

SANTA BARBARA LOCAL AGENCY FORMATION COMMISSION
EXECUTIVE OFFICER'S REPORT

OUT-OF-AGENCY SERVICE AGREEMENT (OASA)

April 6, 2022 (Agenda)

LAFCO 23-02 City of Santa Maria to provide potable Water to the Ray Water Company (RWC).

PROPONENT: City of Santa Maria on behalf of Ray Water Company.

ACREAGE & LOCATION: Approximately 6.6 acres located west on Betteravia Road, Santa Maria, CA 93456. (Includes: Right-of-Way, Betteravia Road, APNs 111-030-005 (3.01 acres), 111-030-006 (0.30 acres), 111-030-007 (0.20 acres), 111-030-008 (0.33 acres), 111-030-009 (0.43 acres), 111-030-011 (0.49 acres), 111-30-012 (0.25 acres), 111-030-013 (0.22 acres), 111-040-010 (1.40 acres) **(Attachment A)**).

PURPOSE: Ray Water Company is requesting a domestic water connection from the City of Santa Maria since the existing well water source has been tested to have nitrate levels exceeding the State-mandated maximum contaminant level, and has been cited by Santa Barbara County Environmental Health Services (SBC EHS) for noncompliance. The existing site contains residential development including eleven single-family residences and two commercial connections.

HISTORY: According to the citation issued on March 6, 2020, Santa Barbara County Health Services determined ongoing nitrate concentrations above the MCL. The Compliance Order required RWC to inform all residents of the elevated nitrate concentrations, submit a progress report, and submit a corrective action plan to resolve the nitrate issue. RWC has received numerous notices of violation (from Santa Barbara County) dating back to 1980 **(Attachment B)**.

RWC is currently served by one well, not equipped with nitrate treatment, which provides water for their operations and for daily use by approximately 40 employees that work on-site. The business has provided proper notification to the water system users, and has posted nitrate exceedance notifications at all sinks and fountains in the facility. Ray Water Company is required to submit a plan to EHS for approval. The applicant is requesting a domestic water connection to best mitigate the violation, since there is nearby existing water main that runs along W. Betteravia Road.

The State Water Resources Control Board has identified the Ray Water Company in need of meeting regulatory compliance and has identified the system as a public health threat.

OUT-OF-AGENCY SERVICE AGREEMENTS:

Much of the following information was included in the City of Santa Maria's OASA Application to LAFCO (**Attachment C**). It is repeated here as pertinent information for the Commission's consideration:

"Ray Water Company is currently served by one well, not equipped with nitrate treatment, with thirteen service connections of which water is provided for eleven residential structures and two commercial structures. There are approximately forty-five residents. Ray Water Company has distributed notification or made direct contact to all residents. Ray Water Company is required to submit a corrective action plan to EHS for approval.

The applicant is requesting a domestic water connection to best mitigate the violation. Two other options were considered to mitigate the violation including installing a treatment system for nitrate within the existing well and drilling a new well. After reviewing the two options, the cost and potential ineffectiveness of mitigating the violation for each alternative led to the determination that full consolidation within the City's existing water system was the most reliable course of action.

This property is located just outside of city limits but is within the City's sphere of influence. Properties to the north, south and east are within city limits. Staff believes that a domestic water connection would be the logical solution to Ray Water Company's water quality violation affecting public health and safety.

Annexation of the property into the City's boundary is not possible at this time, since it would require a larger study of the area, and an evaluation of the City's future growth, in compliance with LAFCO objectives and policies. These efforts may be part of a future comprehensive General Plan update which is anticipated to include significant public outreach, stakeholder input, regional coordination, data collection, and environmental analysis. This is a multi-year process that is expected to incur significant costs. The request for domestic water service is an urgent need. The request for domestic water service is not intended for development or expansion purposes, but solely to address an emergency health and safety situation."

The pertinent section of LAFCO's Authorization to Approve Out of Agency Service Agreement is included in **Attachment D**.

GENERAL ANALYSIS:

1. Description of Project

Since the parcels are in the unincorporated area, land use authority within the County of Santa Barbara is General Industry and zoned M-2 (Industrial). The County' s Comprehensive Plan Designation is Urban Area.

The existing site consist of residential development including eleven single-family residences and two commercial connections on the 6.6-acre site, in compliance with Section 35.25.020 of the County Land Use and Development Code;

The property is currently served by a well that has a documented existing or impending threat to the public health and safety.

2. Requirement for LAFCO Approval

LAFCO regulates boundary changes and extensions of service without boundary changes. Government Code Section 56133 states that "A city or a district may provide new or extended services by contract or agreement outside its boundaries only if it first requests and receives written approval from the commission in the affected county."

It further provides that LAFCO "may authorize a city or district to provide new or extended services outside its jurisdictional boundaries but within its sphere of influence in anticipation of a later change of organization."

3. Sphere of Influence

The area proposed for the Out-of-Agency Agreement is within the City of Santa Maria's sphere of influence (**Attachment A**). The proposed service area is less than 60-feet from the City limits and the sphere of influence Section 56133(c) also allows service if outside a sphere of influence to respond to an existing or impending threat to the public health and safety of residents of the affected territory if both of the following requirements are met:

(1) The entity applying for the contract approval has provided the commission with documentation of a threat to the health and safety of the public or the affected residents.

(2) The commission has notified any alternate service provider, including any water corporation as defined in Section 241 of the Public Utilities Code, or sewer system corporation as defined in Section 230.6 of the Public Utilities Code, that has filed a map and a statement of its service capabilities with the commission.

The current Municipal Service Review and Sphere of Influence update includes Ray Water Company as a Study Area #1. The Staff recommendation is to maintain the area to the City's SOI. As a result of this application for an Out-of-Agency service agreement under an existing public health and safety threat, the OASA should be authorized. However, in the future, the site may become part of the City based on the following determinations: the site is located on the western edge of the City of Santa Maria. The existing uses are anticipated to use 4,885 gallons per day to meet existing demand. The State Water Resources Control Board has identified the Ray Water Company in need of meeting regulatory compliance and has identified the system as a public health threat. RWC has received numerous notices of violation (from Santa Barbara County) dating back to 1980. Santa Barbara County issued RWC an enforcement action Compliance Order on March 6, 2020 due to ongoing nitrate concentrations above the MCL. The Compliance Order required RWC to inform all residents of the elevated nitrate concentrations, submit a progress report, and submit a corrective action plan to resolve the nitrate issue. The consolidation of the RWC and City system would resolve the compliance order. The City would extend water main, a distribution line, and service connections. If future annexation is requested or conditioned maintaining the sphere would be necessary.

4. Plan for Services: The City of Santa Maria provided the following statement in response to LAFCO staffs Plan for Service request: The existing city water main runs nearby the site in W. Betteravia Road. The extension of the main waterline for the provision of domestic water and new service connection to the facility are required.

"The proposed project consists of consolidating Ray Water Company with the City of Santa Maria's water system. The proposed project consists of a water main, a distribution line, and service connections. In total, these components include 4,860 linear feet (0.92 miles) of pipeline.

The water main will extend from the intersection Mahoney Road and Rayville Lane to the intersection of Betteravia Road and A Street to connect with the City of Santa Maria water system. The water main will be approximately 3,400 feet in length. At the intersection of Mahoney Road and Rayville Lane, the water main transitions into an eight-inch water distribution line. This distribution line runs south down Rayville Lane. The distribution line will connect the water main described above to each of the service connections described below. This line will be approximately 500 feet in length.

Each service connection from the distribution line to the residences may vary in length; an average of 60 linear feet per connection has been used to generate a total approximate length of 780 feet for all of the service connections. A typical service line is one to two inches in diameter."

5. Landowner Consent to Annex in Order to Receive Services

Commission policy states that when property may ultimately be annexed to a city or a district, approval of an Out-of-Agency Service Agreement should require the landowner to agree to annex the territory with a consent to annex form. This is a condition of approval. No specific timeframe has been required. The City has indicated it would need to conduct public outreach, stakeholder input, regional coordination, and direction by local and regional decisionmakers. However, the City is currently building out, and land use inventory for development; in particular, new residential housing units, is limited. Given state mandates to build more housing, staff anticipates the study of areas for annexation to ensure an adequate land inventory for future population growth. City staff also anticipates working with other agencies in the region in addressing future growth. This process is expected to take 2+ years to complete.

6. Environmental Impact of the Proposal

The City of Santa Maria has adopted a Mitigated Negative Declaration (SCH# 2022060195) has been conducted for the project.

The purpose of the environmental review process is to provide information about the environmental effects of the actions and decisions made by LAFCO and to comply with the California Environmental Quality Act (CEQA). In this case, the City acting as Lead Agency completed a Mitigated Negative Declaration under the State Guidelines (**Attachment F**).

Conclusion:

The City of Santa Maria, on behalf of Ray Water Company, the property owner is requesting approval of an Out-of-Agency Service Agreement. The Commission has the authority to approve OASA' s pursuant the Government Code Section 56133, within the agencies sphere of influence in anticipation of future annexation. The property is within the City of Santa Maria's sphere of influence. In addition, the application is in response to an existing or impending threat to the public health and safety and would be approvable under this determination.

The well has been determined to be in violation of the California Safe Drinking Water Act, due to surveys indicating nitrate levels exceeding the maximum contaminant level. The City has an existing water main in the road bordering the site and is willing to connect the property for potable water for residents and employees.

The main CEQA issue for this project is whether the provision of potable water services to Ray Water Company would cause growth inducing impacts. This extension of services can be found to NOT be growth inducing for the following reasons:

- There is an existing City water line already located within the street right of way within reasonable distance to the site;
- The new infrastructure needed for the project would be main line extension from A Street to Ray Water Company site.
- The project area and community to be served by this project is already receiving waters and developed. The project would not include housing or development in areas that could induce growth and would also not remove any barriers that could result in population growth.
- Provision of services to Ray Water Company site would be limited to the properties listed above in this general industry area due to the unique threat to health and safety caused by the failure of the onsite well that previously provided potable water to Ray Water Company.
- Provision of potable water services to the residences and commercial use sources under an out of agency service agreement pursuant to the findings of

Government Code section 56133(b), which is that services may be extended outside of a city's or district's boundaries only if the property is within the sphere of influence in anticipation of a later change of organization. This is almost certain to require significant planning studies, including general plan amendments and associated CEQA review, for the City to consider expanding its service area in anticipation of annexation of the area including any properties surrounding the area already within the sphere of influence.

ATTACHMENTS

Attachment A - Map of the Proposed Out-of-Agency Service Area

Attachment B - Documentation of Existing Threat to Public Health and Safety

Attachment C - City of Santa Maria Resolution of Application

Attachment D - LAFCO Authorization to Provide Out-of-Agency Services

Attachment E - City of Santa Maria Environmental Determination

Attachment F - LAFCO Notice of Determination

Attachment G - LAFCO Out of Agency Service Agreement

ALTERNATIVES FOR COMMISSION ACTION

After reviewing this report and any testimony or materials that are presented, the Commission can follow one of the following options:

OPTION 1 - APPROVE the request for an Out-of-Agency Service Agreement (**Attachment G**), subject to the following terms and conditions:

- a) The City's provision of water services shall be limited to the 6.6 acres located at Right-of-Way, Betteravia Road, APNs 111-030-005 (3.01 acres), 111-030-006 (0.30 acres), 111-030-007 (0.20 acres), 111-030-008 (0.33 acres), 111-030-009 (0.43 acres), 111-030-011 (0.49 acres), 111-30-012 (0.25 acres), 111-030-013 (0.22 acres), 111-040-010 (1.40 acres).
- b) The landowners shall execute and record an agreement approved by the Executive Officer that consents to any future annexation of the territory, which agreement shall enure to and bind all successors in interest to the property.
- c) Said out-of-agency service agreement is for potable water service only shall remain in effect until such time as an annexation is approved by the Commission.

OPTION 2 - Deny the request.

OPTION 3 - Continue the item to obtain additional information.

RECOMMENDED ACTION:

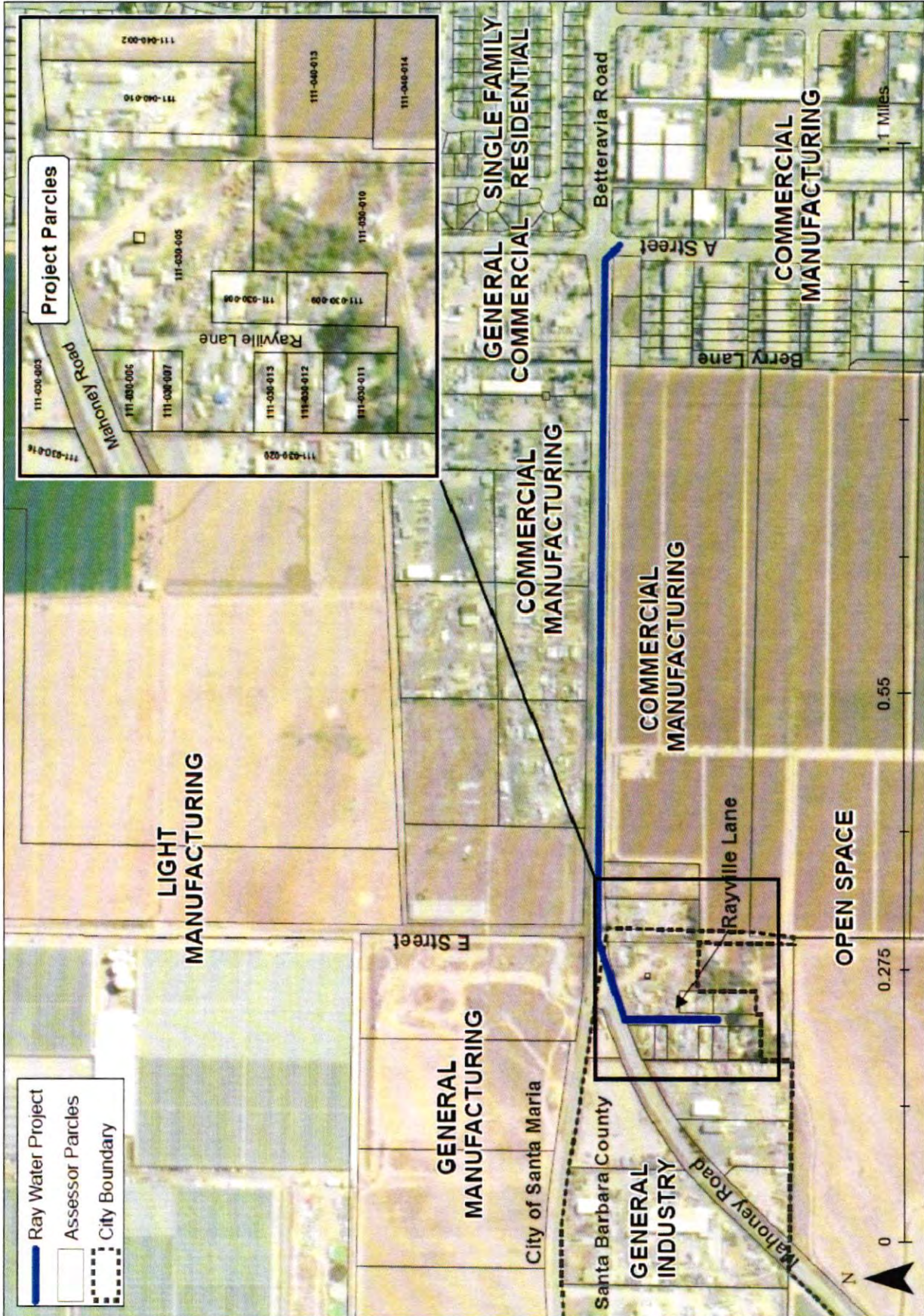
Approve OPTION 1.



Mike Prater
Executive Officer

LOCAL AGENCY FORMATION COMMISSION

Ray Water Company Vicinity Map



Document Path: D:\GIS\Projects\2020-40 Ray Water\Final Products\15 Figures\Land Use Map.mxd

<p>Santa Maria Orcutt</p>	<p>Land Use Map</p>	<p>Date: 09/16/2021 Scale: 1 inch = 0.12 miles Project: 2020-40</p>	<p>Denise Duffy and Associates, Inc. Environmental Consultants & Resource Planners Monterey, CA 93940 (831) 373-1441</p> <p>Monterey San Jose</p>	<p>Figure 3</p>
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March 6, 2020

Ray Bartlett
2275 Rayville Lane
Santa Maria, CA 93455

Water System Name: RAY WATER CO.
Water System Number: 4200867

COMPLIANCE ORDER NO. 04_72_20R_009
NITRATE MAXIMUM CONTAMINANT LEVEL VIOLATION
FOR COMPLIANCE PERIOD 2020

Enclosed is a Compliance Order issued to the RAY WATER CO. state small water system.

Your receipt of this notice indicates that your water system has violated the Nitrate Maximum Contaminant Level requirements during the compliance period of 2020.

The following are the instructions on how to complete the noticing and what information will need to be returned to the office of the Santa Barbara County, Environmental Health Services (EHS):

- A. A completed, signed, and dated **Notification of Receipt** verifying that the RAY WATER CO. has received this Compliance Order and understands that it contains legally enforceable directives with due dates, that must be returned to this office by **March 20, 2020**.
- B. Notify all persons served by the RAY WATER CO. of the violation by issuing a **Public Notification** each month the water system is in violation. The Public Notification must include: the action(s) taken to eliminate the cause(s) of the failure, advise the consumers regarding water use, and what precautions they should take. This notice must be signed and dated, then posted in conspicuous locations throughout the area served by the water system **and** by one of the following methods to reach persons not likely to be reached by public posting: (1) Publication in a local newspaper or newsletter distributed to customers; (2) E-mail message to employees or students; (3) Posting on the Internet or intranet; or (4) Direct delivery to each customer. The notice shall be posted and issued to water customers as soon as possible within 30 days after the date of this notice, or by **April 3, 2020**. A **Compliance Certification Form** must be submitted within 10 days following each Public Notification.

- C. Submit a **Corrective Action Plan** by **July 31, 2020**, identifying improvements to the water system designed to correct the water quality problems identified as an exceedance of the nitrate maximum contaminant level and ensure that the RAY WATER CO. delivers water to consumers that meet primary drinking water standards.
- D. Submit a **Quarterly Progress Report** by **June 30, 2020**, and quarterly thereafter showing actions taken during the previous quarter (calendar three months) to comply with the Corrective Action Plan.

If you have any questions regarding this matter, please contact Belinda Huy at (805) 346-8466 or by email at Belinda.Huy@sbcphd.org.

Sincerely,

Belinda Huy

Belinda Huy
Senior Environmental Health Specialist
Drinking Water Systems Program
Environmental Health Services
Santa Barbara County, Public Health Department

COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SERVICES

Water System Name: RAY WATER CO.

Water System Number: 4200867

Attention: Ray Bartlett
2275 Rayville Lane
Santa Maria, CA 93455

Issued: March 6, 2020

**COMPLIANCE ORDER FOR NONCOMPLIANCE WITH
COUNTY OF SANTA BARBARA, CODE OF ORDINANCES, SECTION 34B-22(b)(A) AND
TITLE 22 OF THE CALIFORNIA CODE OF REGULATIONS, SECTION 64432.1(a)**

**NITRATE MAXIMUM CONTAMINANT LEVEL VIOLATION
FOR THE COMPLIANCE PERIOD OF 2020**

This letter is to inform you of a violation of the Nitrate Maximum Contaminant Level pursuant to the County of Santa Barbara, Code of Ordinances (hereinafter "County Code"), Section 34B-22(b)(A) and the Title 22 of the California Code of Regulations (hereinafter "CCR"), Section 64432.1(a). The County Code authorizes the Santa Barbara County, Environmental Health Services Division (hereinafter "EHS") to issue a Compliance Order to a state small water system when EHS determines that the state small has violated or is violating any regulation, standard, permit, or order issued or adopted thereunder.

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EHS hereby issues Compliance Order No. 04_72_20R_009 (hereinafter “Order”) to the RAY WATER CO. (hereinafter “Water System”), for violation of the County Code, Section 34B-22(b)(A) Water quality monitoring for state small water systems and Title 22, CCR, Section 64432.1(a) Monitoring and Compliance – Nitrate and Nitrite.

STATEMENT OF FACTS

The Water System is classified as a state small water system with a population of approximately 40 residents, serving 14 connections. The Water System is using a single vertical groundwater source to supply potable water to the distribution system.

County Code, Section 34B-22(b)(A) and Title 22, CCR, Section 64432.1(A) requires all state small water systems to comply with the primary drinking water standards for nitrate. Primary drinking water standards include maximum levels of contaminants and monitoring and reporting requirements as specified in regulations adopted by EHS.

County Code, Section 34B-22(b)(A) states that if any sample result exceeds the maximum contaminant level (MCL), for either nitrates or nitrites, the state small water system shall meet all requirements of Title 22, CCR, Section 64432.1(a). The MCL for Nitrate (as Nitrogen) is 10.0 milligrams per liter (hereinafter “mg/L”).

EHS received laboratory results for two nitrate samples collected on 02/21/2020 from the distribution system and on 03/04/2020 from the groundwater well. The samples showed a nitrate concentration of 35.0 mg/L and 46.0 mg/L, respectively. The average of the two nitrate samples is 40.5 mg/L. A summary of the Water System’s nitrate monitoring results are presented in Table 1 below:

Table 1 – Nitrate Sample Results

Sample Date	Result (mg/L)	Type of Sample
02/21/2020	35.0	Initial
03/04/2020	46.0	Confirmation

1

2 **DETERMINATION**

3 EHS has determined that the Water System has failed to comply with primary drinking
4 water standards pursuant to County Code, Section 34B-22(b)(a) and Title 22, CCR,
5 Section 64432.1(a).

6

7 **DIRECTIVES**

8 To ensure that the water supplied by the Water System is at all times safe, wholesome,
9 healthful, and potable, the Water System is hereby directed to take the following actions:

10

11 1. Due to the population served, the Water System meets the requirements of a
12 community water system and shall schedule an inspection with EHS to initiate the
13 reclassification of the Water System by **April 30, 2020**.

14

15 2. On or before **March 20, 2020**, complete and submit a **Notification of Receipt**
16 included in this Order as Appendix 1 to EHS. Completion of this form confirms
17 that the Water System has received this Order and understands that it contains
18 legally enforceable directives with due dates.

19

20 3. Annual sampling for nitrate from the groundwater well must begin by **January 31,**
21 **2021**, and must continue annually thereafter as long as the system is in violation.
22 The analytical results of the samples must be submitted electronically to the EHS,
23 by the laboratory, that conducts the analysis, no later than the tenth day of the
24 month following completion of the analyses.

25

1 4. Monthly Public Notification to the customers of the Water System shall begin by
2 **April 3, 2020**, and continue monthly until EHS determines that the nitrate
3 contamination is resolved and the Water System is no longer in violation. The
4 **Public Notification** attached to this Order in Appendix 2 shall be used to fulfill
5 this Order unless otherwise approved by EHS.
6

7 The Water System must edit the wording of the Public Notification as necessary.

8 The Public Notification shall be completed in accordance with the following:

- 9 • Posting of the Public Notification in conspicuous places within the area
10 served by the Water System. The notice shall remain posted for a minimum
11 of seven (7) consecutive days and;
- 12 • By one of the following secondary methods to reach persons not likely to
13 be reached by posting:
 - 14 ➤ By publication in a local newspaper or newsletter distributed to
15 customers, by internet posting of the notice or by direct delivery to
16 each customer served by the Water System. If the Water System
17 opts to issue the notice via internet website, the public notice shall
18 remain posted for a minimum of seven (7) consecutive days.
 - 19 ➤ The Water System must determine which option will be used to
20 conduct the secondary distribution of the notice and indicate the
21 methods used on the Notification of Receipt form as required in
22 Directive 1.
- 23 • Public Notification for new customers must be conducted in conformance
24 with CCR, Title 22, Section 64463(e) where the Water System must give
25 new customers a copy of the most recent public notice prior to or at any
26 time service begins.

