronald D.	An Archaeological Survey of Two Properties for the City of Fountain Valley, Orange County	Public Antiquities Salvage Team, CSUF	
OR-02230	Cellular -	2000	Duke, Curt	Cultural Resource Assessment for Modifications to Pacific Bell Wireless Facility Cm 063-34, County of Orange, Ca	LSA Associates, Inc.	
OR-02550	Cellular -	2002	Duke, Curt	Cultural Resource Assessment Cingular Wireless Facility No. Sc 035-05 Orange County, California	LSA Associates, Inc.	
OR-02551	Cellular -	2002	Duke, Curt	Cultural Resource Assessment at & T Wireless Services Facility No. 13051b Orange County, California	LSA Associates, Inc.	
OR-03002	Cellular -	2005	Thal, Sean	Cultural Resource Assessment for the Cahill (CA-7072l) Cellular Facility Near 1700 Macarthur Blvd., Costa Mesa, Ca, Orange County	Earth Touch Inc.	
OR-03453	Cellular -	2007	Bonner, Wayne H.	Cultural Resource Records Search and Site Visit Results for T-mobile Candidate La02824e (croddy Carriage), 2907 Croddy Way, Santa Ana, Orange County, California	Michael Brandman Associates	

Page 1 of 5 SCCIC 9/11/2018 3:49:06 PM

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-03454	Cellular -	2007	Bonner, Wayne H.	Cultural Resource Records Search and Site Visit Results for T-mobile Candidate La23639b (fountain Valley Storage), 11345 Slater Avenue, Fountain Valley, Orange County, California	Michael Brandman Associates	
OR-03776		2000	Padon, Beth	Historic Property Survey Report for Harbor Boulevard Smart Street Improvements, City of Garden Grove, Orange County, California.	Discovery Works, Inc.	30-157376, 30-176876, 30-176877, 30-176878, 30-176879, 30-176880, 30-176881, 30-176882, 30-176883, 30-176884, 30-176885, 30-176886, 30-176887, 30-176887, 30-176889, 30-176890, 30-176891, 30-176892, 30-176893, 30-176894, 30-176898, 30-176899, 30-176899, 30-176900, 30-176901, 30-176902, 30-176903, 30-176904, 30-176905, 30-176908, 30-176901,
OR-04087		1998	Salenius, Sylvia	Program EIR/Tier 1 EIS, Groundwater Replenishment System	Orange County Water District & Orange County Sanitation District	

Page 2 of 5 SCCIC 9/11/2018 3:49:07 PM

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-04172		2011	Chasteen, Carrie	Historic Property Survey Report San Diego Freeway (I-405) Improvement Project SR-73 to I-605, Orange and Los Angeles Counties	Parsons	19-189879, 19-189880, 19-189881, 19-189882, 19-189883, 19-189887, 19-189885, 19-189886, 19-189887, 19-189888, 19-189890, 19-189891, 19-189895, 19-189893, 19-189894, 19-189895, 19-189896, 19-189897, 19-189896, 19-189890, 19-189901, 19-189901, 19-189902, 19-189903, 19-189904, 19-189905, 19-189906, 19-189907, 19-189911, 19-189912, 19-189910, 19-189911, 19-189912, 19-189913, 19-189914, 19-189915, 19-189916, 19-189917, 19-189918, 19-189916, 19-189920, 19-189921, 19-189925, 19-189920, 19-189927, 30-000113, 30-000162, 30-001352, 30-001502, 30-177135, 30-177136, 30-177140, 30-177144, 30-177145, 30-177149, 30-177144, 30-177145, 30-177155, 30-177155, 30-177156, 30-177157, 30-177158, 30-177156, 30-177157, 30-177157, 30-177158, 30-177160, 30-177160, 30-177161, 30-177162, 30-177160, 30-177161, 30-177163, 30-177164, 30-177165, 30-177169, 30-177167, 30-177169, 30-177169, 30-177161, 30-177169, 30-177169, 30-177169, 30-177169, 30-177176, 30-177176, 30-177176, 30-177176, 30-177176, 30-177176, 30-177176, 30-177176, 30-177176, 30-177176, 30-177176, 30-177176, 30-177176, 30-177176, 30-177177, 30-177178, 30-177179, 30-177179, 30-177179, 30-177179, 30-177181, 30-177181, 30-177191, 30-177182, 30-177184, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177197, 30-177199, 30-177199, 30-177199, 30-177199, 30-177199, 30-177190, 30-177202, 30-177204, 30-177205, 30-177206, 30-177207, 30-177214, 30-177218, 30-177219, 30-177217, 30-177218, 30-177219, 30-177220, 30-177219, 30-177220, 30-177219, 30-177220, 30-177219, 30-177220,