- Monthly Public Notification must be provided every month even when a nitrate result shows a concentration below the Nitrate MCL. The notice must be updated to include the following wording:

“Although the nitrate level(s) during the most recent monitoring period showed results below the MCL, nitrate levels in the water tend to fluctuate and it is possible that the nitrate level may increase at any time between sampling events. Public notification will continue until the nitrate problem is resolved.”

5. Complete Appendix 3: **Compliance Certification** form. Submit it together with a copy of the Public Notification required by Directive #3 to EHS within 10 days following the issue/distribution of each Public Notification. The first Compliance Certification is due by **April 17, 2020**.
5. Prepare a Corrective Action Plan for EHS approval, identifying improvements to the Water System designed to correct the water quality problems identified as an exceedance of the Nitrate MCL and ensure that the Water System delivers water to consumers that meets primary drinking water standards. The Corrective Action Plan must include a time schedule for completion of each of the phases of the project, such as design, construction, and startup, and a date that shows when the Water System will be in compliance with the Nitrate MCL. The compliance deadline must be no later than **September 1, 2021**.

By **July 31, 2020**, submit the Corrective Action Plan required to EHS. Perform the EHS-approved Corrective Action Plan, and each and every element of said plan, according to the time schedule set forth therein.

- 1 6. By **June 30, 2020**, and every three months thereafter, submit a **Quarterly**
- 2 **Progress Report** to EHS in the form provided as Appendix 4 showing actions
- 3 taken during the previous quarter (calendar three months) to comply with the
- 4 Corrective Action Plan.
- 5
- 6 7. By **November 30, 2021**, demonstrate to EHS that the water delivered by the
- 7 Water System complies with the Nitrate MCL.
- 8
- 9 8. Notify EHS in writing no later than five (5) days prior to the deadline for
- 10 performance of any Directive set forth herein if the Water System anticipates it
- 11 will not timely meet such performance deadline.
- 12
- 13

14 All submittals required by this Order, unless otherwise specified in the directives above,

15 must be electronically submitted to EHS at the following address. The subject line for all

16 electronic submittals corresponding to this Order must include the following information:

17 Water System name and number, compliance order number and title of the document

18 being submitted.

19

20 Belinda Huy

21 Belinda.Huy@sbcphd.org

22

23 EHS reserves the right to make modifications to this Order that it may deem necessary

24 to protect public health and safety. Such modifications may be issued as amendments

25 to this Order and shall be effective upon issuance.

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27 Nothing in this Order relieves the Water System of its obligation to meet the requirements

28 of any regulation, standard, permit or order issued or adopted thereunder.

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PARTIES BOUND

This Order shall apply to and be binding upon the Water System, its owners, shareholders, officers, directors, agents, employees, contractors, successors, and assignees.

SEVERABILITY

The directives of this Order are severable, and the Water System shall comply with each and every provision thereof notwithstanding the effectiveness of any provision.

FURTHER ENFORCEMENT ACTION

The California SDWA authorizes EHS, pursuant to authority delegated by the State Water Board, to issue a citation or order with assessment of administrative penalties to a public water system for violation or continued violation of the requirements of the California SDWA or any regulation, permit, standard, citation, or order issued or adopted thereunder including, but not limited to, failure to correct a violation identified in a citation or compliance order. Pursuant to its delegated authority, the California SDWA also authorizes EHS to take action to suspend or revoke a permit that has been issued to a public water system if the public water system has violated applicable law or regulations or has failed to comply with an order of EHS, and to petition the superior court to take various enforcement measures against a public water system that has failed to comply with an order of EHS. EHS does not waive any further enforcement action by issuance of this Order.

Belinda Huy

Date: March 6, 2020

Belinda Huy
Senior Environmental Health Specialist
Drinking Water Program

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Appendices 4:

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1. Notification of Receipt

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2. Public Notification

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3. Compliance Certification

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4. Quarterly Progress Report

APPENDIX 1: NOTIFICATION OF RECEIPT

Compliance Order Number: 04_72_20R_009

Water System Name: RAY WATER CO.

Water System Number: 4200867

Certification

I certify that I am an authorized representative of the RAY WATER CO. and that Compliance Order No. 04_72_20R_009 was received on _____. Further, I certify that the Order has been reviewed by the appropriate management staff of the RAY WATER CO. and it is clearly understood that Compliance Order No. 04_72_20R_009 contains legally enforceable directives with specific due dates.

Method(s) of Public Notice distribution: _____

Print Name of Water System Representative

Signature of Water System Representative

Date

**THIS FORM MUST BE COMPLETED AND RETURNED TO THE SANTA BARBARA COUNTY,
ENVIRONMENTAL HEALTH SERVICES DIVISION,
NO LATER THAN MARCH 20, 2020.**

Disclosure: Be advised that the California Health and Safety Code, Sections 116725 and 116730 state that any person who knowingly makes any false statement on any report or document submitted for the purpose of compliance with the Safe Drinking Water Act may be liable for, respectively, a civil penalty not to exceed five thousand dollars (\$5,000) for each separate violation or, for continuing violations, for each day that violation continues, or be punished by a fine of not more than \$25,000 for each day of violation, or by imprisonment in the county jail not to exceed one year, or by both the fine and imprisonment.

APPENDIX 2: PUBLIC NOTIFICATION

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

DRINKING WATER WARNING

RAY WATER CO. has high levels of nitrate

DO NOT GIVE THE WATER TO
INFANTS UNDER 6 MONTHS OLD OR PREGNANT WOMEN
OR USE IT TO MAKE INFANT FORMULA

Water sample results received [date] showed nitrate levels of [level and units]. This is above the nitrate standard, or maximum contaminant level (MCL), of 10 milligrams per liter. Nitrate in drinking water is a serious health concern for infants less than six months old.

What should I do?

- **DO NOT GIVE THE WATER TO INFANTS.** *Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. Symptoms in infants can develop rapidly, with health deteriorating over a period of days. If symptoms occur, seek medical attention immediately.*
- **PREGNANT WOMEN SHOULD NOT CONSUME THE WATER.** *High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.*
 - Water, juice, and formula for children under six months of age should not be prepared with tap water. Bottled water or other water low in nitrates should be used for infants until further notice.
 - **DO NOT BOIL THE WATER.** Boiling, freezing, filtering, or letting water stand does not reduce the nitrate level. Excessive boiling can make the nitrates more concentrated, because nitrates remain behind when the water evaporates.
 - If you have other health issues concerning the consumption of this water, you may wish to consult your doctor.

What happened? What is being done?

Nitrate in drinking water can come from natural, industrial, or agricultural sources (including septic systems, storm water run-off, and fertilizers). Levels of nitrate in drinking water can vary throughout the year. We will let you know if the amount of nitrate is again below the limit.

[Describe corrective action, seasonal fluctuations, and when system expects to return to compliance.]

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail.

Secondary Notification Requirements

Upon receipt of notification from a person operating a public water system, the following notification must be given within 10 days [Health and Safety Code Section 116450(g)]:

- **SCHOOLS:** Must notify school employees, students, and parents (if the students are minors).
- **RESIDENTIAL RENTAL PROPERTY OWNERS OR MANAGERS** (including nursing homes and care facilities): Must notify tenants.
- **BUSINESS PROPERTY OWNERS, MANAGERS, OR OPERATORS:** Must notify employees of businesses located on the property.

This notice is being sent to you by the RAY WATER CO.

State Water System ID#: 4200867. Date distributed: _____.

INFORMACIÓN IMPORTANTE SOBRE SU AGUA POTABLE

Este aviso contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

ADVERTENCIA SOBRE EL AGUA POTABLE

El agua de RAY WATER CO. tiene altos niveles de nitratos
**NO DE ÉSTA AGUA A BEBÉS MENORES DE 6 MESES O A
MUJERES EMBARAZADAS. TAMPOCO USE ÉSTA AGUA
PARA PREPARAR FORMULA INFANTIL**

Los resultados de las pruebas del agua recibidas el [date] mostraron niveles de nitrato de [level and units]. Estos niveles exceden el estándar o nivel máximo de contaminante (MCL) de 10 miligramos por litro. Los nitratos en el agua potable son una preocupación seria en bebés menores de seis meses.

¿Qué debe hacer?

- **NO DE ÉSTA AGUA A BEBÉS MENORES DE 6 MESES.** *Los bebés menores de 6 meses que toman agua con nitrato en exceso del nivel máximo de contaminante (MCL), se pueden enfermar seriamente y rápidamente. Y si los bebés no reciben atención médica, pueden morir debido a que los altos niveles de nitratos pueden interferir con la capacidad de la sangre de los bebés para transportar oxígeno. Los síntomas incluyen falta de aire y coloración azulada de la piel. Los síntomas en los bebés se pueden desarrollar rápidamente y la salud se deteriora en cuestión de días. Si hay síntomas de intoxicación por altos niveles de nitratos, busque atención médica de inmediato.*
- **LAS MUJERES EMBARAZADAS NO DEBEN CONSUMIR AGUA CON ALTOS NIVELES DE NITRATOS.** *Los altos niveles de nitrato también pueden afectar la capacidad de la sangre de mujeres embarazadas para transportar oxígeno.*
- No use agua de la llave para preparar jugo, agua, y formula para bebés menores de 6 meses. Use agua embotellada u otra agua baja en nitratos para los bebés menores de 6 meses hasta nuevo aviso.
- **NO HIERVA EL AGUA.** Hervir, congelar, filtrar, o dejar reposar el agua, no reduce el nivel de nitratos. Hervir el agua en exceso puede causar que los nitratos se concentren más, porque los nitratos se quedan cuando el agua se evapora.
- Si tiene otros problemas de salud por el consumo de ésta agua, usted debería consultar con su doctor.

¿Qué sucedió? ¿Qué se está haciendo al respecto?

El nitrato en el agua potable puede originar de fuentes naturales, industriales, o agrícolas (incluyendo sistemas sépticos, escorrentía de agua de lluvia, y fertilizantes). Los niveles de nitrato

en el agua potable pueden variar a través del año. Le informaremos si el nivel de nitratos vuelve a estar debajo del límite.

[Describe corrective action, seasonal fluctuations, and when system expects to return to compliance.]

Para más información, por favor contacte a [name of contact] al [phone number] o [mailing address]

Por favor comparta esta información con todas las demás personas que tomen de esta agua, especialmente aquellos que no hayan recibido éste aviso directamente (por ejemplo, las personas en apartamentos, asilos, escuelas, y negocios). Puede hacerlo poniendo este aviso en un lugar público o distribuyendo copias en persona o por correo.

Requisitos de Notificación Secundaria

Al recibir la notificación de alguien que opere un sistema de agua público, se debe dar la siguiente notificación dentro de 10 días conforme a la Sección 116450(g) del Código de Salud y Seguridad:

- ESCUELAS: Deben notificar a los empleados de la escuela, estudiantes, y a los padres (si los estudiantes son menores).
- DUEÑOS O GERENTES DE PROPIEDAD PARA ALQUILER RESIDENCIAL (incluyendo asilos e instituciones de cuidado): Deben notificar a sus inquilinos.
- DUEÑOS DE PROPIEDAD DE NEGOCIOS, GERENTES, U OPERADORES: Deben notificar a los empleados de los negocios situados en la propiedad.

Este aviso es enviado por el RAY WATER CO.

Núm. de Identificación del Sistema Estatal de Agua: 4200867.

Fecha de distribución: _____.

APPENDIX 3: COMPLIANCE CERTIFICATION

Compliance Order Number: 04_72_20R_009

Water System Name: RAY WATER CO.

Water System Number: 4200867

Attach a copy of the public notice distributed to the water system's customers.

This form, when completed and sent to Belinda.Huy@sbcphd.org for the Santa Barbara County, Environmental Health Services Division, serves as certification that public notification to water users was completed as required by Title 22, California Code of Regulations, Sections 64463-64465.

Public notification for failure to comply with the **Nitrate MCL** was conducted on:

Notification was made on _____.

For the month, year of _____, _____.

To summarize report delivery used and good-faith efforts taken, please check all items below that apply and fill-in where appropriate:

The notice was distributed by mail or direct delivery to each customer on: _____

One or more of the following methods were used to reach persons not likely to be reached by a mailing or direct delivery or persons served by a transient public water system (renters, nursing home patients, prison inmates, etc.):

Posted the notice at the following conspicuous locations served by the water system. (If needed, please attach a list of locations). _____

Publication of the notice in a local newspaper or newsletter of general circulation (attach a copy of the published notice, including name of newspaper and date published).

Posted the notice on the Internet at www. _____

Other method used to notify customers. _____

I hereby certify that the above information is factual.

Certified by: Printed Name _____ Title _____

Signature _____

Date _____

Disclosure: Be advised that the California Health and Safety Code, Sections 116725 and 116730 state that any person who knowingly makes any false statement on any report or document submitted for the purpose of compliance with the Safe Drinking Water Act may be liable for, respectively, a civil penalty not to exceed five thousand dollars (\$5,000) for each separate violation or, for continuing violations, for each day that violation continues, or be punished by a fine of not more than \$25,000 for each day of violation, or by imprisonment in the county jail not to exceed one year, or by both the fine and imprisonment.

APPENDIX 4: QUARTERLY PROGRESS REPORT

Water System Name: RAY WATER CO.	Water System No: 4200867
Compliance Order No: 04_72_20R_009	Violation: Nitrate MCL
Calendar Quarter:	Date:

This form should be prepared and signed by the RAY WATER CO. personnel with appropriate authority to implement the directives of the Compliance Order and the Corrective Action Plan. Please attach additional sheets as necessary. The Quarterly Progress Report must be submitted by the 10th day of each subsequent quarter, to the Santa Barbara County, Environmental Health Services Division to the following email address: Belinda.Huy@sbcphd.org titled appropriately.

Summary of Compliance Plan:

Tasks completed in the reporting quarter:

Tasks remaining to complete:

Anticipated compliance date:

Printed Name

Signature



110 S. PINE STREET #101 (ON HERITAGE WALK) • SANTA MARIA, CALIFORNIA 93458-5082 • 805-925-0951 • TDD 925-4354

January 5, 2023

Michael Prater, Executive Officer
Santa Barbara LAFCO
105 East Anapamu Street Room 407
Santa Barbara CA 93101

Subject: Proposed Out of Agency Service Agreement
Ray Water Company, 2275 Rayville Lane, Santa Maria, CA 93455

Dear Mr. Prater,

The City of Santa Maria hereby requests approval of the Local Agency Formation Commission for an out-of-agency service agreement as described by the attached materials. It is proposed to process this request under the provisions of the Cortese/Knox/Hertzberg Local Government Reorganization Act.

Enclosed with regard to this proposal are the following:

1. Resolution of application approved by the City Council on October 4, 2022.
2. Seven (7) copies of the Application for Out-of-Agency Service Agreement.
3. Seven (7) copies of a map or sketch of the requested service area.
4. A check payable to LAFCO in the amount of \$3500 to cover the processing fee.
5. A copy of all pertinent staff reports, minutes and other material concerning this proposal.
6. Signed Cost Accounting Agreement

If you have any questions regarding this proposal, you should contact me at (805) 925-0951, ext. 2240 or via email at cng@cityofsantamaria.org.

Sincerely,

Chuen Ng
Community Development Director
City of Santa Maria

RESOLUTION NO. 2022-111

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SANTA MARIA, CALIFORNIA, AUTHORIZING AND APPROVING AN APPLICATION TO SANTA BARBARA LOCAL AGENCY FORMATION COMMISSION (LAFCO) FOR AN OUT-OF-AGENCY DOMESTIC WATER SERVICE AGREEMENT WITH RAY WATER COMPANY

WHEREAS, the applicant, Ray Water Company, in accordance with the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 and Santa Barbara County LAFCO Policies and Procedures, requested an out-of-agency service agreement with the City of Santa Maria for domestic water on properties currently served by Ray Water Company located approximately south of Mahoney Road at the E Street alignment, including properties with Assessor Parcel Numbers 111-030-005, -006, -007, -008, -009, -011, -012, -013 and 111-040-010; and

WHEREAS, the properties served by Ray Water Company are located outside the city boundary of Santa Maria, but is within the Sphere of Influence of Santa Maria, as last reaffirmed on January 7, 2016, by LAFCO Resolution 15-12; and

WHEREAS, the properties of Ray Water Company are currently served by ground well water; and

WHEREAS, the water quality has been determined by the County of Santa Barbara Department of Public Health Environmental Health Services to be in excess of maximum nitrate contaminant levels and in violation of the California Safe Drinking Water Act, as stated in a compliance order to Ray Water Company, dated March 6, 2020; and

WHEREAS, Government Code Section 56133 states that LAFCO may authorize a city or district to provide new or extended services outside its jurisdictional boundary to respond to an existing or impending threat to the health and safety of the public or the residents of the affected territory, if the entity applying for approval has provided LAFCO with documentation of a threat to the health and safety of the public or the affected residents; and

WHEREAS, provision of domestic water from the City of Santa Maria to the properties of Ray Water Company, through consolidation, would mitigate the identified health and safety threat to the public; and

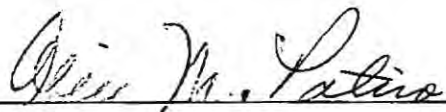
WHEREAS, the City Council considered the proposed request for an application to the Santa Barbara LAFCO on October 4, 2022; and

WHEREAS, the proposed domestic water connection would not result in additional impacts since there will be no change in use. The domestic water connection would be provided solely to mitigate a threat to the health and safety of the public.

NOW THEREFORE, IT IS HEREBY RESOLVED by the City Council of the City of Santa Maria, California, as follows:

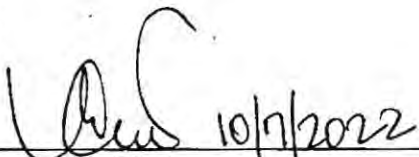
1. That the Director of Community Development is authorized to apply and submit an application to the Santa Barbara Local Agency Formation Commission for an out-of-agency domestic water service agreement with Ray Water Company; and
2. The Chief Deputy City Clerk is hereby authorized to make minor changes herein to address clerical errors, so long as substantial conformance of the intent of this document is maintained. In doing so, the Chief Deputy City Clerk shall consult with the City Manager and City Attorney concerning any changes deemed necessary.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Santa Maria held this 4th day of October 2022.



Mayor


ATTEST:



Chief Deputy City Clerk

Exhibit A – Vicinity Map

APPROVED AS TO FORM:

BY: 

for: CITY ATTORNEY

CONTENTS:

BY: 

DEPARTMENT DIRECTOR

BY: 

CITY MANAGER

RESOLUTION NO. 2022-110

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SANTA MARIA, CALIFORNIA, ADOPTING A MITIGATED NEGATIVE DECLARATION FOR THE RAY WATER PROJECT

WHEREAS, the Ray Water Company received a Technical Assistance Grant to bring its aging and outdated infrastructure into regulatory compliance consisting of consolidating RWC with the City of Santa Maria's water system through the installation of a water main, a distribution line, 4,860 linear feet (0.92 miles) of new pipelines, and service connections located within the city limits in the Betteravia Road right-of-way with some components located south of Betteravia Road on Rayville Lane, and within the unincorporated Santa Barbara County, herein referred to as the Project; and

WHEREAS, the provisions of the California Environmental Quality Act of 1970 (CEQA), Public Resources Code Sections 21000 et. seq., as amended, require the evaluation of environmental impacts of said projects; and

WHEREAS, an Initial Study/Mitigated Negative Declaration was prepared for said Project; and the required notices were published, and the Initial Study/Mitigated Negative Declaration was circulated for public review from June 10, 2022 to July 11, 2022, and sent to every responsible agency with jurisdiction over the project and placed in a public location; and

WHEREAS, public comment letters on the draft Initial Study/Mitigated Negative Declaration were received from the California Department of Conservation, Geologic Energy Management Division (CalGEM), and the Santa Barbara County Air Pollution Control District (SBCAPCD). The comments received on the draft Initial Study/Mitigated Negative Declaration did not result in a "substantial revision" of the document, as defined by CEQA Guidelines Section 15073.5, and the new information added to the final Initial Study/Mitigated Negative Declaration to address the comments merely clarifies, amplifies, or makes insignificant modifications to the document; and

WHEREAS, the City Council of the City of Santa Maria has reviewed and considered the Initial Study/Mitigated Negative Declaration and Mitigation Monitoring Program, incorporated herein by reference for the Project; and

WHEREAS, there is no substantial evidence in the whole record before the City Council supporting a fair argument that the project as described with mitigations in the Initial Study/Mitigated Negative Declaration will have a significant effect on the environment; and

WHEREAS, the Initial Study/Mitigated Negative Declaration and Mitigation Monitoring Program reflects the City Council's independent judgment and analysis

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Santa Maria, that

- Section 1. The above recitals are true and correct and incorporated herein by reference
- Section 2. The City Council adopts the Mitigated Negative Declaration and Mitigation Monitoring Program (Attachments C and D of

the Council Agenda Report, dated October 4, 2022, incorporated herein by reference) for the Ray Water Company project.

Section 3. The Chief Deputy City Clerk is hereby authorized to make minor changes herein to address clerical errors, so long as substantial conformance of the intent of this document is maintained. In doing so, the Chief Deputy City Clerk shall consult with the City Manager and City Attorney concerning any changes deemed necessary.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Santa Maria held this 4th day of October 2022.

ATTEST:

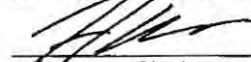


Chief Deputy City Clerk



Mayor

APPROVED AS TO FORM:




for: City Attorney

APPROVED AS TO CONTENT:



Department Director



City Manager

STATE OF CALIFORNIA)
COUNTY OF SANTA BARBARA) ss.
CITY OF SANTA MARIA)

I, **M. Beth Cleary**, Deputy City Clerk of the City of Santa Maria and ex officio Clerk of the City Council **DO HEREBY CERTIFY** that the foregoing is a full, true and correct copy of **Resolution No. 2022-110** which was duly and regularly introduced and adopted by said City Council at a regular meeting held **October 4, 2022**, and carried on the following vote:

AYES: Councilmembers Cordero, Escobedo, Soto,
 Waterfield, and Mayor Patino.

NOES: None.

ABSENT: None.

ABSTAIN: None.

M. Beth Cleary
Deputy City Clerk
City of Santa Maria

SANTA BARBARA LOCAL AGENCY FORMATION COMMISSION

Application for Out-of Agency Service Agreement

(Attach additional sheets as necessary)

1. City or District City of Santa Maria

Who should be contacted if there are questions about this application?

Chuen Ng, Community Development Director
110 South Pine Street, Room 101
Santa Maria, CA 93458
(805) 925-0951 X 2240

2. Affected Property Owners

There are multiple property owners within the Rayville Lane community affected.

Kristy Gilbertson, Ray Water Company Representative
2275 Rayville Lane
Santa Maria, CA 93455

3. Address/location/size of property: Parcel number:

- Right-of-Way, Betteravia Road
- 111-030-005 (3.01 acres)
- 111-030-006 (0.30 acres)
- 111-030-007 (0.20 acres)
- 111-030-008 (0.33 acres)
- 111-030-009 (0.43 acres)
- 111-030-011 (0.49 acres)
- 111-030-012 (0.25 acres)
- 111-030-013 (0.22 acres)
- 111-040-010 (1.40 acres)

Complete all relevant questions

4. Is the property within the service agency's sphere of influence? Yes No

5. What types of services are to be provided under contract? Domestic water service

6. Discuss the justification for the service agreement. Is this an emergency health and safety situation? Why is annexation not possible at this time?

Ray Water Company is requesting a domestic water connection from the City of Santa Maria since the existing well water source has been tested to have nitrate levels exceeding the State-mandated maximum contaminant level and has been cited by Santa Barbara County Environmental Health Services (SBC EHS) for noncompliance.

According to the citation issued on March 6, 2020, SBC EHS determined that Ray Water Company's water system has violated or is violating Title 22, California Code of Regulations (CCR), Section 64431.1(a) and Santa Barbara County Code Section 34B-22 (b)(a). Specifically, Ray Water Company exceeded the primary maximum contaminant Level of 10 milligrams per liter (mg/L), with a average test result of 40.5 mg/L.

Ray Water Company is currently served by one well, not equipped with nitrate treatment, with thirteen service connections of which water is provided for eleven residential structures and two commercial structures. There are approximately forty-five residents. Ray Water Company has distributed notification or made direct contact to all residents. Ray Water Company is required to submit a corrective action plan to EHS for approval.

The applicant is requesting a domestic water connection to best mitigate the violation. Two other options were considered to mitigate the violation including installing a treatment system for nitrate within the existing well and drilling a new well. After reviewing the two options, the cost and potential ineffectiveness of mitigating the violation for each alternative led to the determination that full consolidation within the City's existing water system was the most reliable course of action.

This property is located just outside of city limits but is within the City's sphere of influence. Properties to the north, south and east are within city limits. Staff believes that a domestic water connection would be the logical solution to Ray Water Company's water quality violation affecting public health and safety.

Annexation of the property into the City's boundary is not possible at this time, since it would require a larger study of the area, and an evaluation of the City's future growth, in compliance with LAFCO objectives and policies. These efforts may be part of a future comprehensive General Plan update which is anticipated to include significant public outreach, stakeholder input, regional coordination, data collection, and environmental analysis. This is a multi-year process that is expected to incur significant costs. The request for domestic water service is an urgent need. The request for domestic water service is not intended for development or expansion purposes, but solely to address an emergency health and safety situation.

7. Is annexation of the territory anticipated at some future time? Yes _____
No _____ If yes, when? If no, why not?

The response to this question is dependent on public outreach, stakeholder input, regional coordination, and direction by local and regional decisionmakers. However, the City is currently building out, and land use inventory for development; in particular, new residential housing units, is limited. Given state mandates to build more housing, staff anticipates the study of areas for annexation to ensure an adequate land inventory for future population growth. Staff also anticipates working with other agencies in the region in addressing future growth.

8. What is the existing use of the site? Be specific.

The existing site contains residential development including eleven single-family residences and two commercial connections.

9. If a change in use is proposed, provide a description of the change.

None proposed

10. Describe in detail how services will be extended to the property:

A. Describe needed improvements including distance for connections.

The proposed project consists of consolidating Ray Water Company with the City of Santa Maria's water system. The proposed project consists of a water main, a distribution line, and service connections. In total, these components include 4,860 linear feet (0.92 miles) of pipeline.

The water main will extend from the intersection Mahoney Road and Rayville Lane to the intersection of Betteravia Road and A Street to connect with the City of Santa Maria water system. The water main will be approximately 3,400 feet in length

At the intersection of Mahoney Road and Rayville Lane, the water main transitions into an eight inch water distribution line. This distribution line runs south down Rayville Lane. The distribution line will connect the water main described above to each of the service connections described below. This line will be approximately 500 feet in length.

Each service connection from the distribution line to the residences may vary in length; an average of 60 linear feet per connection has been used to generate a total approximate length of 780 feet for all of the service connections. A typical service line is one to two inches in diameter.

B. What are the costs of improvements and other start up costs?

The overall cost of the improvements is estimated at \$1.34 million

C. How is financing to occur, both capital costs and ongoing operations?

The Drinking Water State Revolving Fund at the State Water Resources Control Board will be providing a grant for construction (capital) costs. The City of Santa Maria will be responsible for ongoing operations.

11. What environmental review has been conducted for the project? If exempt, please provide a copy of the agency's Notice of Exemption.

A Mitigated Negative Declaration (SCH# 2022060195) has been conducted for the project.

Provide a vicinity map showing the property, the city or district boundary and sphere line and existing and proposed infrastructure as relevant to this agreement.

Please see the attached vicinity map.

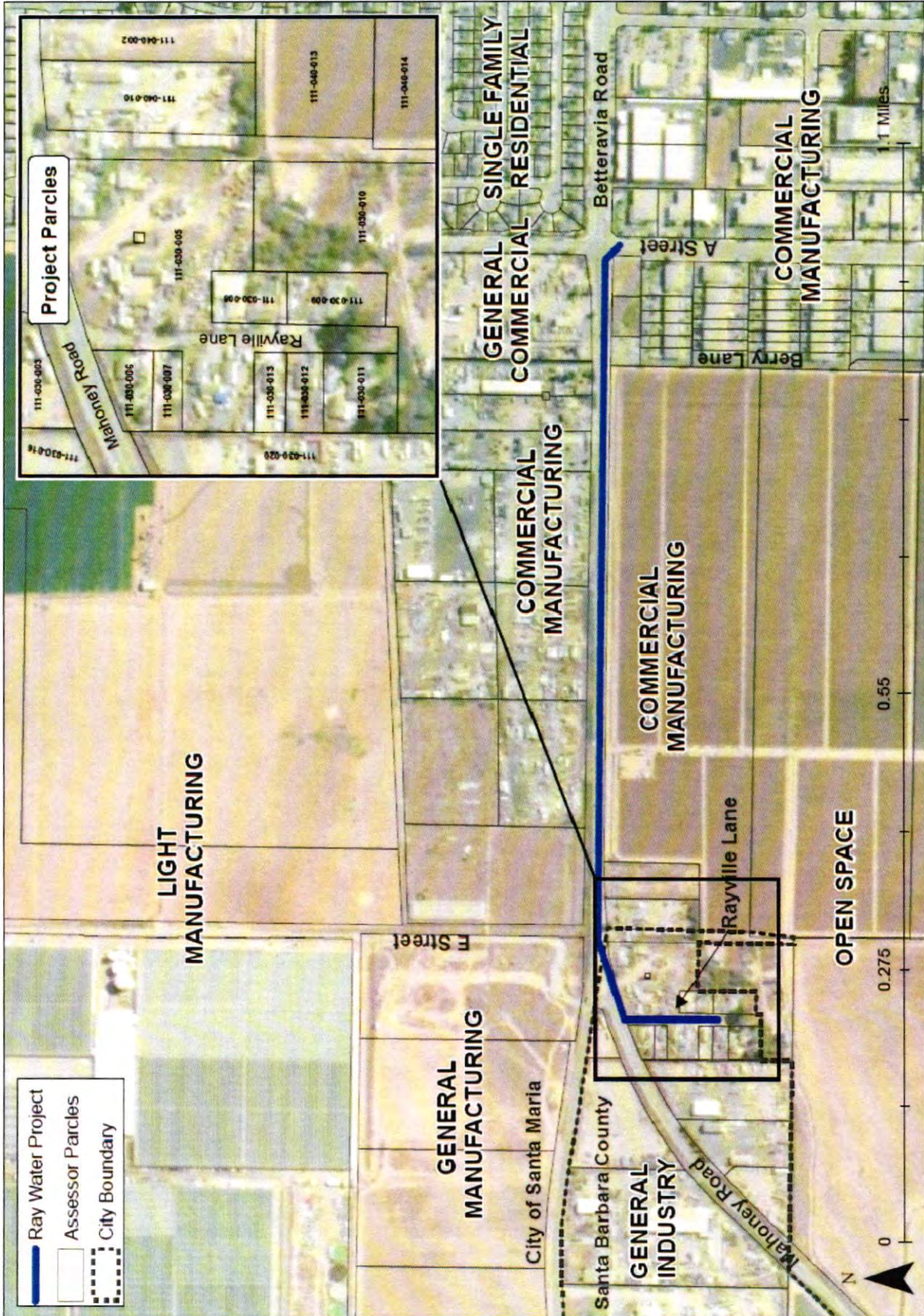
Attach a copy of the proposed services agreement and any staff reports or supporting documentation related to this application.

Please see the attached City Council staff report and resolutions and the services agreement.

This request and a processing fee set forth in LAFCO's fee schedule should be submitted to:

Santa Barbara LAFCO
105 East Anapamu Street
Santa Barbara CA 93101

Ray Water Company Vicinity Map



Document Path: D:\GIS\GIS Projects\2020-40 Ray Water\Final Products\15 Figures\Land Use Map.mxd

<p>Santa Maria Orcutt</p>	<p>Land Use Map</p>	<p>Date: 09/16/2021 Scale: 1 inch = 0.12 miles Project: 2020-40</p>	<p>Denise Duffy and Associates, Inc. Environmental Consultants and Resource Planners Monterey, CA 93940 (831) 373-1441</p> <p>Monterey San Jose</p>	<p>Figure 3</p>
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COUNCIL AGENDA REPORT

TO: City Council

FROM: City Manager

Prepared by: Director of Community Development

SUBJECT: APPLICATION TO SANTA BARBARA LOCAL AGENCY FORMATION COMMISSION (LAFCO) FOR AN OUT-OF-AGENCY DOMESTIC WATER SERVICE AGREEMENT WITH RAY WATER COMPANY

RECOMMENDATION:

That the City Council:

1. Adopt a Resolution to adopt a Mitigated Negative Declaration and Mitigation Monitoring Program for a domestic water connection with Ray Water Company; and
2. Adopt a Resolution authorizing and approving an application to the Santa Barbara Local Agency Formation Commission (LAFCO) for an out-of-agency domestic water service agreement with Ray Water Company.

BACKGROUND:

Ray Water Company (RWC) is a small water company located just outside the city limits of Santa Maria, in unincorporated Santa Barbara County, serving properties located south of Mahoney Road at the E Street alignment (Attachment A – Vicinity Map). The properties served by RWC are surrounded by City jurisdiction to the north, east, and south. RWC was issued a Santa Barbara County water system permit in 1976 but existed prior to that. RWC has been governed by various appointed residents of the water system, which have changed over time. Currently, ownership is equally distributed among ten residents. There are a total of 13 service connections (11 residential, 2 commercial). The total population served is approximately 45 residents. RWC utilizes groundwater as its drinking water source. The capacity of this source is unknown because RWC does not meter the well or regularly monitor depth to groundwater. In addition, the RWC system uses one steel water storage tank.

Over the years, RWC has had ongoing difficulties meeting regulatory requirements, primarily due to aging and outdated infrastructure. RWC has received numerous notices of violation from Santa Barbara County dating back to 1980. The most relevant violation includes repeated nitrate concentrations above the maximum contaminant levels (MCL), but also other violations such as coliform bacteria detections, failure to perform required analytical testing, failure to properly inform residents of MCL exceedances, and failure to resolve the nitrate issue. Santa Barbara County issued RWC an enforcement action Compliance Order on March 6, 2020, due to ongoing nitrate concentrations above the MCL (Attachment B – Compliance Order). The Compliance Order required RWC to inform

all residents of the elevated nitrate concentrations, submit a progress report, and submit a corrective action plan to resolve the nitrate issue.

Through a technical assistance grant, Weber, Hayes & Associates is assisting RWC by preparing an engineering report and assisting in a proposed project to resolve the violations of the Compliance Order. The proposed project is a consolidation of RWC with the City of Santa Maria's water system. The primary project goal is to provide RWC residents with safe and reliable drinking water. The proposed project consists of a water main, a distribution line, and service connections. In total, these components include 4,860 linear feet (0.92 miles) of new pipelines. The City of Santa Maria's provision of domestic water to properties outside the City boundary requires approval from LAFCO for an out-of-agency agreement.

DISCUSSION:

According to the Compliance Order issued on March 6, 2020, Santa Barbara County Public Health, Environmental Health Services (SBC EHS) determined that Ray Water Company's water system has violated or is violating the California Safe Drinking Water Act, based on surveys indicating nitrate levels exceeding the MCL. The MCL for Nitrate is 10.0 milligrams per liter (mg/L). Two nitrate samples, one from the distribution system on February 21, 2020, and one from the groundwater well on March 4, 2020, showed nitrate concentrations of 35.0 mg/L and 46.0 mg/L, respectively. Other subsequent surveys after 2020 continue to show high concentrations exceeding the MCL.

The applicant is requesting a domestic water connection to best mitigate the violation through consolidation of RWC with the City of Santa Maria. The water main will extend along Betteravia Road, from the intersection of Mahoney Road and Rayville Lane to the intersection of Betteravia Road and A Street, to connect with the City of Santa Maria water system. The water main will be approximately 3,400 feet in length. At the intersection of Mahoney Road and Rayville Lane, the water main transitions into an 8-inch water distribution line. This distribution line will connect the water main to each of the 15 proposed service connections on Rayville Lane.

The properties currently served by RWC are immediately outside the City limits, but still within the City's sphere of influence. Staff believes that consolidation of RWC with the City of Santa Maria's water system would be a logical solution to RWC's water quality violation affecting public health and safety. The consolidation would provide a clean, reliable long-term water source to RWC residents. RWC would share operation and maintenance costs with a larger community, and transfer water system management responsibilities to the City.

Government Code Section 56133 states that LAFCO may authorize a city or district to provide new or extended services outside its jurisdictional boundary to respond to an existing or impending threat to the health and safety of the public or the residents of the affected territory if the entity applying for approval has provided LAFCO with documentation of a threat to the health and safety of the public or the affected residents. SBC EHS's citation serves as the documentation of the threat, as well as the supporting technical surveys detailing excessive nitrate levels.

Alternatives:

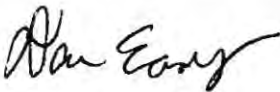
The City Council can choose not to submit an application to LAFCO for an out-of-agency domestic water service agreement; however, the applicant would remain in violation of safe drinking water standards. The engineer's report prepared by Weber, Hayes & Associates evaluated four alternatives for RWC, including: 1) no action; 2) treating the water from the existing well; 3) drilling a new well that will (hopefully) be free of nitrates; and 4) consolidation with a nearby water system that has a reliable water source. The last alternative is the current recommendation, based on review and analysis, and the conclusion that it would best mitigate the water quality violations.

Environmental:

An Initial Study and Mitigated Negative Declaration (MND) was prepared for the proposed consolidation project and circulated for public review from June 10, 2022, to July 11, 2022, as required by the California Environmental Quality Act (CEQA). The MND includes mitigation measures for the environmental impacts identified in the initial study in the topic areas of Biological Resources, Cultural Resources, Hazards and Hazardous Materials, and Tribal Cultural Resources.

CONCLUSION:

Given the information provided regarding water quality affecting public health and safety for Ray Water Company, staff asks that the City Council authorize the Director of Community Development to apply and submit an application to the Santa Barbara LAFCO for an out-of-agency domestic water service agreement with Ray Water Company.



DANA EADY
Planning Division Manager



CHUEN NG
Director of Community Development

Attachments:

- Attachment A – Vicinity Map
- Attachment B – Compliance order dated March 6, 2020, from SB County Environmental Health Services
- Attachment C – Final Initial Study/Mitigated Negative Declaration
- Attachment D – Mitigation Monitoring Program

**CITY COUNCIL MEETING MINUTES
CITY OF SANTA MARIA, CALIFORNIA
OCTOBER 4, 2022 - CITY HALL COUNCIL CHAMBERS**

INVOCATION

Pastor Neil Platon of First United Methodist Church gave the Invocation

PLEDGE OF ALLEGIANCE

Councilmember Soto led the Pledge of Allegiance.

CALL TO ORDER

Mayor Patino convened the meeting and called the meeting to order at 5:30 p.m.

ROLL CALL:

Councilmember Cordero, Councilmember Escobedo, Councilmember Soto, Councilmember Waterfield, and Mayor Patino

STAFF MEMBERS PRESENT:

City Manager Jason Stilwell, City Attorney Thomas Watson, Fire Marshal James Austin, Principal Civil Engineer David Beas, Director of Public Works Brett Fulgoni (remote), Assistant City Manager Andrew Hackleman, Library Director Dawn Jackson, Chief Human Resources Officer Linda Le (remote), Chief Information Officer Jeffrey Marecic, Director of Community Development Chuen Ng, Chief of Police Marc Schneider, Director of Utilities Shad Springer, Chief Deputy City Clerk Rhonda White, Deputy City Clerk Beth Cleary, Business Program Leader Alex Valadez

1 PROCLAMATIONS

- A. Councilmember Cordero presented a Proclamation recognizing the week of October 3 - 9, 2022, as "Code Enforcement Officer Appreciation Week" in the City of Santa Maria to celebrate, honor, and recognize the Code Enforcement Division. Dawn Palacios, Interim Code Enforcement Supervisor, and Code Enforcement staff accepted the Proclamation.
- B. Councilmember Escobedo presented a Proclamation recognizing the week of October 9 - 15, 2022, as "Fire Prevention Week" in the City of Santa Maria and encouraging all residents to plan and practice a home fire escape plan, learn the sounds of their smoke and carbon monoxide alarms, and respond when the alarm sounds by exiting the building immediately. City Fire Marshal, Jim Austin, accepted the Proclamation.
- C. Councilmember Waterfield presented a Proclamation recognizing the month of October 2022 as "Arts and Humanities Month" in the City of Santa Maria, and called upon community members to participate in, celebrate, and promote the arts and culture in the City of Santa Maria. The Proclamation was accepted by Hannah Rubalcava, President of the Santa Maria Arts Council, and John Hood, Chair of Fine Arts Department at Allan Hancock College.

2 PUBLIC COMMENT PERIOD

Written comment was received from Randy Jackson suggesting that term limits be set for members of the Library Board of Trustees.

Gary Hall spoke about the first meeting that was held for stakeholders and City staff to enhance the Model Lease Agreement previously adopted. He also requested that the City Council adopt a mobile home rent stabilization ordinance.

Jose Dominguez spoke about Municipal I.D. cards.

3 CONSENT CALENDAR

Councilmember Escobedo asked for clarification on Item 3F, Amendment to the Reimbursement Agreement with School Mill Investors, LLC.

Principal Civil Engineer Beas explained that an agreement had been previously approved by the City Council. The item on the agenda was just a revision to the agreement with regard to payment for services.

Consent Calendar Items 3A-3F were approved as presented, including the adoption of Resolution Nos 2022-110, 2022-111, and 2022-112. The recorded vote appears with each item below.

- A. Waive the reading in full of all Ordinances and Resolutions. Ordinances on the Consent Agenda will be adopted by the same vote cast at the first meeting, unless City Council indicates otherwise.

Action: Readings were waived.

Moved by Councilmember Waterfield, seconded by Councilmember Soto.

Motion carried 5-0.

- B. Approve the Minutes of the regular City Council meeting of September 20, 2022.

Action: Minutes were adopted as presented.
Moved by Councilmember Waterfield, seconded by Councilmember Soto.
Motion carried. 5-0.

- C. 1) Adopt a Resolution to adopt a Mitigated Negative Declaration and Mitigation Monitoring Program for a domestic water connection with Ray Water Company; and

2) Adopt a Resolution authorizing and approving an application to the Santa Barbara Local Agency Formation Commission (LAFCO) for an out-of-agency domestic water service agreement with Ray Water Company.

Action: Mitigated Negative Declaration and Mitigation Monitoring Program were approved, and the application to LAFCO was authorized and approved.
Moved by Councilmember Waterfield, seconded by Councilmember Soto.
respectively. 5-0.

- D. Payment of Warrants. Ordered ratified subject to having been certified as being in conformity with the budget and having been approved for payment by the Director of Finance.

Action: Warrants were ratified.
Moved by Councilmember Waterfield, seconded by Councilmember Soto.
Motion carried. 5-0.

- E. Payment of Payroll. Ordered ratified subject to having been certified by the proper Department Directors, as shown on records on file in the Department of Finance, and having been approved for payment by the Director of Finance.

Action: Payroll was ratified.
Moved by Councilmember Waterfield, seconded by Councilmember Soto.
Motion carried. 5-0.

- F. Adopt a Resolution approving an amendment to the reimbursement agreement with School Mill Investors, LLC for the construction upgrade of sanitary sewer segment D-13.

Action: Amendment to the Reimbursement Agreement was approved.
Moved by Councilmember Waterfield, seconded by Councilmember Soto.
Motion carried. Adopted as Resolution No. 2022-112. 5-0.

4 PRESENTATIONS

- A. **A.T. STILL UNIVERSITY PRESENTATION.** The City Council received a presentation from A.T. Still University to provide an update on their medical programs. City Manager Stilwell introduced Eric Sauers, Dean & Professor of A.T. Still University who gave a presentation as detailed in the Council Agenda Report.

- B. **CHAMBER OF COMMERCE ANNUAL REPORT.** The City Council received the Santa Maria Valley Chamber of Commerce, Economic Development Commission, Visitors Bureau, and Tourism Marketing District 2021-2022 Annual Report. Glenn Morris, President & CEO of Chamber, gave the presentation as detailed in the Council Agenda Report and Annual Report. He also presented several promotional videos.

5 REGULAR BUSINESS

Mayor Patino announced that Item 5C, Social Host Regulations, would be moved up on the agenda to accommodate young attendees in the Council Chambers.

- A. **SOCIAL HOST REGULATIONS.** The City Council considered an Ordinance to promote the reduction of underage drinking, marijuana, and illegal drug use by imposing a civil fine on persons responsible for gatherings where these items might be served, used, or in the possession of underage persons.

Assistant City Manager Hackleman gave a presentation as detailed in the Council Agenda Report.

Public Input

Chief Deputy City Clerk White announced that written communications were received from Santa Barbara County Behavioral Wellness, One Community Action, Gustavo Prado, Manuel Garcia, Bob Bush, Lupe Valencia, Ramona Cabiles, Richard Batalla, Diana Salazar, Veronica Santos, Sandra Arreguin, Danielle Murillo, Tiara Bumanglag, Lyss Limon, Samantha Yruegas, Marianna Torres, Brandi Pena, and Mothers Against Drunk Drivers in support of the Social Host Regulations.

Edwin Weaver, Andrea Martinez, Audrey Guizar, Emiliano Diaz, Cristal Martinez, Fidelio Pineda, Alondra Castillo, and Eva Avila spoke in support of the Social Host Regulations.

Action: The City Council introduced for first reading and continued to a future meeting for second reading and adoption, an Ordinance amending Title 6 of the Santa Maria Municipal Code to add new Chapter 6-15 - Social Host Regulations
Moved by Councilmember Waterfield, seconded by Councilmember Soto.
Motion carried. Introduced as Ordinance No. 2022-05. 5-0.

- B PARADISO RESIDENTIAL DEVELOPMENT - CONCEPTUAL REVIEW.** The City Council received a presentation regarding a proposed general plan amendment and zone change for Paradiso Residential Development. Director of Community Development Ng gave a presentation as detailed in the Council Agenda Report.

Applicant Comments

Cam Boyd with Coastal Community Builders stated that a portion of the property would be dedicated to senior housing.

Brian Schwartz, Urban Planning Concepts, gave a PowerPoint presentation to explain the details of the proposed development.

Public Input

Chief Deputy City Clerk White announced that staff received two written communications from 1) Joy Cook requesting that the density not be increased for the project and that the development provide single-story buildings accessible to seniors and suitable to age in place, and 2) Sue Andersen, President/CEO of Manan Regional Medical Center expressed support for the project noting it would provide needed housing for seniors, physicians, and hospital staff.

Action: There was a consensus of the City Council to have the project presented to the Planning Commission at a Study Session to allow public input from nearby property owners and residents.

- C CONTINUED APPEAL - CARING HANDS PET CLINIC.** The City Council reconsidered a recommendation of the Planning Commission to approve a Planned Development Permit Amendment (A2021-0010) and Conditional Use Permit (U2021-0006) for Dr. Farshid Kiaei to revise the exterior architecture and establish a veterinary clinic in a proposed 7,000-square-foot mixed-use building on a 0.17-acre site in a PD/R-2 (Planned Development/Medium Density Residential) district and include conditions allowing the adjacent landowner to have signage.

Director of Community Development Ng gave a presentation as detailed in the Council Agenda Report.

Drs. Farshid (appellant/applicant) and Desai (owner of the current sign on the property) explained their positions on the issue.

Public Input

Tracy and Michael Kalata, Jan McGee, and Jeanine Wade spoke in support of the appeal.

Action: Resolution adopted granting the appeal to delete Condition No. 4 regarding signage and uphold the Planning Commission's approval of the Planned Development Permit Amendment (A2021-0010) and Conditional Use Permit (U2021-0006) for the Caring Hands Office Building and Veterinary Clinic project at 1995 South Miller Street.

Moved by Councilmember Waterfield, seconded by Councilmember Soto.

Cordero.

REPORT BY CITY MANAGER

City Manager Stilwell reported that the next regular City Council meeting would be October 18, 2022. Items on the agenda would include the surplus property at Cook Street and the CDBG Capital Project proposals. Mr. Stilwell also announced that Brett Fulgoni, who had been serving as the Interim Public Works Director since January 2022, has been appointed as Director of Public Works after a national recruitment.