Page 3 of 5 SCCIC 9/11/2018 3:49:07 PM

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
						30-177221, 30-177222, 30-177223,
						30-177224, 30-177225, 30-177226,
						30-177227, 30-177228, 30-177229,
						30-177230, 30-177231, 30-177232,
						30-177233, 30-177234, 30-177235,
						30-177236, 30-177237, 30-177238,
						30-177239, 30-177240, 30-177241,
						30-177242, 30-177243, 30-177244,
						30-177245, 30-177246, 30-177247,
						30-177248, 30-177249, 30-177250,
						30-177251, 30-177252, 30-177253,
						30-177254, 30-177255, 30-177256,
						30-177257, 30-177258, 30-177259,
						30-177260, 30-177261, 30-177262,
						30-177263, 30-177264, 30-177265,
						30-177266, 30-177267, 30-177268,
						30-177269, 30-177270, 30-177271,
						30-177272, 30-177273, 30-177274,
						30-177275, 30-177276, 30-177277,
						30-177278, 30-177279, 30-177280,
						30-177281, 30-177282, 30-177283,
						30-177284, 30-177285, 30-177286,
						30-177287, 30-177288, 30-177289,
						30-177290, 30-177291, 30-177292,
						30-177293, 30-177294, 30-177295,
						30-177296, 30-177297, 30-177298,
						30-177299, 30-177300, 30-177301,
						30-177302, 30-177303, 30-177304,
						30-177305, 30-177306, 30-177307,
						30-177308, 30-177309, 30-177310,
						30-177311, 30-177312, 30-177313,
						30-177314, 30-177315, 30-177316,
						30-177317, 30-177318, 30-177319,
						30-177320, 30-177321, 30-177322,
						30-177323, 30-177324, 30-177325,
						30-177326, 30-177327, 30-177328,
						30-177329, 30-177330, 30-177331, 30-177332
						30-177332, 30-177333, 30-177334, 30-177335, 30-177336, 30-177337
						30-177335, 30-177336, 30-177337, 30-177338, 30-177330, 30-177340
						30-177338, 30-177339, 30-177340,
						30-177341, 30-177342, 30-177343, 30-177344, 30-177346
						30-177344, 30-177345, 30-177346,
						30-177347, 30-177348, 30-177349, 30-177350, 30-177351, 30-177352
						30-177350, 30-177351, 30-177352,
						30-177353, 30-177354, 30-177355, 30-177356, 30-177357, 30-177358,
						30-177330, 30-177337, 30-177330,

Page 4 of 5 SCCIC 9/11/2018 3:49:07 PM

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
						30-177359, 30-177360, 30-177361, 30-177362, 30-177363, 30-177364, 30-177365, 30-177366, 30-177367, 30-177368, 30-177369, 30-177370, 30-177371, 30-177372, 30-177373, 30-177374, 30-177375, 30-177376, 30-177377, 30-177378, 30-177379, 30-177380, 30-177381, 30-177382, 30-177386, 30-177386, 30-177387, 30-177388, 30-177389, 30-177390, 30-177391, 30-177392, 30-177393, 30-177394, 30-177395, 30-177396, 30-177397, 30-177395, 30-177396, 30-177397, 30-177398, 30-177399, 30-177400, 30-177401, 30-177402, 30-177403, 30-177404, 30-177405, 30-177406, 30-177407, 30-177408, 30-177409, 30-177410, 30-177411, 30-177412, 30-177416, 30-177417, 30-177418, 30-177419, 30-177420, 30-177421, 30-177422, 30-177422, 30-177424, 30-177422, 30-177424, 30-177424, 30-177425, 30-177424, 30-177425, 30-177424, 30-177425, 30-177424, 30-177425, 30-177425, 30-177424, 30-177425, 30-177424, 30-177425, 30-177425, 30-177424, 30-177425, 30-177424, 30-177425, 30-177424, 30-177425, 30-177424, 30-177425, 30-177424, 30-177425, 30-177424, 30-177425, 30-177424, 30-177425, 30-177424, 30-177425, 30-177424, 30-177425, 30-177424, 30-177425, 30-177425, 30-177424, 30-177425, 30-177425, 30-177425, 30-177425, 30-177424, 30-177425,
OR-04259		2007	Becker, Kenneth, Goodman, John, Sewell, Kristin, and Van Galder, Sarah	Cultural Resources Monitoring Report, Orange County Water District Groundwater Replenishment System, Orange County, California	SRI	30-001670, 30-001671, 30-100402