ORAL REPORTS OF COUNCILMEMBERS AND OFFICERS (INCLUDING AB1234 REPORTS)

Councilmember Cordero reported he attended the annual 3CE conference.

Councilmembers Escobedo and Soto reported they attended the mobile home owners meeting regarding the Model Lease.

Councilmember Waterfield had no reportable AB1234 meetings.

Mayor Patino reported she attended a couple of Business Crimes Meetings; the 3CE conference; a Marian Foundation Board meeting; and an SBCAG/APCD meeting.

ADJOURNMENT

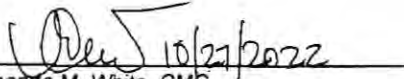
There being no further business before the City Council, Mayor Patino declared the City Council meeting adjourned at 9:01 p.m. in memory of Pastor Orié Johnson of Johnson Temple Church of God in Christ and later named Victory Harvest Church of God in Christ.

Approved at a regular meeting on October 18, 2022.



Rhonda M. White, CMC
Chief Deputy City Clerk and ex officio Clerk
of the City Council

ATTEST:



Rhonda M. White, CMC
Chief Deputy City Clerk



Alice M. Patino
Mayor of the City of Santa Maria



WEBER, HAYES & ASSOCIATES
Hydrogeology and Environmental Engineering
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Draft Engineering Report

Ray Water Company



Santa Maria, California

July 2, 2021

Prepared for:

Ray Water Company

via a Technical Assistance Grant from

California State Water Resources Control Board / University Enterprises, Inc

Technical Assistance Work Plan 6160-A / WHA Project 2t059

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1. Introduction

This is the *Draft Engineering Report* (DER) for Ray Water Company (RWC), located near the intersection of West Betteravia Road and Rayville Lane in Santa Maria, California. See Figure 1 for the project location.

This DER was prepared by Weber, Hayes and Associates on behalf of RWC under a Technical Assistance (TA) Grant from the California State Water Resources Control Board (State Water Board) administered by Sacramento State University / University Enterprises, Inc. (UEI) under TA Work Plan 6160-A, assigned by the State Water Board to UEI.

The intent of this *Draft Engineering Report* (DER) is summarized below:

- Define the problems Ray Water Company (RWC) is facing
- Identify and evaluate alternatives to provide Ray Water Company (RWC) with safe and reliable drinking water
- Choose the best alternative and develop a corresponding set of 30% complete technical design drawings

The best alternative was chosen based on the following:

- Ability to supply safe and reliable drinking water and to comply with regulatory requirements
- meet the water system's O&M needs
- be financially viable
- satisfy public concerns
- meet environmental requirements

The most cost-effective long-term solution is RWC consolidation with the City of Santa Maria's water system.

A. Background

Ray Water Company (RWC) is a small water company located just outside the Santa Maria city limits. RWC was issued a Santa Barbara County water system permit in 1976, but existed prior to that. Over the years, RWC has had ongoing difficulties meeting regulatory requirements – primarily due to aging and outdated infrastructure. Based on these challenges, RWC received a Technical Assistance Grant to help bring their water system into regulatory compliance. This Draft Engineering Report identifies the problems, presents and evaluates alternative solutions, and provides initial plans / design drawings for the solution selected to bring RWC into compliance.

B. Problem Statement

Ray Water Company's (RWC) current water source is a well, which has elevated nitrate and arsenic concentrations. This is the primary problem with RWC. Nitrate concentrations are above the Maximum Contaminant Level (MCL) set by the Environmental Protection Agency (EPA) and the State of California, and therefore pose a health risk. Arsenic concentrations are close to, yet just below the MCL. The recent concentrations and corresponding MCL's are presented in the table below:

Ray Water Company Source Water – Contaminants of Concern

Analyte	Date	Concentration (mg/L)	MCL (mg/L)
Nitrate as N	3/25/21	29	10
Nitrate as N	4/22/21	28	10
Nitrate as N	2/19/21	31	10
Nitrate as N	1/12/21	28	10
Arsenic	11/11/20	0.0096	0.010

mg/L = milligrams per Liter

Aside from elevated nitrate and arsenic concentrations, there are various secondary problems at RWC. The complete list of system deficiencies is summarized below in Section 2-F.

C. Project Objective

The overall project objective is to provide Ray Water Company (RWC) residents with safe and reliable drinking water. To this end, the *Draft Engineering Report* (DER) identifies and evaluates alternative solutions, and selects the best option – based on the following:

- Ability to supply safe and reliable drinking water
- Ability to comply with regulatory requirements
- Meet the water system's O&M needs
- Be financially viable
- Satisfy public concerns; and
- Meet environmental requirements

Based on the criteria cited above, the best alternative is consolidation with the City of Santa Maria's water system.

We evaluated various alternatives, which are presented below in Section 3. The consolidation alternative is discussed further in Section 4. Figure 2 shows the proposed new water main alignment connecting RWC with the City's water system.

2. Existing Facilities

A. Water System Description

Ray Water Company (RWC) operated for some time before its first temporary Water Supply Permit was issued in 1976. RWC has been governed by various appointed residents of the water system, which have changed over time. Ownership of RWC was equally distributed among nine residents in 1976. Currently, ownership is equally distributed among ten residents.

There are a total of 13 service connections (11 residential, 2 commercial). The total population served is approximately 45 residents. The service area boundaries are shown on Figure 1.

The Local Primacy Agency with jurisdiction over Ray Water Company (RWC) is Santa Barbara County, Public Health, Environmental Health Services (Santa Barbara County).

Based on State Water Resources Control Board 2020 data for Santa Maria water usage, the Average Daily Demand (ADD) is 65.4 gallons per day (per resident). To determine the Maximum Daily Demand (MDD), we multiplied the ADD by 1.66:

$$65.4 \text{ gal/day} \times 1.66 = 108.56 \text{ gallons MDD per RWC resident}$$

The current number of residents is 45. So, the entire Ray Water Company MDD is:

$$108.56 \times 45 = 4,885 \text{ gallons per day}$$

Ray Water Company currently charges a flat rate of \$100 per month for each of the 13 service connections. The most recent rate increase went into effect on May 1, 2021.

RWC has received numerous notices of violation (from Santa Barbara County) dating back to 1980. The most relevant violation includes repeated nitrate concentrations above the MCL, starting at least as early as June 24, 1980. Other violations included (but not limited to) coliform

bacteria detections, failure to perform the required analytical testing, failure to properly inform residents of MCL exceedances, and failure to resolve the nitrate issue.

Santa Barbara County issued RWC an enforcement action Compliance Order on March 6, 2020 due to ongoing nitrate concentrations above the MCL. The Compliance Order required RWC to inform all residents of the elevated nitrate concentrations, submit a progress report, and submit a corrective action plan to resolve the nitrate issue. This Draft Engineering Report (DER) is a response to the Compliance Order.

B. Source

Ray Water Company (RWC) utilizes groundwater as its drinking water source. The capacity of this source is unknown, because RWC does not meter the well or regularly monitor depth to groundwater.

A Santa Barbara County sanitary survey report letter dated September 11, 2017 indicated the following for the existing well:

- 320-feet deep vertical well with a 75-foot annular seal. 6-inch diameter well casing. Well screen from 270 to 320-feet. In late 2016, the 5-Horsepower Submersible pump was replaced and set deeper into the well at 230-feet.

Per our understanding, there is not a current drinking water source assessment and protection (DWSAP) Report for RWC.

The water quality data from 2019 to 2021 is presented in Table 1.

C. Treatment

Ray Water Company (RWC) chlorinates the well source drinking water as a precautionary measure. This is the only water treatment technique used. A chlorine solution is injected into the system prior to storage by a Stenner peristaltic pump with a maximum capacity of 12 gallons per day at 150 psi. The chlorine solution is stored in a 25-gallon plastic container and all disinfection equipment is housed in a small shed. The water storage tank feeds a booster pump, which pressurizes the water through the distribution system. See Figure 3 for a schematic of the treatment train.

D. Storage

Ray Water Company (RWC) uses one steel water storage tank. Santa Barbara County documentation indicates that the steel tank is 32-feet tall, 12-feet in diameter, with a capacity of approximately 25,000-gallons. This tank was originally used to store bulk petroleum products. A “Shell Oil” logo is still faintly visible on the storage tank. According to the contractor who provided the tank, the inside of the tank was cleaned and then sand-blasted until bare metal was visible. Then it was painted with 3 coats of Henry’s #107 tank paint manufactured by W. W. Henry Company of Huntington Park, CA, which was specially formulated for coating water tanks (information provided in a letter from the contractor to Santa Barbara County on September 9, 1972).

The storage tank dates to the 1950’s and has prevalent rust stains and significant signs of aging. The water tank can only be partially filled, because of holes located higher up on the tank.

Figure 4 shows the water tank location.

E. Distribution System

A 4-inch galvanized steel outlet pipe exits the bottom of the 25,000-gallon storage tank then reduces to 1½-inch and feeds a ½ horsepower booster pump. There are no pressure vessels, so the booster pump supplies all the pressure to the distribution system. The booster pump constantly runs to keep the distribution system pressurized at 40-60 psi. The constant wear on the booster pump necessitates replacement every few years. The booster pump is Sta-Rite Model BMG-41S and was last replaced in 2021, according to RWC. The booster pump feeds a 4-inch steel water main running down Rayville Lane and a 2-inch PVC pipe to the two properties on Betteravia Road: with ¾ and ½-inch laterals to 13 total service connections. See Figure 4 for a layout of the existing distribution system.

In general, the distribution system components are old and near (or beyond) the end of their service life. More details are presented in the section below.

F. System Deficiencies

Ray Water Company system deficiencies include the following:

- Nitrate concentrations above the Maximum Contaminant Level (MCL). Santa Barbara County enforcement action due to ongoing high nitrate concentrations.
- Arsenic concentration close to, yet just below the MCL
- Currently no water meters at the well or service connections
- No emergency power source. If RWC loses power, the customers have no water.
- The electrical system servicing the well is old (circa 1940's) and in need of an upgrade.
- Old, hobbled together, and decayed distribution system piping. Pipe leaks in the ground are common. Most of the steel pipe connections are "frozen" (i.e., fused together). Some

2-inch lines are only open $\frac{3}{4}$ -inch due to rust/mineralization. System pressure is suboptimal (too low).

- Inadequate fire suppression capacity
- No pressure tanks, requiring booster pumps to run constantly to pressurize distribution system
- Water storage tank has holes rusted through it, limiting its capacity and providing a potential pathway for bacteria

The primary need and overall project objective are to provide Ray Water Company (RWC) residents with safe and reliable drinking water. Various solution alternatives are presented in the next section.

3. Alternatives Analysis - Projects

To address the project objective described above in Section 1-C, we evaluated four potential alternatives:

- No Action
- Treatment System for Nitrate and Arsenic
- Drilling a New Well
- Full Consolidation with an Existing Water System

The four alternatives are presented in the sections below.

A. Project Alternative #1 – Take No Action

Project Alternative #1 involves taking no corrective actions. This alternative does not address the primary problem of nitrate concentrations above the Maximum Contaminant Level (MCL). The ramification of not addressing this issue includes RMC residents potentially becoming ill. Project Alternative #1 also does not address the various secondary problems presented above in Section 2F.

For these reasons, we do not recommend Alternative #1.

B. Project Alternative #2 – Treatment System for Nitrate & Arsenic

Project Alternative #2 involves installing a Reverse Osmosis (RO) treatment system to remove nitrate from the groundwater. Alternative #2 addresses the primary problem of nitrate concentrations above the Maximum Contaminant Limit (MCL). This treatment system could also remove arsenic from the groundwater.

Alternative #2 would also require an upgraded water distribution system and a new water storage tank. The problems (and corresponding need for upgrade) of these items are explained above in Section 2-F.

The advantages of Alternative #2 include removing nitrate and arsenic from the groundwater. The disadvantages include the following:

- High cost to install RO treatment system, upgraded water distribution system, and new water storage tank. High monthly Operations and Maintenance (O&M) cost to maintain the treatment system, especially to deal with filtrate (high concentration wastewater produced by the system).
- A new water well may need to be installed sometime in the next 20-years as either a back-up or replacement for the existing well. The existing water well is currently operational; but was installed in 1978 (43-years old).
- Ray Water Company (RWC) would remain in operation. Primarily due to financial constraints, RWC have been generally unreliable and inconsistent as water system managers dating back to the 1970's. They have not demonstrated the financial responsibility to maintain a relatively complex RO system, nor to consistently perform water quality analytical testing per county/state requirements.

Per the disadvantages listed above, we do not recommend Alternative #2.

Table 2 summarizes costs for a new distribution system. Table 3 summarizes costs for the entire Alternative #2 (new distribution system + treatment system).

C. Project Alternative #3 – Drilling a New Well

Project Alternative #3 involves installing a new well in search of non-impacted groundwater (i.e., groundwater without significant nitrate or arsenic concentrations present).

Alternative #3 addresses the primary problem of elevated nitrate and arsenic concentrations.

Alternative #3 would also require an upgraded water distribution system and water storage tank. The problems (and corresponding need for upgrade) of these items are explained above in Section 2-F.

The advantage of Alternative #3 includes a potentially clean groundwater source.

The disadvantages include the following:

- High cost to install a new well, upgraded water distribution system, and water storage tank. Moderate monthly Operations and Maintenance (O&M) costs to maintain the new well and distribution system. The monthly costs would be difficult to secure payment for over the next few decades.
- There is a significant chance that the new well may also contain elevated nitrate and arsenic concentrations. There is also a chance that other contaminants may be encountered. There is a good possibility that several test wells would be required to locate quality water. Even then, there is no guarantee of finding it.
- Ray Water Company (RWC) would remain in operation. Primarily due to financial constraints, RWC have been generally unreliable and inconsistent as water system managers dating back to the 1970's. They have not shown the financial responsibility to maintain a new well and distribution system, nor to consistently perform water quality analytical testing per county/state requirements.

Based on the disadvantages listed above and the uncertainty of finding nitrate-free groundwater, we do not recommend Alternative #3.

Table 2 summarizes costs for a new distribution system. Table 4 summarizes costs for the entire Alternative #3 (new distribution system + new well).

D. Project Alternative #4 – Full Consolidation with Existing Water System

Project Alternative #4 involves full consolidation with an existing water system. A new water main would be constructed between Ray Water Company (RWC) and the City of Santa Maria (City) water system. The City water system is the closest public water system to RWC. The other public water system in the vicinity is Golden State Water Company, which is significantly further away. See Figure 1 for locations.

Alternative #4 addresses the primary problem of elevated nitrate and arsenic concentrations by providing clean and reliable potable water.

Alternative #4 also requires an upgraded water distribution system. The problems (and corresponding need for upgrade) of these items are explained above in Section 2-F. A new water storage tank is not needed, because the City's water system already has sufficient storage capacity.

Local Agency Formation Commission (LAFCO) approval is required for this consolidation project. City of Santa Maria staff plan to complete the LAFCO Out-of-Agency service agreement application. Estimated LAFCO fees are included in Table 5.

CPUC requirements, if any, need to be identified and addressed.

The advantages of Alternative #4 include a clean / reliable long-term water source, sharing operations and maintenance costs with a larger community, and transfer of water system management responsibilities to the City.

The disadvantages include moderate initial cost to construct a water main connecting RWC to the City's water system, and to upgrade the existing RWC distribution system

Alternative #4 is the most reliable and cost-effective long-term solution.

Table 2 summarizes costs for a new distribution system. Table 5 summarizes costs for the entire Alternative #4 (new distribution system + new water main consolidation).

E. Comparison of Various Alternatives

Of the four Project Alternatives presented above, Alternative #4 (full consolidation) most effectively resolves Ray Water Company's issues and meets the project objectives. The long-term sustainability of Alternative #4 is superior to the other Alternatives [including technical, managerial, and financial (TMF) requirements]. This is because the City (and not RWC) would manage all aspects of the water system for the existing RWC residents.

A 20-year period life cycle cost analysis was performed on the four Alternatives. The analysis is summarized in Tables 2 through 5. Table 6 shows a side-by-side comparison of the various alternatives. The life cycle cost analysis indicates that Alternative #4 provides the best long-term, cost-effective solution.

The environmental impacts of the four Alternatives are generally low. Alternative #1 has minor environmental impacts, including high nitrate water entering the septic systems. Alternative #2 has minor environmental impacts, including land disturbance associated with replacing the distribution system and water storage tank; and installing the treatment system. There are also emissions from hauling away the wastewater generated. Alternative #3 has limited environmental impacts including installation of a new well, and land disturbance associated with replacing the distribution system and water storage tank. Alternative #4 has limited environmental impacts including land disturbance associated with installation of a new water

main and replacing the distribution system. A detailed Environmental Analysis of Engineering Alternatives is included in Appendix A.

The sites and easements required to implement the various alternatives are presented in the table below:

Alternative #	Sites & Easements Required	Properties or leases need to be acquired for this Alternative?
1	None	No
2	None	No
3	None	No
4	Need easement for City water infrastructure on Rayville Lane. City already has existing easements within Betteravia Road (Need to verify).	No

Alternative #4 (full consolidation) most effectively resolves Ray Water Company's issues and meets the project objective.

4. Recommended Option

A. Project Description

The proposed construction project consists of consolidating Ray Water Company (RWC) with the City of Santa Maria's (City) water system. The individual components include:

- Approximately 3,400-feet of new water main extending from RWC east along Betteravia Road to connect with the City water system near the intersection of Betteravia Road and A Street. See Figure 2 for details.
- A new upgraded distribution system extending from the new RWC water main connection to various resident's homes. An 8-inch diameter distribution water line will supply the various service connections to the resident's homes.

Tables 2 & 5, and the 30% design drawings (Appendix B) provide additional project detail.

B. Preliminary Schedule

Submit this Draft Engineering Report (DER) and 30% plans to the TA Team:	July 2, 2021
TA Team Review and response:	Aug 2, 2021
Submit Final Engineering Report and design plans to the TA Team	Sept 23, 2021
Construction application complete	Nov 17, 2021
Construction application approved / funding agreement issued	6 to 9 months
Project bid documents and contractor selection	3 to 6 months
Project construction	3 to 6 months

C. Comprehensive Response to Climate Change

This section describes climate change preparedness for the project and is organized as follows:

Vulnerability – Describes the effects of climate changes that the proposed project is susceptible to, including critical threshold conditions that may cause damage to the facility or result in loss of services

Adaptation – Describes the applied adaptation measures considered for the project, including adaptation measures deemed unnecessary, and explains why such measures were eliminated

Mitigation – Describes the mitigation measures considered for the project, including mitigation measures deemed unnecessary, and explains why such measures were eliminated

Vulnerability

Vulnerability is used to identify effects of climate change that the project may be susceptible to. Vulnerability includes sea level rise, water supply depletion, adverse water supply quality, flooding/storm surges, wildfires, and drought.

The climate change effects the Project may be susceptible to are discussed below.

Sea Level Rise

The project is not susceptible to sea level rise.

Water Supply Quality issues

There are no anticipated water quality issues with City of Santa Maria supplied water, and none are anticipated due climate change (**Confirm with the City**).

Flooding/Storm Surges

The project is not susceptible to flooding or storm surges.

Forest Fires

The project is not susceptible to forest fires.

Drought

Longer or more frequent droughts due to climate change may adversely affect all water supplies. This could lead to water supply issues for all of California, including the City of Santa Maria. Water conservation should be practiced to help insure a long-term water supply.

Other

No other vulnerability effects of climate change were identified for the Project.

Adaptation

Adaptation is the term used to identify measures taken as a direct response to climate change effects. Multiple measures can be taken in response to a single vulnerability. For example, in response to sea level rise an agency may investigate constructing sea walls or levees in order to prevent flooding. Flood contingencies could also be explored to protect the project if the levees fail or in the event of severe storm surges.

Adaptive measures in the Project in response to Climate Change are described below.

Renewable Energy Sources

No renewable energy sources are directly involved with the project. Energy will not be directly involved in the project as water will be delivered from the City of Santa Maria's system. As the overall fraction of renewable energy in the California grid grows, renewable energy will be incorporated into the project.

Drought Resiliency and Flood Contingency

The multiple sources of water for the City of Santa Maria provide some drought resiliency. The project is not subject to flooding.

Permeable Pavements

No permeable pavements are incorporated in the Project.

Elevated Construction, Sea Walls, Levees

No elevated construction, sea walls or levees are necessary for the Project, and none have been incorporated into the Project.

Green Roofing

No green roofing has been incorporated in the Project, as no structures or roofing is involved.

Fire Resistant Water Connections and Hydrants

Fire hydrants and the necessary flow and pressure to ensure their proper operation are part of the Project. Fire resistant water connections are not part of the Project.

Other

No other adaptations were included in the Project.

Mitigation

Mitigation is the term used to identify measures taken to slow or stop changes caused by greenhouse gas emissions in the atmosphere. Measures identified in adaptation may also be used for mitigation. For example, water conservation may be an adaptation response to drought vulnerability but a mitigation measure by reducing the energy consumed to move excessive volumes of water. Green roofing as an adaptation measure will help to reduce the heat island

effect of an urban community, and as a mitigation measure will reduce the energy consumed to heat and cool the building.

Mitigation measures taken to reduce concentrations of greenhouse gases in the atmosphere as part of the Project are described below.

Renewable Energy Sources

There is no direct energy use by the project and no renewable energy sources are incorporated in the Project.

Energy Conservation

There is no direct energy use by the project and no energy conservation practices are incorporated in the Project.

Water Conservation

Water conservation components of the Project include:

- New water main and distribution lines which will be "tight" (no leaks)
- Removal of the leaking storage tank
- Water meters for each connection

Other

No other mitigation measures were included in the Project.

Limitations

Our service consists of professional opinions and recommendations made in accordance with generally accepted engineering principles and practices. This warranty is in lieu of all others, either expressed or implied. The analysis and conclusions in this report are based on site observations and existing data, some of which have been conducted or collected by others, all of which are necessarily limited. Additional data from future work may lead to modifications of the opinions expressed herein. All work was conducted under the direct supervision of a Professional Engineer, registered in the state of California, and experienced in drinking water system design and water resource engineering.

Thank you for the opportunity to prepare this Draft Engineering Report. If you have any questions or comments regarding this project, please contact us at 831-722-3580.

Sincerely yours,

Weber, Hayes and Associates

A California Corporation

By: _____
Shawn Mixan, EIT, D2, T2
Project Engineer

And: _____
Rich Peterson, EIT
Staff Engineer

And: _____
Craig B. Drizin, PE, D2, T2
Principal Engineer



References

- State Water Resources Control Board water usage data for the City of Santa Maria; June 2014 – April 2021 Urban Water Supplier Monthly Reports (Raw Dataset). File found on Water Board website:
https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.html

FIGURES

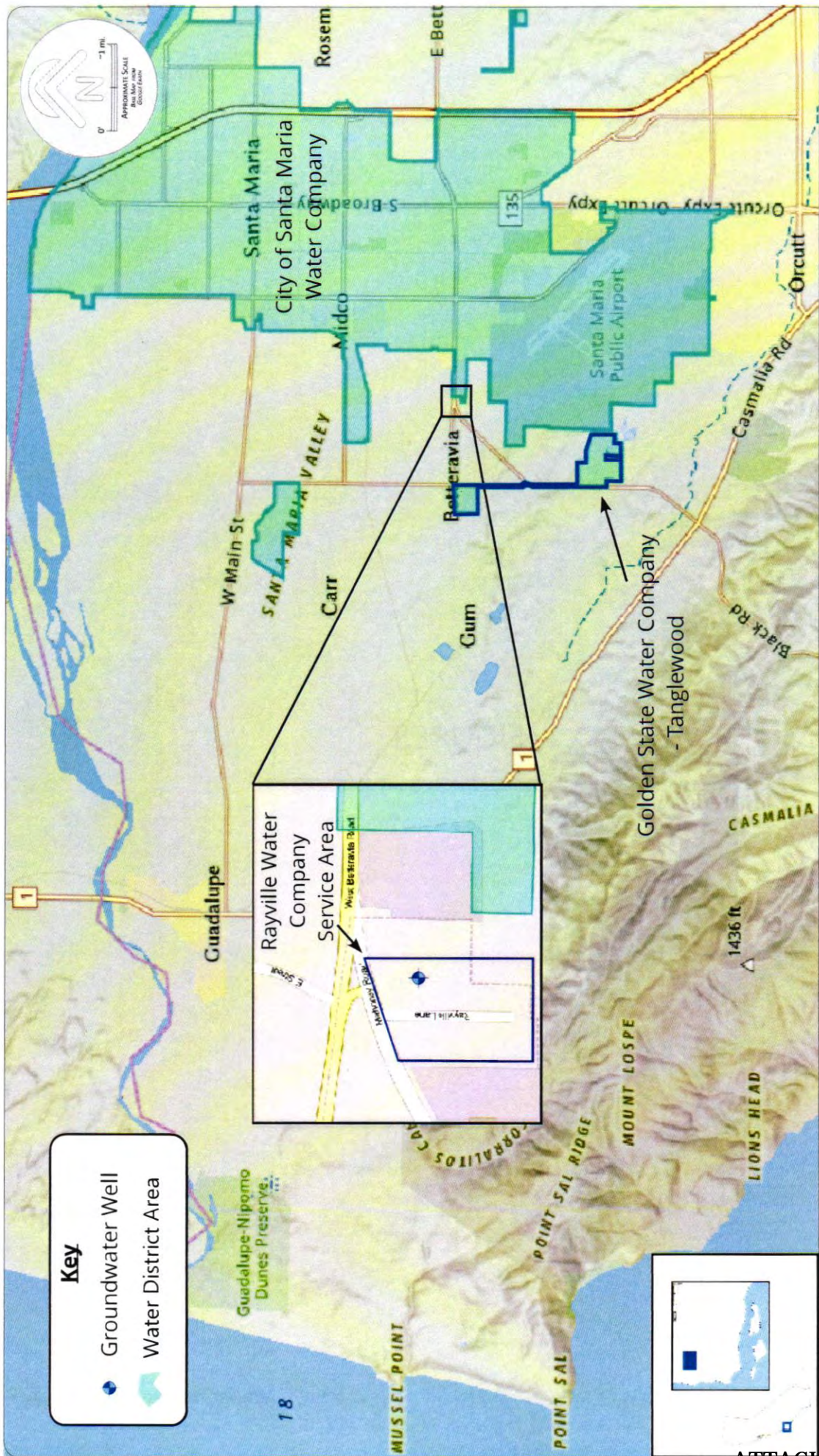


Figure 1
April 2021

Location Map with Water Company Service Area Boundaries
Ray Water Company - Rayville Ln. Moragn Hill, CA

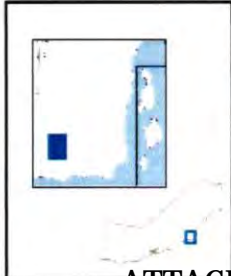
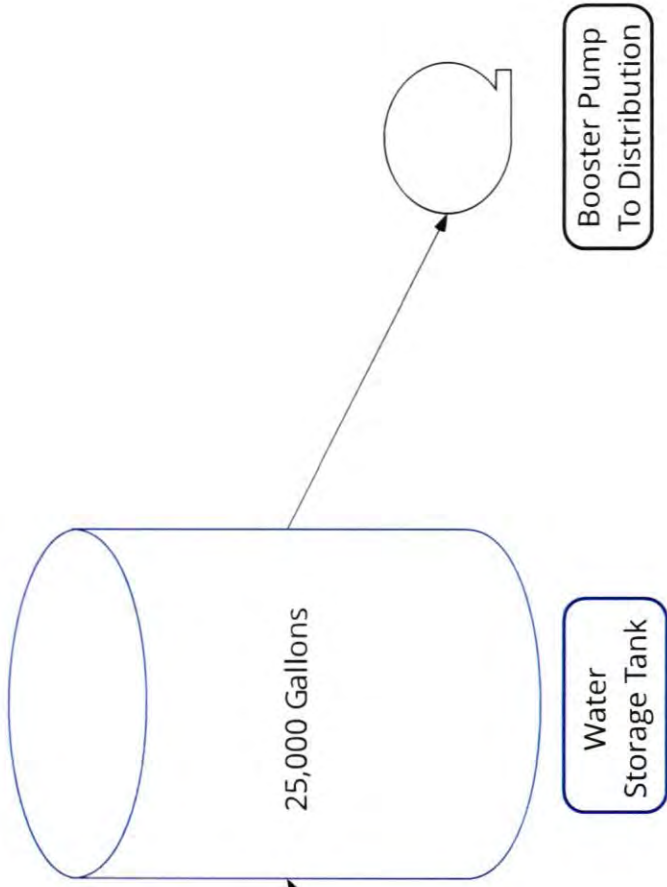




Figure 2
May 2021

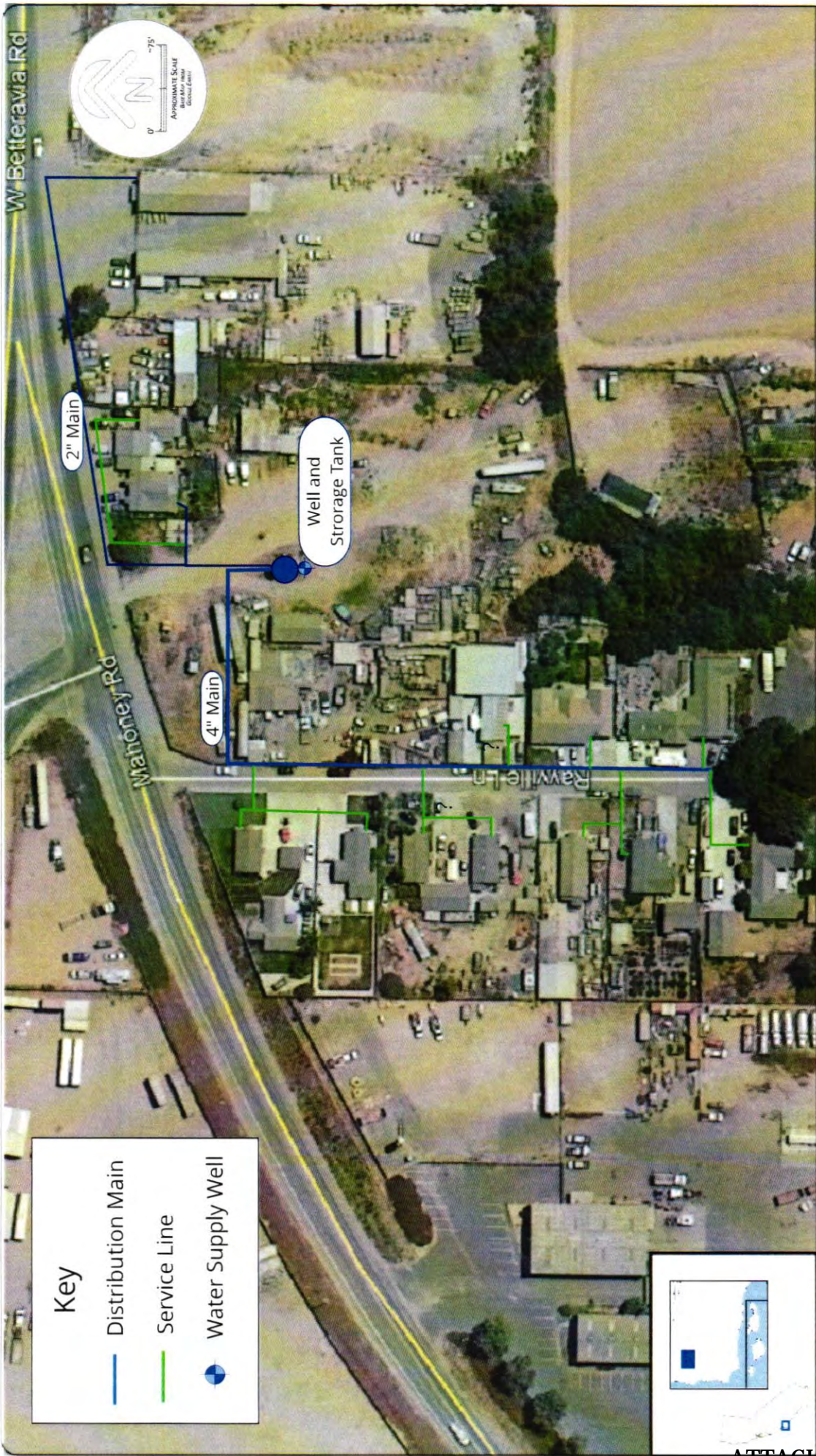
Proposed New Water Main Alignment
Ray Water Company - Santa Maria, CA





Schematic of Current Treatment Train
Ray Water Company - Santa Maria, CA

Figure 3
May 2021



Ray Water Company Distribution System Layout
 Ray Water Company - Santa Maria, CA

Figure 4
 May 2021

TABLES



Table 1 - Ray Water Company - Water Quality Data

Analyte	Sample Date	Result	Unit	MCL
NITRATE (AS N)	2021-04-22	28	mg/L	10
NITRATE (AS N)	2021-03-25	29	mg/L	10
GROSS ALPHA	2021-03-02	0	pCi/L	15
RADIUM 228	2021-03-02	0	pCi/L	---
URANIUM (PCI/L)	2021-03-02	3.3	pCi/L	20
CARBON TETRACHLORIDE	2021-03-02	<0.5	µg/L	0.5
TOLUENE	2021-03-02	<0.5	µg/L	150
BENZENE	2021-03-02	<0.5	µg/L	1
MONOCHLOROBENZENE	2021-03-02	<0.5	µg/L	70
ETHYL BENZENE	2021-03-02	<0.5	µg/L	300
CHLOROMETHANE	2021-03-02	<0.5	µg/L	---
DICHLOROMETHANE	2021-03-02	<0.5	µg/L	5
TETRACHLOROETHYLENE	2021-03-02	<0.5	µg/L	5
TRICHLOROFLUOROMETHANE FREON 11	2021-03-02	<5	µg/L	150
1,1-DICHLOROETHANE	2021-03-02	<0.5	µg/L	5
1,1-DICHLOROETHYLENE	2021-03-02	<0.5	µg/L	6
1,1,1-TRICHLOROETHANE	2021-03-02	<0.5	µg/L	200
1,1,2-TRICHLOROETHANE	2021-03-02	<0.5	µg/L	5
1,1,2,2-TETRACHLOROETHANE	2021-03-02	<0.5	µg/L	1
1,2-DICHLOROETHANE	2021-03-02	<0.5	µg/L	0.5
1,2-DICHLOROBENZENE	2021-03-02	<0.5	µg/L	600
1,2-DICHLOROPROPANE	2021-03-02	<0.5	µg/L	5
TRANS-1,2-DICHLOROETHYLENE	2021-03-02	<0.5	µg/L	10
1,2,4-TRICHLOROBENZENE	2021-03-02	<0.5	µg/L	5
1,3-DICHLOROPROPENE (TOTAL)	2021-03-02	<0.5	µg/L	0.5
1,3-DICHLOROBENZENE	2021-03-02	<0.5	µg/L	---
1,4-DICHLOROBENZENE	2021-03-02	<0.5	µg/L	5
TRANS-1,3-DICHLOROPROPENE	2021-03-02	<0.5	µg/L	0.5
CIS-1,3-DICHLOROPROPENE	2021-03-02	<0.5	µg/L	0.5
VINYL CHLORIDE	2021-03-02	<0.5	µg/L	0.5
TRICHLOROETHYLENE	2021-03-02	<0.5	µg/L	5
METHYL-TERT-BUTYL-ETHER (MTBE)	2021-03-02	<3	µg/L	13
CIS-1,2-DICHLOROETHYLENE	2021-03-02	<0.5	µg/L	6
STYRENE	2021-03-02	<0.5	µg/L	100
O-XYLENE	2021-03-02	<0.5	µg/L	---
1,2,3-TRICHLOROPROPANE (1,2,3-TCP)	2021-03-02	<0.005	µg/L	0.005
XYLENES (TOTAL)	2021-03-02	<0.5	µg/L	1,750
TRICHLOROTRIFLUOROETHANE (FREON 113)	2021-03-02	<10	µg/L	1,200
M,P-XYLENE	2021-03-02	<0.5	µg/L	---
GROSS ALPHA MDA95	2021-03-02	1.63	pCi/L	3
RADIUM 228 MDA95	2021-03-02	0.624	pCi/L	1.001
NITRATE (AS N)	2021-02-19	31	mg/L	10
NITRATE (AS N)	2021-01-12	28	mg/L	10
NITRATE (AS N)	2020-12-22	30	mg/L	10
COLOR	2020-11-11	<3	units	15
ODOR THRESHOLD @ 60 C	2020-11-11	<1	t.o.n.	3
SPECIFIC CONDUCTANCE	2020-11-11	1400	US	1,600



Table 1 - Ray Water Company - Water Quality Data

Analyte	Sample Date	Result	Unit	MCL
PH, LABORATORY	2020-11-11	7.57	units	---
ALKALINITY (TOTAL) AS CaCO ₃	2020-11-11	400	mg/L	---
BICARBONATE ALKALINITY	2020-11-11	400	mg/L	---
CARBONATE ALKALINITY	2020-11-11	<10	mg/L	---
NITRATE (AS N)	2020-11-11	30	mg/L	10
NITRITE (AS N)	2020-11-11	<0.4	mg/L	1
CALCIUM	2020-11-11	170	mg/L	---
MAGNESIUM	2020-11-11	77	mg/L	---
SODIUM	2020-11-11	96	mg/L	---
POTASSIUM	2020-11-11	3.8	mg/L	---
CHLORIDE	2020-11-11	99	mg/L	500
SULFATE	2020-11-11	500	mg/L	500
FLUORIDE (F) (NATURAL-SOURCE)	2020-11-11	0.34	mg/L	2
ARSENIC	2020-11-11	9.6	µg/L	10
BARIUM	2020-11-11	15	µg/L	1,000
BERYLLIUM	2020-11-11	<1	µg/L	4
CADMIUM	2020-11-11	<1	µg/L	5
CHROMIUM (TOTAL)	2020-11-11	16	µg/L	50
COPPER	2020-11-11	<2	µg/L	1,000
IRON	2020-11-11	82	µg/L	300
LEAD	2020-11-11	<1	µg/L	0.000015
MANGANESE	2020-11-11	<10	µg/L	50
THALLIUM	2020-11-11	<1	µg/L	2
NICKEL	2020-11-11	5.8	µg/L	100
SILVER	2020-11-11	<1	µg/L	100
ZINC	2020-11-11	<5	µg/L	5,000
ANTIMONY	2020-11-11	<2	µg/L	6
ALUMINUM	2020-11-11	<50	µg/L	1,000
SELENIUM	2020-11-11	40	µg/L	50
CYANIDE	2020-11-11	<40	µg/L	150
GROSS ALPHA	2020-11-11	3.08	pCi/L	15
RADIUM 228	2020-11-11	0	pCi/L	---
URANIUM (PCI/L)	2020-11-11	3.6	pCi/L	20
BROMODICHLOROMETHANE (THM)	2020-11-11	<1	µg/L	---
CARBON TETRACHLORIDE	2020-11-11	<0.5	µg/L	0.5
BROMOFORM (THM)	2020-11-11	1.4	µg/L	---
DIBROMOCHLOROMETHANE (THM)	2020-11-11	<1	µg/L	---
CHLOROFORM (THM)	2020-11-11	<1	µg/L	---
TOLUENE	2020-11-11	<0.5	µg/L	150
BENZENE	2020-11-11	<0.5	µg/L	1
BENZO (A) PYRENE	2020-11-11	<0.1	µg/L	0.2
MONOCHLOROBENZENE	2020-11-11	<0.5	µg/L	70
CHLOROETHANE	2020-11-11	<0.5	µg/L	---
ETHYL BENZENE	2020-11-11	<0.5	µg/L	300
HEXACHLOROCYCLOPENTADIENE	2020-11-11	<1	µg/L	50
HEXACHLOROBUTADIENE	2020-11-11	<0.5	µg/L	---
BROMOMETHANE	2020-11-11	<0.5	µg/L	---



Table 1 - Ray Water Company - Water Quality Data

Analyte	Sample Date	Result	Unit	MCL
CHLOROMETHANE	2020-11-11	<0.5	µg/L	---
DICHLOROMETHANE	2020-11-11	<0.5	µg/L	5
TETRACHLOROETHYLENE	2020-11-11	<0.5	µg/L	5
TRICHLOROFLUOROMETHANE FREON 11	2020-11-11	<5	µg/L	150
1,1-DICHLOROETHANE	2020-11-11	<0.5	µg/L	5
1,1-DICHLOROETHYLENE	2020-11-11	<0.5	µg/L	6
1,1,1-TRICHLOROETHANE	2020-11-11	<0.5	µg/L	200
1,1,2-TRICHLOROETHANE	2020-11-11	<0.5	µg/L	5
1,1,2,2-TETRACHLOROETHANE	2020-11-11	<0.5	µg/L	1
1,2-DICHLOROETHANE	2020-11-11	<0.5	µg/L	0.5
1,2-DICHLOROBENZENE	2020-11-11	<0.5	µg/L	600
1,2-DICHLOROPROPANE	2020-11-11	<0.5	µg/L	5
TRANS-1,2-DICHLOROETHYLENE	2020-11-11	<0.5	µg/L	10
1,2,4-TRICHLOROBENZENE	2020-11-11	<0.5	µg/L	5
1,3-DICHLOROPROPENE (TOTAL)	2020-11-11	<0.5	µg/L	0.5
1,3-DICHLOROBENZENE	2020-11-11	<0.5	µg/L	---
1,4-DICHLOROBENZENE	2020-11-11	<0.5	µg/L	5
DICHLORODIFLUOROMETHANE (FREON 12)	2020-11-11	<0.5	µg/L	---
NAPHTHALENE	2020-11-11	<0.5	µg/L	---
TRANS-1,3-DICHLOROPROPENE	2020-11-11	<0.5	µg/L	0.5
CIS-1,3-DICHLOROPROPENE	2020-11-11	<0.5	µg/L	0.5
FOAMING AGENTS (MBAS)	2020-11-11	<0.05	mg/L	0.5
ATRAZINE	2020-11-11	<0.5	µg/L	1
SIMAZINE	2020-11-11	<1	µg/L	4
DI(2-ETHYLHEXYL)PHTHALATE	2020-11-11	<3	µg/L	4
VINYL CHLORIDE	2020-11-11	<0.5	µg/L	0.5
TRICHLOROETHYLENE	2020-11-11	<0.5	µg/L	5
HEXACHLOROBENZENE	2020-11-11	<0.5	µg/L	1
METHYL-TERT-BUTYL-ETHER (MTBE)	2020-11-11	<3	µg/L	13
TOTAL DISSOLVED SOLIDS	2020-11-11	1000	mg/L	1,000
HYDROXIDE ALKALINITY	2020-11-11	<10	mg/L	---
MERCURY	2020-11-11	<0.2	µg/L	2
CARBON DISULFIDE	2020-11-11	<0.5	µg/L	---
CIS-1,2-DICHLOROETHYLENE	2020-11-11	<0.5	µg/L	6
STYRENE	2020-11-11	<0.5	µg/L	100
O-XYLENE	2020-11-11	<0.5	µg/L	---
1,1-DICHLOROPROPENE	2020-11-11	<0.5	µg/L	---
2,2-DICHLOROPROPANE	2020-11-11	<0.5	µg/L	---
1,3-DICHLOROPROPANE	2020-11-11	<0.5	µg/L	---
1,2,4-TRIMETHYLBENZENE	2020-11-11	<0.5	µg/L	---
ISOPROPYLBENZENE	2020-11-11	<0.5	µg/L	---
N-PROPYLBENZENE	2020-11-11	<0.5	µg/L	---
1,3,5-TRIMETHYLBENZENE	2020-11-11	<0.5	µg/L	---
SEC-BUTYLBENZENE	2020-11-11	<0.5	µg/L	---
TERT-BUTYLBENZENE	2020-11-11	<0.5	µg/L	---
1,2,3-TRICHLOROPROPANE (1,2,3-TCP)	2020-11-11	<0.005	µg/L	0.005
1,1,1,2-TETRACHLOROETHANE	2020-11-11	<0.5	µg/L	---

Table 1 - Ray Water Company - Water Quality Data

Analyte	Sample Date	Result	Unit	MCL
DIBROMOMETHANE	2020-11-11	<0.5	µg/L	---
1,2,3-TRICHLOROBENZENE	2020-11-11	<0.5	µg/L	---
ALACHLOR	2020-11-11	<1	µg/L	2
XYLENES (TOTAL)	2020-11-11	<0.5	µg/L	1,750
BROMOBENZENE	2020-11-11	<0.5	µg/L	---
METHYL ETHYL KETONE	2020-11-11	<5	µg/L	---
METHYL ISOBUTYL KETONE	2020-11-11	<5	µg/L	---
TRICHLOROTRIFLUOROETHANE (FREON 113)	2020-11-11	<10	µg/L	1,200
TURBIDITY, LABORATORY	2020-11-11	11	NTU	5
TOTAL TRIHALOMETHANES	2020-11-11	1.4	µg/L	80
MOLINATE	2020-11-11	<2	µg/L	20
AGGRSSIVE INDEX (CORROSIVITY)	2020-11-11	12.8	---	---
THIOBENCARB	2020-11-11	<1	µg/L	70
2-CHLOROTOLUENE	2020-11-11	<0.5	µg/L	---
4-CHLOROTOLUENE	2020-11-11	<0.5	µg/L	---
N-BUTYLBENZENE	2020-11-11	<0.5	µg/L	---
P-ISOPROPYLTOLUENE	2020-11-11	<0.5	µg/L	---
BROMOCHLOROMETHANE	2020-11-11	<0.5	µg/L	---
M,P-XYLENE	2020-11-11	<0.5	µg/L	---
DI(2-ETHYLHEXYL)ADIPATE	2020-11-11	<5	µg/L	400
ETHYL-TERT-BUTYL ETHER	2020-11-11	<3	µg/L	---
TERT-AMYL-METHYL ETHER (TAME)	2020-11-11	<3	µg/L	---
DIISOPROPYL ETHER	2020-11-11	<3	µg/L	---
GROSS ALPHA MDA95	2020-11-11	0.841	pCi/L	3
RADIUM 228 MDA95	2020-11-11	0.773	pCi/L	1.001
COLIFORM, total	2019-10-25	absent	---	---
E. Coli	2019-10-25	absent	---	---

Notes:

MCL = Maximum Contaminant Level

mg/L = milligrams per Liter

pCi/L = picocuries per Liter

µg/L = micrograms per Liter

t.o.n. = threshold odor number

NTU = Nephehelometric Turbidity Units

Result exceeds MCL	Result just below the MCL
--------------------	---------------------------



Table 2

Engineer's Opinion of Probable Costs for New Distribution System

DISTRIBUTION SYSTEM - ITEM	Quantity	Unit	Cost per Unit	COST (\$)
Distribution System 8-inch (see Figure 2 for alignment) C-900 DR18 PVC & Trenching	700	LF	116	81,480
13 service line laterals to residents (1-inch Type K soft copper lines, Meter stops (valves) are to be 1" size, lockable-style (equal to Ford KV43-444W) and adapted (bushed down) after the service valve to 3/4" size (meter size)	13	EA	4,200	54,600
Install Water Meter Box and Customer Service Valve	13	EA	840	10,920
Fire Hydrants WA-19D (every 350' max) - see Section F of City's Standard Specifications for details. Price does not include a concrete pad.	2	EA	11,640	23,280
Blow off at end of Rayville Lane - WA-24B	1	EA	2,760	2,760
8-inch valve at Betteravia and Rayville Lane	1	EA	2,040	2,040
Water sampling ports on distribution line	1	EA	2,500	2,500
Traffic control on Rayville Lane	1	LS	5,875	5,875
Encroachment permit	1	LS	2,000	2,000
Engineering field oversight of project	120	HR	150	18,000
Engineering & project administration (including as-built plans & completion report)	---	---	---	15,000
Distribution System Construction-Related Cost	---	---	---	218,455

Notes

This distribution system cost estimate table includes all distribution system upgrade items, except the items specific to Project Alternatives #2, #3, #4 - such as distribution system components associated with the treatment system (Alt #2); distribution system components associated with the new well (Alt #3); distribution system components associated with the connection to the new water main (Alt #4); and corresponding annual admin, operations / maintenance, and capital costs. These Alternative-specific items are presented on the corresponding Alternative cost estimate tables (Tables 3, 4, and 5).