Page 5 of 5 SCCIC 9/11/2018 3:49:07 PM

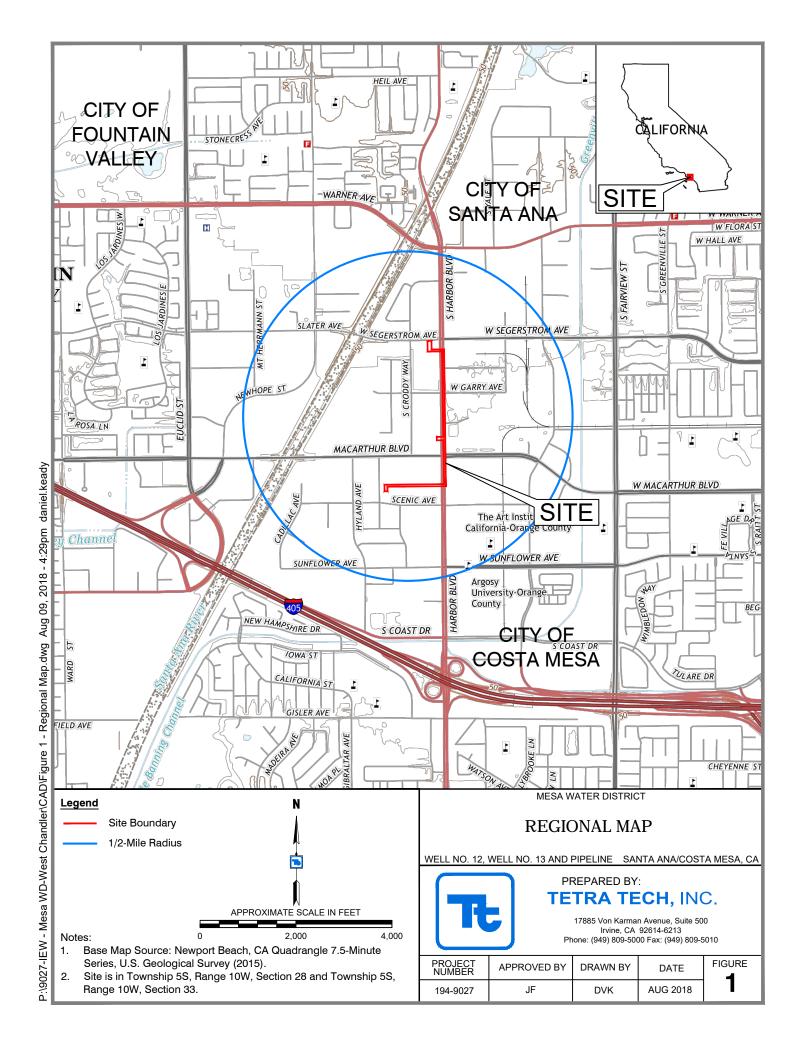
Resource List

Primary No.	Trinomial	Other IDs	Туре	Age	Attribute codes	Recorded by	Reports
P-30-176943		OHP Property Number - 154087; Resource Name - Ana Mesa Inn; Other - map #11; Other - zip 92626	Building	Historic	HP05 (Hotel/motel)	2000 (McElroy, Sheila, Circa: Historic Property Development)	OR-03776

Page 1 of 1 SCCIC 9/11/2018 3:49:12 PM

Cultural Resource Record Search Review Mesa Water Well Project

ENCLOSURE 2 NAHC SACRED LANDS FILE SEARCH RESULTS



Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd, Suite 100 West Sacramento, CA 95501 (916) 373-3710 (916) 373-5471 – Fax nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project:	
County:	
Township:	Range: Section(s):
Company/Firm	n/Agency:
Contact Perso	n:
Street Addres	s:
City:	Zip:
	Extension:
Fax:	
Email:	
Project Descr	
Project Lo	ocation Map is attached