- LS = Lump Sum
- LF = Lineal Feet
- EA = Each
- HR = Hour

Table 3

Engineer's Opinion of Probable Costs for Treatment System (Alternative #2)

TREATMENT SYSTEM - ITEM	COST (\$)
Distribution System Upgrade (see Table 2 for a detailed list of costs)	218,455
Engineering design of treatment system; as built plans	60,000
Installation of Reverse Osmosis System (to remove nitrate/arsenic concentrations) and calcite re-mineralization	125,000
New shed with concrete pad for treatment system	15,000
New piping from well to Reverse Osmosis (RO) system; new piping from RO System to distribution system	7,500
Install tank to hold brine stream prior to off-haul for disposal at a wastewater treatment plant	15,000
Removal and disposal of a 25,000-gallon water tank	10,000
Install new 50,000-gallon water storage tank, and new concrete pad	175,000
Engineering oversight during treatment system installation	10,000
Admin Costs - Coordination with RWC Residents	4,050
Subtotal of Treatment System Construction-Related Costs	421,550
Annual Operations and Maintenance - service visits	15,000
Annual Operations and Maintenance - brine stream waste disposal	200,750
Annual Operations and Maintenance - treatment chemicals & filter replacements	5,000
20-Year Operations and Maintenance Cost	4,415,000
20-year Capital Expenditures (expect pipe & appurtenances to last 50-years)	30,000
Project administration (20-years)	75,000
Subtotal of Operations & Maintenance, Capital Expenditure, and Administration Costs (20-years)	4,520,000
Project Lifecycle (20-years)	5,160,005
Additional Cost if a new well is needed in the next 20-years. Current well was constructed in 1978. Per current water system standards, each water system should have at least 2 wells.	870,500
Total Cost if a new well is needed in the next 20-years	6,030,505

Table 4

Engineer's Opinion of Probable Costs for New Well (Alternative #3)

NEW WELL - ITEM	COST (\$)
Distribution System Upgrade (see Table 2 for a detailed list of costs)	218,455
Hydro-geological analysis to determine ideal location and depth of new well	12,000
Engineering design (including as-built plans)	60,000
Engineering oversight during well drilling	45,000
Mobilization / Demobilization	10,000
Drill boring for new well (Assume 600 feet deep)	70,000
Two additional test wells to find viable water (3 test wells total to find one viable location to install well)	250,000
Install well casing, filter pack, and well seal	45,000
Well development and pump test	40,000
E-log & caliper logs	25,000
Site Clean Up	5,000
Well surface completion, well pad, and well shed. Well pump, controls, connection, and commissioning	100,000
Removal and disposal of a 25,000-gallon water tank	10,000
Install a new 50,000-gallon water storage tank	175,000
Admin Costs - Coordination with RWC Residents	4,000
Subtotal of New Well Construction-Related Costs	851,000
Annual Operations and Maintenance (including potential chlorine treatment)	12,000
20-Year Operations and Maintenance Cost	240,000
20-year Capital Expenditures (expect pipe & appurtenances to last 50-years)	25,000
Project administration (20-years)	60,000
Subtotal of Operations & Maintenance, Capital Expenditure, and Administration Costs (20-years)	325,000
Project Lifecycle (20-years)	1,394,455
Additional cost if clean water cannot be found and reverse osmosis treatment system is needed	4,941,550
Total project cost if reverse osmosis is needed in addition to the new well	6,336,005

Table 5

Engineer's Opinion of Probable Costs for Consolidation with City's Water System (Alternative #4)

CONSOLIDATION - ITEM	Quantity	Units	Cost per unit	COST (\$)
Distribution System Upgrade (see Table 2 for a detailed list of costs)	1	LS	218,455	218,455
New Water Main - 12-inch PVC (AWWA C900 Class 150, DR 18) - installed in asphalt	3,430	LF	158	543,312
Connection into City's existing 12-inch water main at intersection of Betteravia Road & A Street (with 2 valves)	1	LS	23,400	23,400
New Fire Hydrants WA-31 in dirt shoulder (every 350' max) - see Section F of City's Standard Specifications for details. Cost does not include a concrete pad.	10	EA	14,580	145,800
New Fire Hydrant WA-31 lateral across Betteravia	1	EA	20,280	20,280
2-inch Air Vac assembly WA-26A in dirt shoulder	1	EA	9,720	9,720
Final construction details	1	LS	---	60,000
Encroachment Permit	1	LS	6,000	6,000
Traffic Control along Betteravia new water main alignment	1	LS	17,200	17,200
Additional traffic control if 2 flaggers are also needed	240	HR	40	9,600
Easement on Rayville Lane for City of Santa Maria water main infrastructure	---	---	---	TBD
City "Water Connection Fee & State Water Reimbursement Fee" - for 3/4-inch meters (residential)	11	EA	12,359	135,951
City "Water Connection Fee & State Water Reimbursement Fee" - for 3/4-inch meters (commercial)	2	EA	12,359	24,718
RWC existing well and well shed destruction	---	---	---	50,000
Removal and disposal of 25,000-gallon water storage tank	---	---	---	10,000
Engineering oversight during new water main construction	240	HR	150	36,000
Engineering (including as-built plans)	40	HR	150	6,000
Admin Costs - LAFCO	---	---	---	15,000
Admin Costs - Coordination with RWC Residents	27	HR	150	4,050
Subtotal of Consolidation Construction-Related Costs				1,335,486
Annual Operations and Maintenance (City of Santa Maria's responsibility)	--	--	--	0
20-Year Operations and Maintenance Cost (City of Santa Maria's responsibility)	--	--	--	0
20-year Capital Expenditures (City of Santa Maria's responsibility)	--	--	--	0
Subtotal of Operations & Maintenance, Capital Expenditure, and Administration Costs (20-years)				0
Project Lifecycle Costs (20-years)	--	--	--	1,335,486

Notes

LS = Lump Sum

LF = Lineal Feet

EA = Each

HR = Hour

Table 6
Alternative Comparison Summary

Consideration	Alt #1 No Action	Alt #2 Reverse Osmosis (R.O.) Treatment System	Alt #3 Install a New Well	Alt #4 Full Consolidation
Meets Regulatory Compliance	No	Maybe *	Maybe *	YES
Meets O&M Needs	No	YES	Uncertain if clean water could be found	YES
Financially Viable	No	Likely Not	Likely Not	YES
Long Term Sustainability	No	Likely Not	Likely Not	YES
Environmental Concerns	Minor; high nitrate concentrations into the septic systems	Minor to moderate; off-site disposal of brine stream; land disturbance to install new distribution system, treatment system, and water storage tank	Minor; land disturbance from new test well(s), distribution system, and water storage tank	Minor; land disturbance to install new water main and distribution system
Satisfy Public Concerns	No	Maybe *	Maybe *	YES
Water Rates	\$100 / month	~\$1,000+ / month	~ \$150+ / month	~ \$200 / month
Other considerations		The R.O. treatment system produces a brine + concentrated nitrate waste stream that would not be suitable to flow into septic systems. This waste stream is very expensive to dispose of.	The is no guarantee that we could find nitrate-free water via a new well. It's possible that even with a new well, an expensive treatment system would still be needed.	
Total Cost	0	5,160,005	1,394,455	1,335,486
Total Cost if new well is needed within 20-years for treatment Alt #2; and clean water cannot be found for new well Alt #3 requiring reverse osmosis treatment	0	6,192,005	6,336,005	1,335,486

Notes

Maybe* = This means the outcome is questionable. Primarily because Ray Water Company (RWC) would remain in business and be at least partially responsible for outcomes. Based on past experience and RWC's financial constraints, we were not able to confidently say "YES" for this items. As such, they are labeled "Maybe" and considered questionable.

APPENDIX A

Environmental Analysis of Engineering Alternatives

Environmental Analysis of Engineering Alternatives Ray Water Company

The project is needed because the Ray Water Company's (RWC) current water source is a well, which contains nitrate and arsenic concentrations above their respective drinking water Maximum Contaminant Levels. There is also an aging water storage tank, and aged components and appurtenances that are in poor condition and/or nearing the end of their useful life.

Three potential alternatives were considered to solve these problems:

- **Alternative 1** – No Action: Maintain existing system with no improvements. Water supply issues would not be addressed, and supply would still contain nitrates above the MCL
- **Alternative 2** – Treatment System for Nitrate & Arsenic: install a Reverse Osmosis (RO) treatment system to remove nitrate from the groundwater
- **Alternative 3** – Drilling a new well: drill deeper to find groundwater without significant nitrate or arsenic concentrations
- **Alternative 4** – Consolidation with an existing water system

Each of the project alternatives result in varying temporary and permanent environmental impacts, which are compared in the following table. When Alternatives have differing impacts on an environmental factor, the alternative with less impact is preferred and marked with a (+).

Environmental Alternatives Analysis – Ray Water Company				
Environmental Factor	Alternative 1: No Action	Alternative 2: Treatment System for Nitrate & Arsenic	Alternative 3: Drill a new well	Alternative 4: Preferred Project – Consolidation
Aesthetics	No Impact	No Impact	No Impact	No Impact
Agricultural and Forestry Resources	No Impact	No Impact	No Impact	No Impact
Air Quality	(+) No Impact	Construction-generated air pollutant emissions likely less-than-significant. Operational emissions for the proposed Project would be similar to existing.	Construction-generated air pollutant emissions likely less-than-significant. Operational emissions for the proposed Project would be similar to existing.	Construction-generated air pollutant emissions likely less-than-significant. Operational emissions for the proposed Project would be similar to existing.
Biological Resources	(+) No Impact	<i>In Process</i>	<i>In Process</i>	<i>In Process</i>

Environmental Alternatives Analysis – Ray Water Company				
Environmental Factor	Alternative 1: No Action	Alternative 2: Treatment System for Nitrate & Arsenic	Alternative 3: Drill a new well	Alternative 4: Preferred Project – Consolidation
Cultural and Tribal Resources	No Impact	<i>In Process</i>	<i>In Process</i>	<i>In Process</i>
Geology and Soils	No Impact	No Impact. No unique geologic features identified.	No Impact. No unique geologic features identified.	No Impact. No unique geologic features identified.
Greenhouse Gas Emissions	No Impact	Project construction and operations would adhere to statewide efforts to minimize GHG emissions. Short-term impacts of construction would likely have a less-than-significant impact.	Project construction and operations would adhere to statewide efforts to minimize GHG emissions. Short-term impacts of construction would likely have a less-than-significant impact.	(+) Project construction and operations would adhere to statewide efforts to minimize GHG emissions. Short-term impacts of construction would likely have a less-than-significant impact.
Hazards and Hazardous Materials	No Impact	No Impact	No Impact	No Impact.

Environmental Alternatives Analysis – Ray Water Company				
Environmental Factor	Alternative 1: No Action	Alternative 2: Treatment System for Nitrate & Arsenic	Alternative 3: Drill a new well	Alternative 4: Preferred Project – Consolidation
Hydrology and Water Quality	(+) No Impact	The project would involve ground disturbance such as trenching that could result in temporary impacts on surface water quality. Accidental spill controls and best stormwater construction management practices would be implemented to ensure impacts remain less than significant.	The project would involve ground disturbance such as trenching that could result in temporary impacts on surface water quality. Accidental spill controls and best stormwater construction management practices would be implemented to ensure impacts remain less than significant.	The project would involve ground disturbance such as trenching that could result in temporary impacts on surface water quality. Accidental spill controls and best stormwater construction management practices would be implemented to ensure impacts remain less than significant.
Land Use and Planning	No Impact	No Impact	No Impact	No Impact
Mineral Resources	No Impact	The project area is not in an area of known mineral resource potential and would not result in the loss of	The project area is not in an area of known mineral resource potential and would not result in the	The project area is not in an area of known mineral resource potential and would not result in the loss of availability of a

Environmental Alternatives Analysis – Ray Water Company				
Environmental Factor	Alternative 1: No Action	Alternative 2: Treatment System for Nitrate & Arsenic	Alternative 3: Drill a new well	Alternative 4: Preferred Project – Consolidation
		availability of a valuable mineral resource.	loss of availability of a valuable mineral resource.	valuable mineral resource.
Noise	No Impact	During construction, a minor increase in noise levels is anticipated. Construction-related noise and ground borne vibration during construction would be temporary and occur only during daylight hours and have a less than significant impact on the adjacent residences.	During construction, a minor increase in noise levels is anticipated. Construction-related noise and ground borne vibration during construction would be temporary and occur only during daylight hours and have a less than significant impact on the adjacent residences.	During construction, a minor increase in noise levels is anticipated. Construction-related noise and ground borne vibration during construction would be temporary and occur only during daylight hours and have a less than significant impact on the adjacent residences.
Population and Housing	No Impact	The project would neither induce growth nor displace existing housing. No replacement housing would be required.	The project would neither induce growth nor displace existing housing. No replacement housing would be required.	The project would neither induce growth nor displace existing housing. No replacement housing would be required.

Environmental Alternatives Analysis – Ray Water Company				
Environmental Factor	Alternative 1: No Action	Alternative 2: Treatment System for Nitrate & Arsenic	Alternative 3: Drill a new well	Alternative 4: Preferred Project – Consolidation
Public Services	No Impact –water supply does not meet Nitrate MCL	The project would not cause impacts on government facilities or negatively affect fire/police protection, schools, parks, or public facilities. The improvements to the water facilities would ensure that Ray WC had adequate drinking water supplies.	The project would not cause impacts on government facilities or negatively affect fire/police protection, schools, parks, or public facilities. The improvements to the water facilities would ensure that Ray WC had adequate drinking water supplies, assuming Nitrate-free water is found.	The project would not cause impacts on government facilities or negatively affect fire/police protection, schools, parks, or public facilities. The improvements to the water facilities would ensure that Ray WC had adequate drinking water supplies.
Recreation	No Impact	There are no recreational facilities in or adjacent to the project area.	There are no recreational facilities in or adjacent to the project area.	There are no recreational facilities in or adjacent to the project area.
Transportation and Traffic	(+) No Impact	No Impact	No Impact	Disruption to local traffic during pipeline installation`

Environmental Alternatives Analysis – Ray Water Company				
Environmental Factor	Alternative 1: No Action	Alternative 2: Treatment System for Nitrate & Arsenic	Alternative 3: Drill a new well	Alternative 4: Preferred Project – Consolidation
Utilities and Service Systems	No Impact	No Impact	No Impact	Consolidation with City of Santa Maria would have no significant impact.

APPENDIX B

Consolidation Alternative 30% Design Drawings

These drawings are the property of the City of Santa Maria. The contents herein are for the use of the City of Santa Maria only. No part may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the City of Santa Maria.

Water System Consolidation

Consolidation of Ray Water Company into the City of Santa Maria Water System
 Rayville Lane and Betteravia Road
 Santa Barbara County, CA
 30% Plans

Project Team

Project Management & Coordination / Water System Design and Engineering

Craig Drizin
 Weber, Hayes and Associates
 (831) 722-3580

Environmental Consultants
 Denise Duffy
 Denise Duffy and Associates
 (831) 373-3580

Survey
 Kenny Fargen
 Fargen Surveys, Inc.
 (805) 934-5727

SUMMARY OF WORK	
DESIGN	
CONSTRUCTION	
OPERATION	
MAINTENANCE	
REPAIR	



Location Map

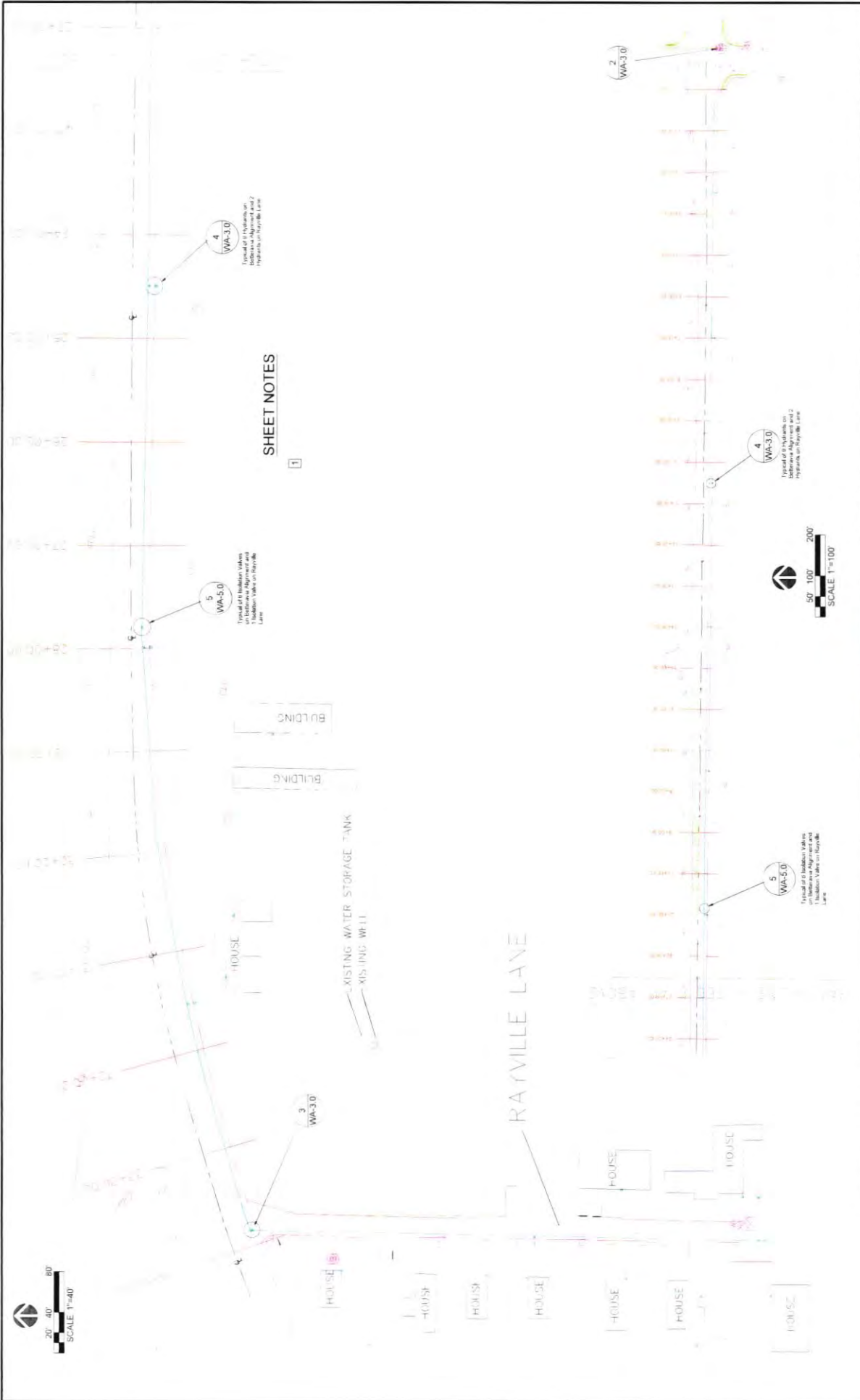
- Sheet WA-1.0:
- Sheet WA-1.1:
- ?Sheet WA- #:
- Sheet WA-2.0:
- Sheet WA-3.0:
- Sheet WA-4.0:
- Sheet WA-5.0:
- Sheet WA-6.0:

- Civil - Cover Sheet
- Civil - General Notes
- Civil - Demolition Plan
- Civil - Site Layout Plan
- Civil - Water Main Alignment
- Civil - Water Distribution Plan
- Civil - Details
- Fargen - Topographic Survey



LOCATIONS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE ONLY APPROXIMATE. THE EXISTING UTILITIES SHOWN WERE IN LATEST AVAILABLE RECORDS. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL HAND DIG AND LOCATE ALL UTILITIES THAT MAY BE AFFECTED BY THE NEW FACILITIES IN THE CONTRACT TO VERIFY ACTUAL DEPTH AND LOCATION OF UTILITIES AND REPORT POTENTIAL CONFLICTS TO THE OWNERS REPRESENTATIVE. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES WHETHER SHOWN OR NOT AND IS RESPONSIBLE FOR ALL DAMAGES TO EXISTING UTILITIES.

 Weber, Hayes & Associates Professional Engineers, Geographers, Surveyors, and Environmental Scientists 1800 17th Street, Suite 200, Santa Maria, CA 93456 (831) 722-3580		CITY OF SANTA MARIA DEPARTMENT OF PUBLIC WORKS
PROJECT: 30% DESIGN DEVELOPMENT DRAWING NO: 0621	SHEET NO: 1 OF 6 SHEETS DATE: 10/20/11	COVER SHEET FILE NO: WA-1.0
Ray Water Company Consolidation Rayville Lane Santa Barbara County		Job # 21059



SHEET NOTES

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WA-3.0
Typical of 6 hydrants on Rayville Lane

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WA-5.0
Typical of 6 hydrants on Rayville Lane

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WA-3.0
Typical of 6 hydrants on Rayville Lane

5
WA-5.0
Typical of 6 hydrants on Rayville Lane



DRAWN BY: MAF		CHECKED BY:	
DATE: 6/2/2021	SCALE: 1"=100'	DATE: 6/2/2021	DATE: 6/2/2021
PROJECT: 21059		SHEET: 2 OF 4	
CITY OF SANTA MARIA		FILE NO: WA-2.0	
Site Layout Plan			

REVISIONS

NO.	DATE	DESCRIPTION
1	06/21	CD

WHA
Weber, Hayes & Associates
Hydrology and Environmental Engineering
1811 ZEEB - www.weberhayes.com

Ray Water Company Consolidation

Rayville Lane
Santa Barbara County
Job # 21059

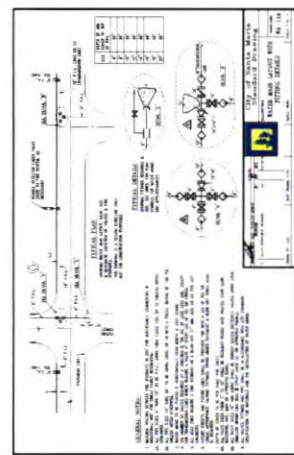
SHEET NOTES

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WATER MAIN AS-BUILT STANDARD DRAWING

WATER MAIN CONNECTION SCHEMATIC

NEW DISTRIBUTION CONNECTION

6" FIRE HYDRANT SCHEMATIC

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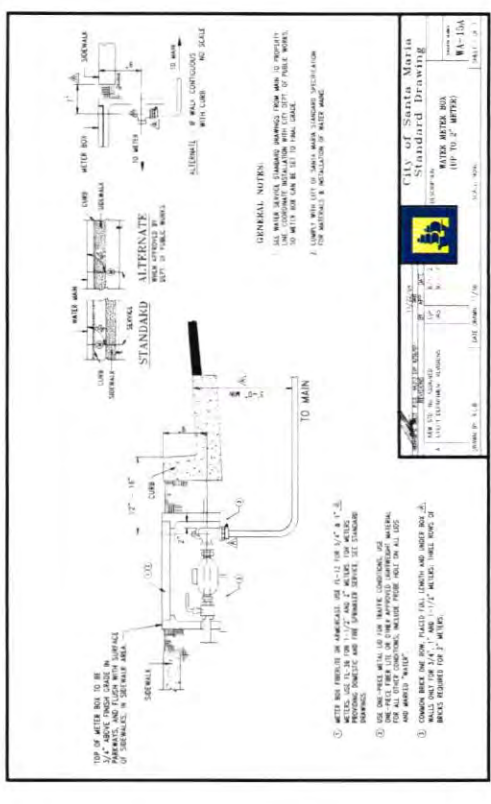
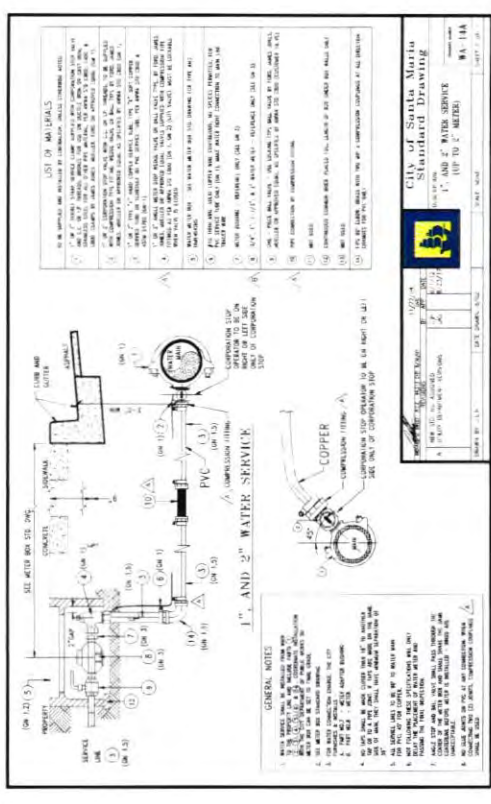
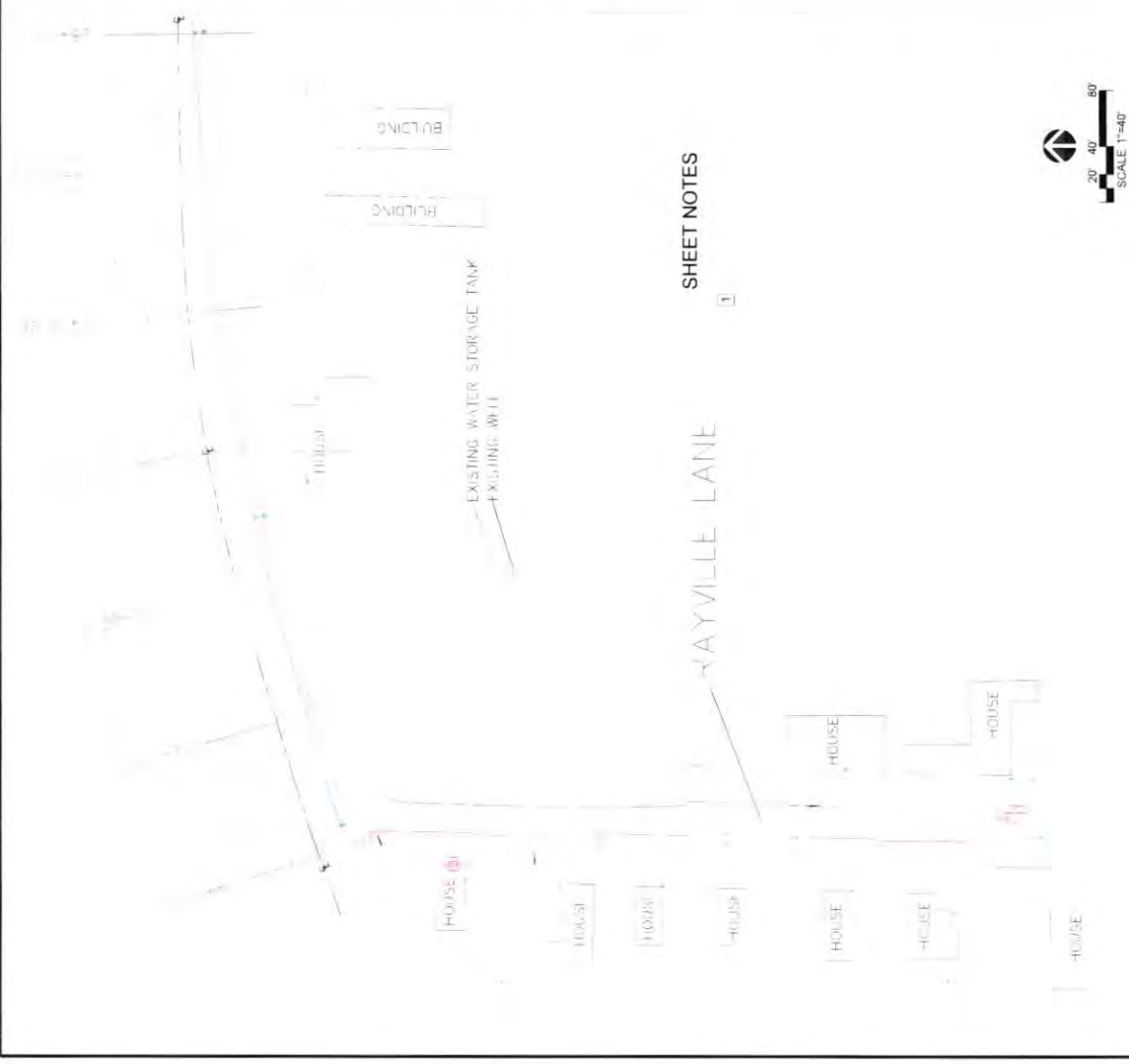
Ray Water Company Consolidation
Rayville Lane
Santa Barbara County



NO.	DATE	BY	REVISIONS
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CITY OF SANTA MARIA
DEPARTMENT OF PUBLIC WORKS
Betteravia Road Alignment

PROJECT NO. CD 18621
DATE: 11/11/11
DRAWN BY: CD
CHECKED BY: [blank]
SCALE: 1"=60'
JOB # 27059
SANTA BARBARA COUNTY
FILE NO. WA-30



SHEET NOTES

NO. 01	REVISIONS	DATE	BY	APP'D BY
02	30% DESIGN DEVELOPMENT	06/21	CD	

WHA
Weber, Hayes & Associates
Professional Engineers, Surveyors & Planners
1403 17th Street, Santa Barbara, CA 93101
805.727.1982 / Fax 805.764.9100

Ray Water Company Consolidation
Rayville Lane
Santa Barbara County

Job # 21059
RAYVILLE LANE WATER SERVICE (10' TO 2' METER)

RAYVILLE LANE WATER SERVICE (10' TO 2' METER)



March 6, 2020

Ray Bartlett
2275 Rayville Lane
Santa Maria, CA 93455

Water System Name: RAY WATER CO.
Water System Number: 4200867

**COMPLIANCE ORDER NO. 04_72_20R_009
NITRATE MAXIMUM CONTAMINANT LEVEL VIOLATION
FOR COMPLIANCE PERIOD 2020**

Enclosed is a Compliance Order issued to the RAY WATER CO. state small water system.

Your receipt of this notice indicates that your water system has violated the Nitrate Maximum Contaminant Level requirements during the compliance period of 2020.

The following are the instructions on how to complete the noticing and what information will need to be returned to the office of the Santa Barbara County, Environmental Health Services (EHS):

- A. A completed, signed, and dated **Notification of Receipt** verifying that the RAY WATER CO. has received this Compliance Order and understands that it contains legally enforceable directives with due dates, that must be returned to this office by **March 20, 2020**.
- B. Notify all persons served by the RAY WATER CO. of the violation by issuing a **Public Notification** each month the water system is in violation. The Public Notification must include: the action(s) taken to eliminate the cause(s) of the failure, advise the consumers regarding water use, and what precautions they should take. This notice must be signed and dated, then posted in conspicuous locations throughout the area served by the water system **and** by one of the following methods to reach persons not likely to be reached by public posting: (1) Publication in a local newspaper or newsletter distributed to customers; (2) E-mail message to employees or students; (3) Posting on the Internet or intranet; or (4) Direct delivery to each customer. The notice shall be posted and issued to water customers as soon as possible within 30 days after the date of this notice, or by **April 3, 2020**. A **Compliance Certification Form** must be submitted within 10 days following each Public Notification.

- C. Submit a **Corrective Action Plan** by **July 31, 2020**, identifying improvements to the water system designed to correct the water quality problems identified as an exceedance of the nitrate maximum contaminant level and ensure that the RAY WATER CO. delivers water to consumers that meet primary drinking water standards.
- D. Submit a **Quarterly Progress Report** by **June 30, 2020**, and quarterly thereafter showing actions taken during the previous quarter (calendar three months) to comply with the Corrective Action Plan.

If you have any questions regarding this matter, please contact Belinda Huy at (805) 346-8466 or by email at Belinda.Huy@sbcphd.org.

Sincerely,

Belinda Huy

Belinda Huy
Senior Environmental Health Specialist
Drinking Water Systems Program
Environmental Health Services
Santa Barbara County, Public Health Department

COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SERVICES

Water System Name: RAY WATER CO.

Water System Number: 4200867

Attention: Ray Bartlett
2275 Rayville Lane
Santa Maria, CA 93455

Issued: March 6, 2020

**COMPLIANCE ORDER FOR NONCOMPLIANCE WITH
COUNTY OF SANTA BARBARA, CODE OF ORDINANCES, SECTION 34B-22(b)(A) AND
TITLE 22 OF THE CALIFORNIA CODE OF REGULATIONS, SECTION 64432.1(a)**

**NITRATE MAXIMUM CONTAMINANT LEVEL VIOLATION
FOR THE COMPLIANCE PERIOD OF 2020**

This letter is to inform you of a violation of the Nitrate Maximum Contaminant Level pursuant to the County of Santa Barbara, Code of Ordinances (hereinafter "County Code"), Section 34B-22(b)(A) and the Title 22 of the California Code of Regulations (hereinafter "CCR"), Section 64432.1(a). The County Code authorizes the Santa Barbara County, Environmental Health Services Division (hereinafter "EHS") to issue a Compliance Order to a state small water system when EHS determines that the state small has violated or is violating any regulation, standard, permit, or order issued or adopted thereunder.

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EHS hereby issues Compliance Order No. 04_72_20R_009 (hereinafter "Order") to the RAY WATER CO. (hereinafter "Water System"), for violation of the County Code, Section 34B-22(b)(A) Water quality monitoring for state small water systems and Title 22, CCR, Section 64432.1(a) Monitoring and Compliance – Nitrate and Nitrite.

STATEMENT OF FACTS

The Water System is classified as a state small water system with a population of approximately 40 residents, serving 14 connections. The Water System is using a single vertical groundwater source to supply potable water to the distribution system.

County Code, Section 34B-22(b)(A) and Title 22, CCR, Section 64432.1(A) requires all state small water systems to comply with the primary drinking water standards for nitrate. Primary drinking water standards include maximum levels of contaminants and monitoring and reporting requirements as specified in regulations adopted by EHS.

County Code, Section 34B-22(b)(A) states that if any sample result exceeds the maximum contaminant level (MCL), for either nitrates or nitrites, the state small water system shall meet all requirements of Title 22, CCR, Section 64432.1(a). The MCL for Nitrate (as Nitrogen) is 10.0 milligrams per liter (hereinafter "mg/L").

EHS received laboratory results for two nitrate samples collected on 02/21/2020 from the distribution system and on 03/04/2020 from the groundwater well. The samples showed a nitrate concentration of 35.0 mg/L and 46.0 mg/L, respectively. The average of the two nitrate samples is 40.5 mg/L. A summary of the Water System's nitrate monitoring results are presented in Table 1 below:

Table 1 – Nitrate Sample Results

Sample Date	Result (mg/L)	Type of Sample
02/21/2020	35.0	Initial
03/04/2020	46.0	Confirmation

1

2 **DETERMINATION**

3 EHS has determined that the Water System has failed to comply with primary drinking
4 water standards pursuant to County Code, Section 34B-22(b)(a) and Title 22, CCR,
5 Section 64432.1(a).

6

7 **DIRECTIVES**

8 To ensure that the water supplied by the Water System is at all times safe, wholesome,
9 healthful, and potable, the Water System is hereby directed to take the following actions:

10

11 1. Due to the population served, the Water System meets the requirements of a
12 community water system and shall schedule an inspection with EHS to initiate the
13 reclassification of the Water System by **April 30, 2020**.

14

15 2. On or before **March 20, 2020**, complete and submit a **Notification of Receipt**
16 included in this Order as Appendix 1 to EHS. Completion of this form confirms
17 that the Water System has received this Order and understands that it contains
18 legally enforceable directives with due dates.

19

20 3. Annual sampling for nitrate from the groundwater well must begin by **January 31,**
21 **2021**, and must continue annually thereafter as long as the system is in violation.
22 The analytical results of the samples must be submitted electronically to the EHS,
23 by the laboratory, that conducts the analysis, no later than the tenth day of the
24 month following completion of the analyses.

25

1 4. Monthly Public Notification to the customers of the Water System shall begin by
2 **April 3, 2020**, and continue monthly until EHS determines that the nitrate
3 contamination is resolved and the Water System is no longer in violation. The
4 **Public Notification** attached to this Order in Appendix 2 shall be used to fulfill
5 this Order unless otherwise approved by EHS.
6

7 The Water System must edit the wording of the Public Notification as necessary.

8 The Public Notification shall be completed in accordance with the following:

- 9 • Posting of the Public Notification in conspicuous places within the area
10 served by the Water System. The notice shall remain posted for a minimum
11 of seven (7) consecutive days and;
- 12 • By one of the following secondary methods to reach persons not likely to
13 be reached by posting:
 - 14 ➤ By publication in a local newspaper or newsletter distributed to
15 customers, by internet posting of the notice or by direct delivery to
16 each customer served by the Water System. If the Water System
17 opts to issue the notice via internet website, the public notice shall
18 remain posted for a minimum of seven (7) consecutive days.
 - 19 ➤ The Water System must determine which option will be used to
20 conduct the secondary distribution of the notice and indicate the
21 methods used on the Notification of Receipt form as required in
22 Directive 1.
- 23 • Public Notification for new customers must be conducted in conformance
24 with CCR, Title 22, Section 64463(e) where the Water System must give
25 new customers a copy of the most recent public notice prior to or at any
26 time service begins.

- Monthly Public Notification must be provided every month even when a nitrate result shows a concentration below the Nitrate MCL. The notice must be updated to include the following wording:

“Although the nitrate level(s) during the most recent monitoring period showed results below the MCL, nitrate levels in the water tend to fluctuate and it is possible that the nitrate level may increase at any time between sampling events. Public notification will continue until the nitrate problem is resolved.”

5. Complete Appendix 3: **Compliance Certification** form. Submit it together with a copy of the Public Notification required by Directive #3 to EHS within 10 days following the issue/distribution of each Public Notification. The first Compliance Certification is due by **April 17, 2020**.
5. Prepare a Corrective Action Plan for EHS approval, identifying improvements to the Water System designed to correct the water quality problems identified as an exceedance of the Nitrate MCL and ensure that the Water System delivers water to consumers that meets primary drinking water standards. The Corrective Action Plan must include a time schedule for completion of each of the phases of the project, such as design, construction, and startup, and a date that shows when the Water System will be in compliance with the Nitrate MCL. The compliance deadline must be no later than **September 1, 2021**.

By **July 31, 2020**, submit the Corrective Action Plan required to EHS. Perform the EHS-approved Corrective Action Plan, and each and every element of said plan, according to the time schedule set forth therein.

- 1 6. By **June 30, 2020**, and every three months thereafter, submit a **Quarterly**
2 **Progress Report** to EHS in the form provided as Appendix 4 showing actions
3 taken during the previous quarter (calendar three months) to comply with the
4 Corrective Action Plan.
- 5
- 6 7. By **November 30, 2021**, demonstrate to EHS that the water delivered by the
7 Water System complies with the Nitrate MCL.
- 8
- 9 8. Notify EHS in writing no later than five (5) days prior to the deadline for
10 performance of any Directive set forth herein if the Water System anticipates it
11 will not timely meet such performance deadline.
- 12

13

14 All submittals required by this Order, unless otherwise specified in the directives above,
15 must be electronically submitted to EHS at the following address. The subject line for all
16 electronic submittals corresponding to this Order must include the following information:
17 Water System name and number, compliance order number and title of the document
18 being submitted.

19

20 Belinda Huy

21 Belinda.Huy@sbcphd.org

22

23 EHS reserves the right to make modifications to this Order that it may deem necessary
24 to protect public health and safety. Such modifications may be issued as amendments
25 to this Order and shall be effective upon issuance.

26

27 Nothing in this Order relieves the Water System of its obligation to meet the requirements
28 of any regulation, standard, permit or order issued or adopted thereunder.

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PARTIES BOUND

This Order shall apply to and be binding upon the Water System, its owners, shareholders, officers, directors, agents, employees, contractors, successors, and assignees.

SEVERABILITY

The directives of this Order are severable, and the Water System shall comply with each and every provision thereof notwithstanding the effectiveness of any provision.

FURTHER ENFORCEMENT ACTION

The California SDWA authorizes EHS, pursuant to authority delegated by the State Water Board, to issue a citation or order with assessment of administrative penalties to a public water system for violation or continued violation of the requirements of the California SDWA or any regulation, permit, standard, citation, or order issued or adopted thereunder including, but not limited to, failure to correct a violation identified in a citation or compliance order. Pursuant to its delegated authority, the California SDWA also authorizes EHS to take action to suspend or revoke a permit that has been issued to a public water system if the public water system has violated applicable law or regulations or has failed to comply with an order of EHS, and to petition the superior court to take various enforcement measures against a public water system that has failed to comply with an order of EHS. EHS does not waive any further enforcement action by issuance of this Order.

Belinda Huy

Date: March 6, 2020

Belinda Huy
Senior Environmental Health Specialist
Drinking Water Program

1

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Appendices 4:

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1. Notification of Receipt

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2. Public Notification

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3. Compliance Certification

7

4. Quarterly Progress Report

APPENDIX 1: NOTIFICATION OF RECEIPT

Compliance Order Number: 04_72_20R_009

Water System Name: RAY WATER CO.

Water System Number: 4200867

Certification

I certify that I am an authorized representative of the RAY WATER CO. and that Compliance Order No. 04_72_20R_009 was received on _____. Further, I certify that the Order has been reviewed by the appropriate management staff of the RAY WATER CO. and it is clearly understood that Compliance Order No. 04_72_20R_009 contains legally enforceable directives with specific due dates.

Method(s) of Public Notice distribution: _____

Print Name of Water System Representative

Signature of Water System Representative

Date

**THIS FORM MUST BE COMPLETED AND RETURNED TO THE SANTA BARBARA COUNTY,
ENVIRONMENTAL HEALTH SERVICES DIVISION,
NO LATER THAN MARCH 20, 2020.**

Disclosure: Be advised that the California Health and Safety Code, Sections 116725 and 116730 state that any person who knowingly makes any false statement on any report or document submitted for the purpose of compliance with the Safe Drinking Water Act may be liable for, respectively, a civil penalty not to exceed five thousand dollars (\$5,000) for each separate violation or, for continuing violations, for each day that violation continues, or be punished by a fine of not more than \$25,000 for each day of violation, or by imprisonment in the county jail not to exceed one year, or by both the fine and imprisonment.

APPENDIX 2: PUBLIC NOTIFICATION

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

DRINKING WATER WARNING

RAY WATER CO. has high levels of nitrate

DO NOT GIVE THE WATER TO
INFANTS UNDER 6 MONTHS OLD OR PREGNANT WOMEN
OR USE IT TO MAKE INFANT FORMULA

Water sample results received [date] showed nitrate levels of [level and units]. This is above the nitrate standard, or maximum contaminant level (MCL), of 10 milligrams per liter. Nitrate in drinking water is a serious health concern for infants less than six months old.

What should I do?

- **DO NOT GIVE THE WATER TO INFANTS.** *Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. Symptoms in infants can develop rapidly, with health deteriorating over a period of days. If symptoms occur, seek medical attention immediately.*
- **PREGNANT WOMEN SHOULD NOT CONSUME THE WATER.** *High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.*
 - Water, juice, and formula for children under six months of age should not be prepared with tap water. Bottled water or other water low in nitrates should be used for infants until further notice.
 - **DO NOT BOIL THE WATER.** Boiling, freezing, filtering, or letting water stand does not reduce the nitrate level. Excessive boiling can make the nitrates more concentrated, because nitrates remain behind when the water evaporates.
 - If you have other health issues concerning the consumption of this water, you may wish to consult your doctor.

What happened? What is being done?

Nitrate in drinking water can come from natural, industrial, or agricultural sources (including septic systems, storm water run-off, and fertilizers). Levels of nitrate in drinking water can vary throughout the year. We will let you know if the amount of nitrate is again below the limit.

[Describe corrective action, seasonal fluctuations, and when system expects to return to compliance.]

For more information, please contact [name of contact] at [phone number] or [mailing address].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail.

Secondary Notification Requirements

Upon receipt of notification from a person operating a public water system, the following notification must be given within 10 days [Health and Safety Code Section 116450(g)]:

- **SCHOOLS:** Must notify school employees, students, and parents (if the students are minors).
- **RESIDENTIAL RENTAL PROPERTY OWNERS OR MANAGERS** (including nursing homes and care facilities): Must notify tenants.
- **BUSINESS PROPERTY OWNERS, MANAGERS, OR OPERATORS:** Must notify employees of businesses located on the property.

This notice is being sent to you by the RAY WATER CO.

State Water System ID#: 4200867. Date distributed: _____.

INFORMACIÓN IMPORTANTE SOBRE SU AGUA POTABLE

Este aviso contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

ADVERTENCIA SOBRE EL AGUA POTABLE

El agua de RAY WATER CO. tiene altos niveles de nitratos
**NO DE ÉSTA AGUA A BEBÉS MENORES DE 6 MESES O A
MUJERES EMBARAZADAS. TAMPOCO USE ÉSTA AGUA
PARA PREPARAR FORMULA INFANTIL**

Los resultados de las pruebas del agua recibidas el [date] mostraron niveles de nitrato de [level and units]. Estos niveles exceden el estándar o nivel máximo de contaminante (MCL) de 10 miligramos por litro. Los nitratos en el agua potable son una preocupación seria en bebés menores de seis meses.

¿Qué debe hacer?

- **NO DE ÉSTA AGUA A BEBÉS MENORES DE 6 MESES.** *Los bebés menores de 6 meses que toman agua con nitrato en exceso del nivel máximo de contaminante (MCL), se pueden enfermar seriamente y rápidamente. Y si los bebés no reciben atención médica, pueden morir debido a que los altos niveles de nitratos pueden interferir con la capacidad de la sangre de los bebés para transportar oxígeno. Los síntomas incluyen falta de aire y coloración azulada de la piel. Los síntomas en los bebés se pueden desarrollar rápidamente y la salud se deteriora en cuestión de días. Si hay síntomas de intoxicación por altos niveles de nitratos, busque atención médica de inmediato.*
- **LAS MUJERES EMBARAZADAS NO DEBEN CONSUMIR AGUA CON ALTOS NIVELES DE NITRATOS.** *Los altos niveles de nitrato también pueden afectar la capacidad de la sangre de mujeres embarazadas para transportar oxígeno.*
- No use agua de la llave para preparar jugo, agua, y formula para bebés menores de 6 meses. Use agua embotellada u otra agua baja en nitratos para los bebés menores de 6 meses hasta nuevo aviso.
- **NO HIERVA EL AGUA.** Hervir, congelar, filtrar, o dejar reposar el agua, no reduce el nivel de nitratos. Hervir el agua en exceso puede causar que los nitratos se concentren más, porque los nitratos se quedan cuando el agua se evapora.
- Si tiene otros problemas de salud por el consumo de ésta agua, usted debería consultar con su doctor.

¿Qué sucedió? ¿Qué se está haciendo al respecto?

El nitrato en el agua potable puede originar de fuentes naturales, industriales, o agrícolas (incluyendo sistemas sépticos, escorrentía de agua de lluvia, y fertilizantes). Los niveles de nitrato

en el agua potable pueden variar a través del año. Le informaremos si el nivel de nitratos vuelve a estar debajo del límite.

[Describe corrective action, seasonal fluctuations, and when system expects to return to compliance.]

Para más información, por favor contacte a [name of contact] al [phone number] o [mailing address]

Por favor comparta esta información con todas las demás personas que tomen de esta agua, especialmente aquellos que no hayan recibido éste aviso directamente (por ejemplo, las personas en apartamentos, asilos, escuelas, y negocios). Puede hacerlo poniendo este aviso en un lugar público o distribuyendo copias en persona o por correo.