SLF&Contactsform: rev: 05/07/14

NATIVE AMERICAN HERITAGE COMMISSION

Environmental and Cultural Department 1550 Harbor Blvd., ROOM 100 West SACRAMENTO, CA 95691 (916) 373-3710 Fax (916) 373-5471



August 27, 2018

Jenna Farrell

Tetra Tech

Sent by Email: jenna.farrell@tetratech.com

Re: Mesa Water Well Project, Orange County

Dear Ms. Farrell,

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not preclude the presence of cultural resources in any project area. Other sources for cultural resources should also be contacted for information regarding known and/or recorded sites.

Enclosed is a list of Native Americans tribes who may have knowledge of cultural resources in the project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these tribes, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at 916-573-1033 or frank.lienert@nahc.ca.gov.

Sincerety.

Frank Lienert

Associate Governmental Program Analyst

Native American Heritage Commission Native American Contacts August 27, 2018

Juaneno Band of Mission Indians Acjachemen Nation

Matias Belardes, Chairperson

32161 Avenida Los Amigos

San Juan Capistrano , CA 92675

Juaneno

kaamalam@gmail.com

(949) 444-4340 (Cell)

Juaneno Band of Mission Indians Acjachemen Nation

Jovce Perry, Tribal Manager

4955 Paseo Segovia

Irvine

- CA 92612

kaamalam@gmail.com

(949) 293-8522

Gabrieleno/Tongva San Gabriel Band of Mission Indians

, CA 91778

Anthony Morales, Chairperson

P.O. Box 693 San Gabriel

Gabrielino Tongva

Gabrielino Tongva

Gabrielino-Tongva Tribe

Linda Candelaria, Chairperson

No Current Address on File Gabrielino

(626) 483-3564 Cell (626) 286-1262 Fax

Gabrielino /Tongva Nation

GTTribalcouncil@aol.com

Sandonne Goad, Chairperson

106 1/2 Judge John Aiso St., #231

- CA 90012 Los Angeles sgoad@gabrielino-tongva.com

(951) 807-0479

Gabrieleno Band of Mission Indians - Kizh Nation

Andrew Salas, Chairperson

P.O. Box 393

Gabrielino

Juaneno

Covina

, CA 91723 admin@gabrielenoindians.org

(626) 926-4131

Juaneno Band of Mission Indians Acjachemen Nation

Teresa Romero, Chairwoman

31411-A La Matanza Street

San Juan Capistrano , CA 92675

Juaneno

tromero@iuaneno.com

(949) 488-3484

(530) 354-5876 Call

(949) 488-3294 Fax

Gabrielino-Tongva Tribe

Charles Alvarez. Councilmember

23454 Vanowen St.

Gabrielino

West Hills

, CA 91307

roadkingcharles@aol.com

(310) 403-6048

Juaneño Band of Mission Indians Sonia Johnston, Tribal Chairperson

P.O. Box 25628

Juaneno

Santa Ana

- CA 92799

sonia.johnston@sbcglobal.net

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American Tribes with regard to cultural resources assessments for the proposed Mesa Water Well Project, Orange County

REPORTS:

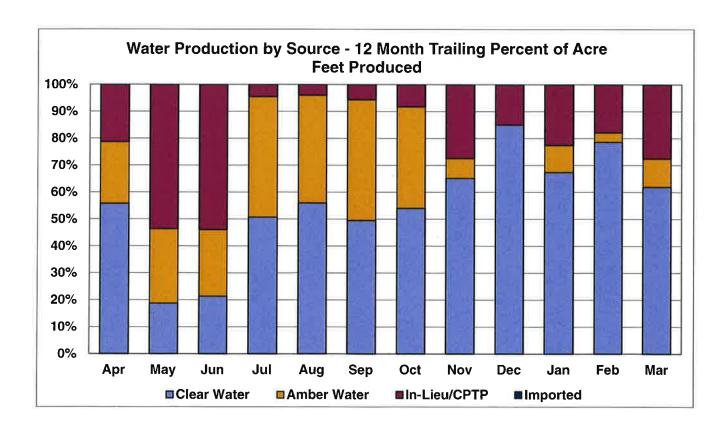
- 13. REPORT OF THE GENERAL MANAGER:
 - March Key Indicators Report
 - Other (no enclosure)

Goal #1: Provide a safe, abundant, and reliable water supply

FY 2019 Potable Production (Acre Feet)

Water Supply Source	FY 2019 YTD Actual (AF)	FY 2019 YTD Budget (AF)	FY 2019 Annual Budget (AF)
Clear Water	7,269	8,581	12,241
Amber Water (MWRF)	3,079	3,333	4,419
Imported	0	0	0
Basin Management Water	1,573	1,000	1,000
Total Production	11,921	12,914	17,660

YTD actual water production (AF) through March 31, 2019



Goal #1: Provide a safe, abundant, and reliable water supply

FY19 System Water Quality – This data reflects samples taken in February

Distribution System:	Average	Range	MCL
Chlorine Residual (mg/L) Compliance	1.65 0.49 – 2.58 Current RAA = 1.9		4 RAA
Coliform Positive % Compliance	0	0	5
Temperature (° F)	67.6	58 – 75	None

Reservoir I & II:	Average	Range	MCL
Chlorine Residual (mg/L)	1.07	0.04 1.73	None
Monochloramine (mg/L)	0.96	0 – 1.62	None
Ammonia (mg/L)	0.23	0.02 - 0.41	None
Temperature (° F)	68.5	61 – 73	None

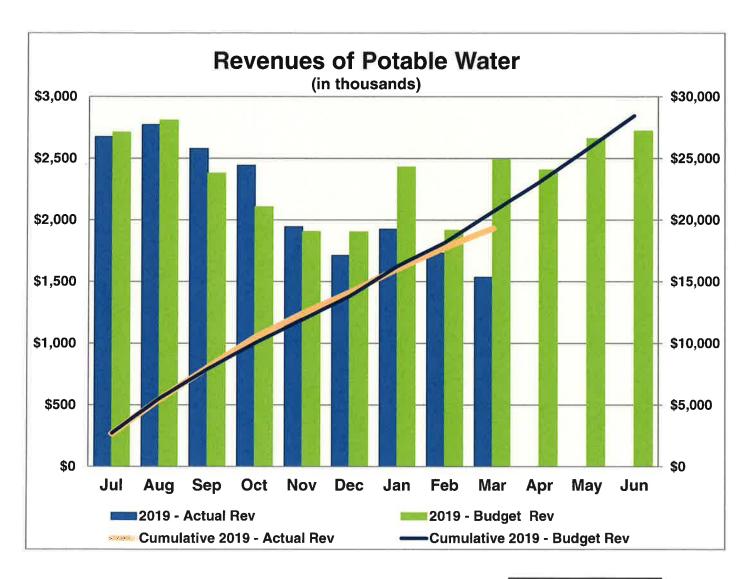
Wells (Treated):	Average	Range	MCL
Chlorine Residual (mg/L)	2.57	2.21 - 2.75	None
Monochloramine (mg/L)	2.51	2.19 – 2.76	None
Ammonia (mg/L)	0.57	0.49 - 0.69	None
Temperature (° F)	69.8	68 – 75	None

MWRF:	Average	Range	MCL
Chlorine Residual (mg/L)	2.78	2.54 – 3.01	None
Monochloramine (mg/L)	2.71	2.56 – 2.87	None
Ammonia (mg/L)	0.63	0.61 – 0.65	None
Temperature (° F)	79	79	None
Color (CU) Compliance	ND	ND	15
Odor (TON) Compliance	1	1	3

Water Quality Calls/Investigations:

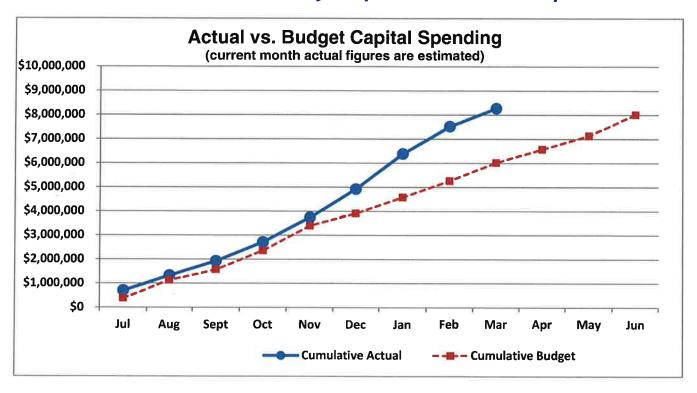
Total Calls	.4
Total Investigations (from calls)	1

Goal #2: Practice perpetual infrastructure renewal and improvement



_			Favorable (Un	favorable)
[Actual	Budget	Difference	%
Total YTD \$	19,311,433	20,653,821	(1,342,388)	(6.50%)

Goal #3: Be financially responsible and transparent



Goal #4: Increase public awareness about Mesa Water® and about water

Web Site Information

Web Site Information	February 2019	March 2019
Visits to the web site	5618	5982
Unique visitors	3196	3558
(First time to the site)		
Average per day	200	193
Average visit length	1 minute, 24 seconds	1 minute, 24 seconds
Page visited most	Home	Home
Second most visited page	Online Bill Pay	Online Bill Pay
Third most visited page	Human Resources	Human Resources
Fourth most visited page	Departments	Departments
Fifth most visited page	Contact	Contact
Most downloaded file	Salary Ranges by Job	Standard Specifications
	Classification & Level	and Standard Drawings for
		the Construction of Water
		Facilities
Second most downloaded	2018 Water Quality Report	Salary Ranges by Job
file		Classification & Level
Most active day of the week	Monday	Monday
Least active day of the week	Saturday	Saturday

Total visits since June 1, 2002 <u>1,318,460</u>

Water Vending Machine Information

Vending Machine	Vend	March 2019	Totals
Location	Measurement	Vends	Vends
Mesa Water Office	1 gal	4,719	342,884

Goal #5: Attract and retain skilled employees

	- Key		FY 2019		
DEPARTMENT:		BUDGET	FILLED	VACANT	COMMENTS:
OFFICE OF THE GENERAL MANA	AGER:				
General Manager		1.00	1.00	0.00	
Business Administrator		1.00	1.00	0.00	
	Subtotal	2.00	2.00	0.00	
ADMINISTRATIVE SERVICES:					
Administrative Services		5.00	5.00	0.00	
	Subtotal	5.00	5.00	0.00	
CUSTOMER SERVICES:		2.00		5.00	
Conservation		1.00	1.00	0.00	
Customer Service		9.00	7.00	2.00	Field Customer Service Representative (2)
		0.00	1100	2.00	- vacant/using temporary
					assistance/recruitment in process
	Subtotal	10.00	8.00	2.00	·
ENGINEERING:					
Engineering		4.00	4.00	0.00	
	Subtotal	4.00	4.00	0.00	
EXTERNAL AFFAIRS:					
Legislative & Governmental Affair	s	1.50	1.50		
	Subtotal	1.50	1.50	0.00	
FINANCIAL SERVICES:					
Financial Reporting/ Purchasing		5.00	4.00	1.00	Buyer - vacant/using temporary assistance/
Accounting		1.00	1.00	0.00	recruitment in process
	Subtotal	6.00	5.00	1.00	, , , , , , , , , , , , , , , , , , ,
HUMAN RESOURCES:		0.00			
Human Resources		3.00	2.00	1.00	Sr. Human Resources Analyst - vacant/
					using temporary assistance
	Subtotal	3.00	2.00	1.00	,
PUBLIC AFFAIRS:					
Outreach, Education & Communic	ations	2.50	1.50	1.00	Public Affairs Manager - vacant
	Subtotal	2.50	1.50	1.00	
WATER OPERATIONS:					
Supervision/Support		6.00	6.00	0.00	
Distribution		10.00	9.00	1.00	Facility Maintenance Worker I/II -
					vacant/using temporary assistance/
					recruitment in process
Production		3.00	3.00	0.00	
Water Quality		2.00	2.00	0.00	
	Subtotal	21.00	20.00	1.00	
TOTAL BUDGETED POSITIONS:		55.00	49.00	6.00	

Goal #6: Provide outstanding customer service

Customer Calls

Call Type	FY19 YTD	March 2019	YTD Weekly Average
General Billing Question	1703	204	44
Service Requests	1483	147	38
High Bill	1637	172	42
Payments	2000	206	51
Late Fee	1515	211	39
Account Maintenance	370	41	9
On-Line Bill Pay	1301	165	33
Water Pressure	40	8	1
No Water	230	15	6
Conservation	196	20	5
Water Waste	85	8	2
Other (District info. other utility info. etc.)	1942	207	50
Rate Increase	36	2	1
Fluoridation	9	0	1
TOTAL CUSTOMER CALLS	12547	1406	322
AVERAGE ANSWER TIME (Seconds)	10	10	10

Online Bill Pay Customers

Current Customers Enrolled	FY 2019 YTD	March 2019	YTD Weekly Average
13610	1731	345	44

REPORTS:

14. DIRECTORS' REPORTS AND COMMENTS

DIRECTORS' REPORTS (AB 1234) PER CA GOVERNMENT CODE SECTION 53232.3 (d)

In accordance with CA Government Code 53232.3 (d), the following report identifies the meetings for which Mesa Water Directors received expense reimbursement.

Jim Atkinson

Meetings Attended

JIIII ALKIIISOII	weetings Attended
Reimbursement Date:	Description, Date
03/11/19	Urban Water Institute Conference, 2/26 – 2/28
03/18/19	MWDOC/OCWD Jt. Meeting, 1/23
03/18/19	WACO Meeting, 2/1
03/18/19	MWDOC Planning & Operations Committee Meeting, 2/4
03/18/19	MWDOC/MWD Jt. Meeting, 2/6
03/18/19	OCWD Board Meeting, 2/6
03/18/19	ACWA Region 10 Meeting, 2/8
03/18/19	Meeting w/ General Manager, 2/15
03/18/19	WACO Planning Committee Meeting, 2/19
03/18/19	MWDOC Public Affairs & Legislation Committee Meeting, 2/19
03/18/19	MWDOC Board Meeting, 2/20
03/18/19	OCWD Board Meeting, 2/20
03/18/19	WACO Meeting, 3/1
03/18/19	MWDOC Planning and Operations Committee Meeting, 3/4
03/18/19	MWDOC/MWD Jt. Meeting, 3/6
03/18/19	OCWD Board Meeting, 3/6
03/18/19	MWDOC Admin & Finance Committee Meeting, 3/13

Fred R. Bockmiller, P.E.

Meetings Attended

Reimbursement Date:	Description, Date
03/18/19	OCWD Board Meeting, 2/6
03/18/19	OCWD Board Meeting, 2/20
03/18/19	Costa Mesa Chamber Meeting, 2/26
03/18/19	Meeting w/ General Manager, 2/27
03/18/19	OCWD Board Meeting, 3/6
03/18/19	Yorba Linda Water District Board Meeting, 3/12
03/27/19	ACWA/JPIA Risk Management Committee Meeting, 3/19 – 3/20

Marice H. DePasquale

Meetings Attended

Reimbursement Date:	Description, Date
03/11/19	ACWA Legislative Symposium, 3/5 – 3/6
03/18/19	OC BIA Outlook Meeting, 1/28
03/18/19	ISDOC Quarterly Meeting, 1/31
03/18/19	South Coast Plaza Lunar New Year Event 1/31
03/18/19	WACO Meeting, 2/1
03/18/19	Meeting w/ President Dewane, 2/13
03/18/19	Meeting w/ J. McCusker, 2/20



Shawn Dewane

Meetings Attended

Reimbursement Date:	Description, Date
03/01/19	Meeting w/ Director Fisler, 1/29
03/01/19	Meeting w/ Director Fisler, 2/12
03/01/19	Meeting w/ Vice President DePasquale, 2/13
03/01/19	Meeting w/ Director J. Thomas, 2/15
03/01/19	Meeting w/ Vice President DePasquale, 2/20
03/18/19	Meeting w/ Newport City Council Member, 1/24
03/18/19	Meeting w/ City of Costa Mesa, 2/11
03/18/19	I Heart Costa Mesa Interview, 3/4

James R. Fisler

Meetings Attended

	3
Reimbursement Date:	Description, Date
03/18/19	ISDOC Quarterly Meeting, 1/31
03/18/19	WACO Meeting, 2/1
03/18/19	ISDOC Executive Committee Meeting, 2/5
03/18/19	Meeting w/ President Dewane, 2/12
03/18/19	WACO Meeting, 3/1
03/18/19	ISDOC Executive Committee Meeting, 3/5

There are no support materials for this item.