Requisitos de Notificación Secundaria

Al recibir la notificación de alguien que opere un sistema de agua público, se debe dar la siguiente notificación dentro de 10 días conforme a la Sección 116450(g) del Código de Salud y Seguridad:

- ESCUELAS: Deben notificar a los empleados de la escuela, estudiantes, y a los padres (si los estudiantes son menores).
- DUEÑOS O GERENTES DE PROPIEDAD PARA ALQUILER RESIDENCIAL (incluyendo asilos e instituciones de cuidado): Deben notificar a sus inquilinos.
- DUEÑOS DE PROPIEDAD DE NEGOCIOS, GERENTES, U OPERADORES: Deben notificar a los empleados de los negocios situados en la propiedad.

Este aviso es enviado por el RAY WATER CO.

Núm. de Identificación del Sistema Estatal de Agua: 4200867.

Fecha de distribución: _____.

APPENDIX 3: COMPLIANCE CERTIFICATION

Compliance Order Number: 04_72_20R_009

Water System Name: RAY WATER CO.

Water System Number: 4200867

Attach a copy of the public notice distributed to the water system's customers.

This form, when completed and sent to Belinda.Huy@sbcphd.org for the Santa Barbara County, Environmental Health Services Division, serves as certification that public notification to water users was completed as required by Title 22, California Code of Regulations, Sections 64463-64465.

Public notification for failure to comply with the **Nitrate MCL** was conducted on:

Notification was made on _____.

For the month, year of _____, _____.

To summarize report delivery used and good-faith efforts taken, please check all items below that apply and fill-in where appropriate:

The notice was distributed by mail or direct delivery to each customer on: _____

One or more of the following methods were used to reach persons not likely to be reached by a mailing or direct delivery or persons served by a transient public water system (renters, nursing home patients, prison inmates, etc.):

Posted the notice at the following conspicuous locations served by the water system. (If needed, please attach a list of locations). _____

Publication of the notice in a local newspaper or newsletter of general circulation (attach a copy of the published notice, including name of newspaper and date published).

Posted the notice on the Internet at www. _____

Other method used to notify customers. _____

I hereby certify that the above information is factual.

Certified by: Printed Name _____ Title _____

Signature _____

Date _____

Disclosure: Be advised that the California Health and Safety Code, Sections 116725 and 116730 state that any person who knowingly makes any false statement on any report or document submitted for the purpose of compliance with the Safe Drinking Water Act may be liable for, respectively, a civil penalty not to exceed five thousand dollars (\$5,000) for each separate violation or, for continuing violations, for each day that violation continues, or be punished by a fine of not more than \$25,000 for each day of violation, or by imprisonment in the county jail not to exceed one year, or by both the fine and imprisonment.

APPENDIX 4: QUARTERLY PROGRESS REPORT

Water System Name: RAY WATER CO.	Water System No: 4200867
Compliance Order No: 04_72_20R_009	Violation: Nitrate MCL
Calendar Quarter:	Date:

This form should be prepared and signed by the RAY WATER CO. personnel with appropriate authority to implement the directives of the Compliance Order and the Corrective Action Plan. Please attach additional sheets as necessary. The Quarterly Progress Report must be submitted by the 10th day of each subsequent quarter, to the Santa Barbara County, Environmental Health Services Division to the following email address: Belinda.Huy@sbcphd.org titled appropriately.

Summary of Compliance Plan:

Tasks completed in the reporting quarter:

Tasks remaining to complete:

Anticipated compliance date:

Printed Name

Signature

COST ACCOUNTING AGREEMENT

Applicant: Ray Bartlett / Raywater COMPANY
Mailing Address: 2275 Mayville Ln
Santa Maria CA 93455
Telephone: 805 598 4995
Fax: _____
E-mail Address: rbart@SMC-TICLOUD.COM

The cost of processing an application may exceed the initial deposit required. In order to recover any additional costs associated with processing your application, the Local Agency Formation Commission, LAFCO, has found it necessary to implement a provision of the Fee Schedule that provides full cost recovery for processing an application.

I, Ray Bartlett / Raywater, the landowner and/or responsible Applicant, agree to pay the actual costs pursuant to the Fee Schedule attached hereto, plus copying charges and related expenses incurred in the processing of this application. I also understand that if payment on any billings prior to final action is not paid within thirty (30) days, I agree that processing of my application will be suspended until payment is received. In the event of default, I agree to pay all costs and expenses incurred by LAFCO in securing the performance of this obligation.

If the applicant is in non-compliance with an existing agreement, the applicant shall be subject to LAFCO Policy Guidelines and Standards XIV, which identifies additional steps that must be satisfied before a new application may be accepted.

In order to implement the cost accounting, please sign and date this statement indicating your agreement to the cost accounting procedure and agreement. This signed agreement is required for your application to be accepted for processing. Checks may be made payable to LAFCO and delivered or mailed to the LAFCO Office at 105 East Anapamu Street, Rm 407, Santa Barbara, CA 93101. If you have questions regarding your application, please contact the LAFCO Office at (805) 568-3391.


Applicant's Signature

12 14 2022
Date

LAFCO Authorization for Approval of Out of Agency Service Agreements

Government Code Section 56133 (a) A city or district may provide new or extended services by contract or agreement outside its jurisdictional boundary only if it first requests and receives written approval from the commission.

(b) The commission may authorize a city or district to provide new or extended services outside its jurisdictional boundary but within its sphere of influence in anticipation of a later change of organization.

(c) If consistent with adopted policy, the commission may authorize a city or district to provide new or extended services outside its jurisdictional boundary and outside its sphere of influence to respond to an existing or impending threat to the health or safety of the public or the residents of the affected territory, if both of the following requirements are met:

(1) The entity applying for approval has provided the commission with documentation of a threat to the health and safety of the public or the affected residents.

(2) The commission has notified any alternate service provider, including any water corporation as defined in Section 241 of the Public Utilities Code, that has filed a map and a statement of its service capabilities with the commission.

STANDARDS FOR OUT-OF-AGENCY SERVICE AGREEMENTS

Considerations for Approving Agreements:

Annexations to cities and special districts are generally preferred for providing public services, however, out-of-agency service agreements can be an appropriate alternative. While each proposal must be decided on its own merits, the Commission may favorably consider such agreements in the following situations:

1. Services will be provided to a small portion of a larger parcel and annexation of the entire parcel would be inappropriate in terms of orderly boundaries, adopted land use plans, open space/greenbelt agreements or other relevant factors.
2. Lack of contiguity makes annexation infeasible given current boundaries and the requested public service is justified based on adopted land use plans or other entitlements for use.
3. Where public agencies have a formal agreement defining service areas, provided LAFCO has formally recognized the boundaries of the agreement area.
4. Emergency or health related conditions mitigate against waiting for annexation.
5. Other circumstances which are consistent with the statutory purposes and the policies and standards of the Santa Barbara LAFCO.

Agreements Consenting to Annex:

Whenever the affected property may ultimately be annexed to the service agency, a standard condition for approval of an out-of-agency service agreement is recordation of an agreement by the landowner consenting to annex the territory, which agreement shall inure to future owners of the property.



CITY OF SANTA MARIA
INITIAL ENVIRONMENTAL STUDY
NEGATIVE DECLARATION
 JUNE 2022

RAY WATER PROJECT SP2021-0008

Betteravia Road between Rayville Lane and A Street

PROJECT SUMMARY

Project Description	The proposed project consists of consolidating Ray Water Company with the City of Santa Maria's water system. The proposed project consists of a water main, a distribution line, and service connections. In total, these components include 4,860 linear feet (0.92 miles) of new pipelines.
Location	Betteravia Road between Rayville Lane and A Street
Assessor's Parcel No.	Betteravia Road right-of-way, 111-030-005, 111-030-006, 111-030-007, 111-030-008, 111-030-009, 111-030-011, 111-030-012, 111-030-013, 111-040-010
General Plan Designation	Right-of-Way (no designation) – City of Santa Maria General Industry – Santa Barbara County
Zoning	Right-of-Way (no designation) – City of Santa Maria M-2 (General Industry) – Santa Barbara County
Size of Site	0.3 acres of temporary disturbance
Present Use	Road right-of-way; residential
Proposed Uses	Road right-of-way; residential (no change)
Access	Betteravia Road
Surrounding Uses/Zoning	
North	Agricultural and Industrial
South	Agricultural
East	Residential and Commercial
West	Industrial and Agricultural
Parking	During construction, the project site would be accessed by Betteravia Road. The project's staging area would be located along the northern edge of the water main along an undeveloped portion of Betteravia Road.
Setbacks	NA
Height	NA
Related files/Actions	NA
Applicant/Agent/Owner	Ray Water Company

GENERAL AREA DESCRIPTION:

The proposed project is located on the western edge of the City of Santa Maria. The proposed project components are primarily within the Betteravia Road right-of-way, with some components located to the south of Betteravia Road, on Rayville Lane. The west portion of the proposed project is located within unincorporated Santa Barbara County and the east portion (the majority of the project) is located within the City of Santa Maria.

Regional access to the project site is provided from U.S. Route 101 and Betteravia Road. The proposed project is surrounded primarily by agricultural and industrial uses. In addition, residential and commercial office uses are located to the east of the project. The project site currently consists of paved road right-of-way and industrial land. It should be noted that although the area in and around Rayville Lane is designated as industrial land, there are existing residences that the proposed project will serve.

The eastern portion of the project area is governed by the Santa Maria General Plan. This area does not have a land use designation because it is within the right-of-way of Betteravia Road. The western portion of the project area is governed by the Santa Barbara County Comprehensive Plan and is designated as General Industry. It should be noted that the area within the jurisdiction of Santa Barbara County is located within the City of Santa Maria Sphere of Influence.

ENVIRONMENTAL SETTING:

The proposed project alignment is primarily within the Betteravia Road right-of-way. A portion of the project site has been used for petroleum production in the past. The project alignment is relatively flat. The project alignment is mostly surrounded by agricultural and industrial uses. Two vegetation types were mapped within the biological survey area: riparian and ruderal; however, only ruderal vegetation is present within the proposed project alignment.

PROJECT DESCRIPTION:

The proposed project consists of consolidating Ray Water Company with the City of Santa Maria's water system. The proposed project consists of a water main, a distribution line, and service connections. In total, these components include 4,860 linear feet (0.92 miles) of new pipelines. These components are explained in more detail below.

Water Main

The water main will extend from the intersection Mahoney Road and Rayville Lane to the intersection of Betteravia Road and A Street to connect with the City of Santa Maria water system. The water main will be approximately 3,400 feet in length.

Distribution Line

At the intersection of Mahoney Road and Rayville Lane, the water main transitions into an eight (8) inch water distribution line. This distribution line runs south down Rayville Lane. The distribution line will connect the water main described above to each of the service connections described below. This line will be approximately 500 feet in length.

Service Connections

The proposed project includes 15 service connections on Rayville Lane. Each service connection from the distribution line to the residences may vary in length; an average of 60 linear feet per connection has been used to generate a total approximate length of 780 feet for all of the service connections. A typical service line is one (1) to (2) inches in diameter.

PROJECT REVIEW:

The environmental impacts associated with the proposed project were determined using the City of Santa Maria Staff Project Environmental Checklist (attached), on-site inspection, various computer models, and information provided by the applicant. Potentially significant adverse environmental impacts were identified in the areas of Biological Resources, Cultural Resources, Hazards and Hazardous Materials, and Tribal Cultural Resources.

Based on the above-mentioned sources, no adverse impacts are associated with Aesthetics, Agriculture and Forest Resources, Air Quality, Energy, Geology and Soils, Greenhouse Gas Emissions, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Utilities and Service Systems or Wildfire.

The following discussion of the potential adverse environmental impacts includes mitigation measures which would reduce all identified impacts to a level of insignificance and are recommended to be included in the conditions of approval for the project. If the decision makers wish to delete a mitigation measure which is proposed to mitigate a significant impact, an alternative mitigation measure should be agreed to by the applicant and made part of the project. Verification that these mitigation measures have been implemented will be monitored as described in Section 8 of the City of Santa Maria's Environmental Procedures.

Biological Resources

Nesting raptors and other protected avian species have the potential to occur within the project site. Construction activities may result in direct mortality of individuals or disturbance of nests. This is considered a less than significant impact with mitigation incorporated, see Mitigation Measure BIO-1 below.

The floristic alliance occurring within the riparian habitat near the proposed project alignment is listed as sensitive on the California Department of Fish and Wildlife's (CDFW's) California's Natural Communities List and in the Resources Management Element of the Santa Maria General Plan. Riparian habitat is under CDFW jurisdiction per Fish and Wildlife Code Section 1602. The project will not result in direct impacts to riparian habitat; however, if an accident during construction were to result in the release of hazardous materials (e.g., fuel for construction equipment, oil, solvents, or paints) into the environment, there is a potential to degrade the adjacent riparian habitat. The project is subject to existing regulatory requirements pertaining to the use and disposal of hazardous materials. This is considered a less than significant impact with mitigation incorporated, see Mitigation Measure BIO-2 below.

A ditch is present within the biological survey area that conveys waters of the state likely under the jurisdiction of the Regional Water Quality Control Board (RWQCB) and CDFW. In addition,

wetlands under RWQCB jurisdiction may be present where the ditch flows through the riparian habitat. The project will not result in direct impacts to the potential wetlands; however, if an accident during construction were to result in the release of hazardous materials (e.g., fuel for construction equipment, oil, solvents, or paints) into the environment, there is a potential to degrade the adjacent habitat and impact water quality. The project has the potential to directly impact waters of the state where the project intersects the culvert that runs under West Betteravia Road or if work were to occur outside of the project limits. These are considered a less than significant impact with mitigation incorporated, see Mitigation Measures BIO-2, BIO-3, and BIO-4 below.

BIO-1 To avoid and reduce impacts to nesting raptors and other nesting avian species, construction activities can be timed to avoid the nesting season period. Specifically, construction activities can be scheduled after September 1 and before January 31 to avoid impacts to these species. Alternatively, if avoidance of the nesting period is not feasible, a qualified biologist shall be retained to conduct pre-construction surveys for nesting raptors and other protected avian species within 250 feet of proposed construction activities if construction occurs between February 1 and August 31. Pre-construction surveys will be conducted no more than 14 days prior to the start of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). Because some bird species nest early in spring and others nest later in summer, some breed multiple times in a season, surveys for nesting birds may be required to continue during construction to address new arrivals. The necessity and timing of these continued surveys will be determined by the qualified biologist based on review of the final construction plans.

If raptors or other protected avian species nests are identified during the pre-construction surveys, the qualified biologist will notify the project applicant and an appropriate no-disturbance buffer will be imposed within which no construction activities or disturbance should take place as determined by the qualified biologist to ensure avoidance of impacts to the individuals. The buffer will remain in place until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.

BIO-2 Cleaning and refueling of equipment and vehicles will occur only within designated staging areas on paved or graded parking areas. No maintenance, cleaning or fueling of equipment will occur within riparian areas, or within 100 feet of such areas if possible. At a minimum, all equipment and vehicles will be checked and maintained on a daily basis to ensure proper operation and avoid potential leaks or spills. During construction, all project-related spills of hazardous materials within or adjacent to proposed project area will be cleaned up immediately. Spill prevention and clean-up materials will be onsite at all times during construction. Construction materials/debris will also be stored within the designated staging areas. No debris, soil, silt, sand, oil, petroleum products, cement, concrete, or washings thereof will be allowed to enter into, or be placed where they may be washed by rainfall or runoff, into riparian habitat.

BIO-3 The project shall avoid work within the potential waters of the state to the extent feasible. No Staging shall occur within potential waters of the state. Protective fencing shall be placed so as to keep construction vehicles and personnel from impacting potential waters of the state adjacent to the proposed project area outside of work limits. Typically, protective fencing, also

referred to as Environmentally Sensitive Area (ESA) fencing, is four feet in height and is made of a highly visible color of polypropylene plastic.

BIO-4 If avoidance of waters of the state is not feasible, the project applicant shall comply with the Clean Water Act and Fish and Wildlife Code and coordinate with the RWQCB to obtain a Water Quality Certification and CDFW to obtain a Section 1602 Lake and Streambed Alteration Agreement prior to construction. All measures included in the permits to avoid, reduce, or mitigate impacts to waters of the state shall be implemented. These measures may include, but not be limited to, construction timing restrictions, monitoring, and reporting.

Cultural Resources

Public Resources Code §21083.2 requires that lead agencies evaluate potential impacts to archaeological resources. Specifically, lead agencies must determine whether a project may have a significant effect or cause a substantial adverse change in the significance of an archaeological resource. The findings of the Phase I cultural report did not document any confirmed evidence of an archaeological resource. Accordingly, the project would not significantly impact a known archaeological resource. Although not anticipated, there is the potential for inadvertent discovery of archaeological resources during construction, which may result in potential inadvertent damage or disturbance to a resource. This is considered a less than significant impact with mitigation incorporated, see Mitigation Measure CR-1 below.

Human graves are often associated with prehistoric occupation sites. Section 7050.5 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human burial and Section 5097.99 of the Public Resources Code defines the obtaining or possession of Native American remains or grave goods to be a felony.

Although not anticipated, there is the potential for inadvertent discovery of human remains and potential inadvertent damage or disturbance during construction. This is a less than significant impact with mitigation incorporated, see Mitigation Measure CR-2 below.

CR-1 If archaeological resources are unexpectedly discovered during construction, work shall be halted within 50 meters (±160 feet) of the find until it can be evaluated by a qualified professional archaeologist. If the find is determined to be significant, appropriate mitigation measures shall be formulated and implemented, with the concurrence of the City of Santa Maria.

CR-2 If human remains are unexpectedly discovered during construction, work shall be halted within 50 meters (±160 feet) of the find. The County Coroner shall be notified in accordance with provisions of Public Resources Code 5097.98-99 in the event human remains are found and the Native American Heritage Commission shall be notified in accordance with the provisions of Public Resources Code section 5097 if the remains are determined to be of Native American origin. The Commission will designate a Most Likely Descendant who will be authorized to provide recommendations for management of the Native American human remains. (California Public Resources Code Section 5097.98; and Health and Safety Code Section 7050.5)

Hazards and Hazardous Materials

There are typically two types of hazardous materials releases that could occur during construction: (1) the accidental release of hazardous materials that are routinely used during construction activities; and (2) the potential for construction activities to encounter and excavate contaminated soil or groundwater that are already present at the construction site and thus release it to expose new receptors to the hazard.

Hazardous materials that could be used during construction activities include typical construction equipment fluids. Storage and use of hazardous materials at construction sites could potentially result in the accidental release of small quantities of hazardous materials, which could pose a risk to construction workers and the environment, such as degradation of soil and/or surface water quality. However, the construction contractor would be required to prepare a Water Pollution Control Plan. The Water Pollution Control Plan would list the hazardous materials (including petroleum products) proposed for use and describe measures for preventing spills, inspecting equipment and fuel storage, and providing immediate response to spills. Through compliance with applicable hazardous materials storage and storm water permitting regulations, the impacts from potential releases of hazardous materials or petroleum products during construction would be less than significant.

The greatest potential for encountering contaminated soil and groundwater during construction would be in areas where past or current land uses have resulted in soil contamination. Nine (9) environmental cases were identified using GeoTracker that may have potentially affected soil or subsurface conditions at project sites. Two (2) of these sites are listed as "Open;" the remainder are considered "Completed – Case Closed," meaning that a closure letter or other formal closure decision document has been issued for the site.

Encountering soil or groundwater contamination could result in exposures to construction workers, the public, or the environment, resulting in a potentially significant impact. Construction within the former Jim O'Donnell Lease could result in exposure to petroleum hydrocarbon-impacted soil. Soil disturbance during construction could further disperse existing contamination into the environment and expose construction workers or the public to contaminants. Specifically, construction of the distribution line located just to the south of the intersection of Rayville Lane and Mahoney Road has the potential to encounter petroleum hydrocarbon-impacted soil found in the "Historic Lease Roads." It should be noted that the Site Assessment Report and Site Restoration Plan (SARSRP) prepared by AECOM found that the hydrocarbon-impacted soils found in the "Historic Lease Roads" is considered to be non-hazardous.

There is also potential to encounter this material during trenching of Betteravia Road and Mahoney Road, however, this is not certain. The presence of these hazards cannot be determined using historic aerial photographs and assuming the presence of hydrocarbon-impacted soils would be speculation. In addition, construction of the distribution lateral to APN 111-030-01 has the potential to encounter the "Sump of Unknown Origin." It should be noted that the "Sump of Unknown Origin," while within the same vicinity as the other lease features, is not associated with the former Jim O'Donnell Lease. A responsible party has not been identified for this feature. The "Sump of Unknown Origin" has the potential to contain hazardous hydrocarbon-impacted material.

Potential impacts associated with encountering hazardous materials at the former Jim O'Donnell Lease are considered potentially significant.

A Soils Management Plan (SMP) will be prepared by the responsible party for the former Jim O'Donnell Lease prior to construction of the proposed project. The SMP will include contact from the responsible party and process for cleanup of contaminated soils. It should be noted that the remediation of the "Sump of Unknown Origin" would not be covered in the SMP, as a responsible party has not been identified for that feature. The required SMP together with Mitigation Measure HM-1, included below, would reduce the impact from encountering contaminated soil during construction to a less than significant level. This impact is considered ***less than significant with mitigation incorporated***.

Operation of the proposed project would not result in exposure to hazardous materials because all components of the project would be underground. Any potential hazardous materials on the site would not be accessible to the public or nearby residents.

HM-1 The applicant's contractor shall immediately stop work and notify Santa Barbara County Public Health Department – Environmental Health Services Division at (805) 346-8216, if soil contamination is suspected or encountered during construction activities (e.g., unusual soil discoloration or strong odor). In addition, the applicant's contractor shall contact the project engineers and the City of Santa Maria Public Works Department. All work in the area of suspected contamination shall cease, the work area shall be sectioned off, until appropriate health and safety procedures have been determined and implemented.

Tribal Cultural Resources

There are no historical structures on the site. Records indicate that the project site, which is primarily within the road right-of-way and contains several residences on Rayville Lane, is not listed on the California Register of Historic Places or on Santa Barbara County's local list. Professional archaeologists studied a project boundary larger than the proposed project site disturbance. After initial consultation, a field survey of the project area was completed. The studies indicate the area of proposed development is not within an archaeological site eligible to be designated as a historical resource applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. Should archaeological resources be unexpectedly discovered during construction, work shall be halted until it can be evaluated by a qualified professional archaeologist and determined to be significant, and appropriate mitigation measures formulated and implemented, as identified in Mitigation Measures CR-1 and CR-2. The project would have a less than significant impact on tribal cultural resources. These mitigation measures are included above under the Cultural Resources Heading.

ENVIRONMENTAL RECOMMENDATION:

Based on the information available at the time of preparation this report and, without benefit of additional information which may come to light at the public hearing, the Environmental Officer recommends that a Mitigated Negative Declaration be filed for the Ray Water Project based upon information contained in SP2021-0008.

PREPARED BY:



City of Santa Maria
Community Development Department
110 South Pine Street, #101
Santa Maria, CA 93458

Handwritten signature of Dana Eady in black ink.

Dana Eady, Environmental Analyst

Handwritten date "June 7, 2022" in black ink.

Date

Handwritten signature of Chuen Ng in blue ink.

Chuen Ng, Environmental Officer

Handwritten date "6/7/2022" in blue ink.

Date



CITY OF SANTA MARIA
Environmental Checklist / Initial Study
RAY WATER PROJECT / (SP2021-0008)

1. Project Title and Location

Ray Water Company

City of Santa Maria Assessor's Parcel Numbers:

- Right-of-Way, Betteravia Road

County of Santa Barbara Assessor's Parcel Numbers:

- Right-of-Way, Betteravia Road
- 111-030-005 (3.01 acres)
- 111-030-006 (0.30 acres)
- 111-030-007 (0.20 acres)
- 111-030-008 (0.33 acres)
- 111-030-009 (0.43 acres)
- 111-030-011 (0.49 acres)
- 111-030-012 (0.25 acres)
- 111-030-013 (0.22 acres)
- 111-040-010 (1.40 acres)

2. Lead Agency, Contact and Preparer

City of Santa Maria
Dana Eady, Planning Division Manager
Community Development Department
110 South Pine Street, #101
Santa Maria, CA 93458
(805) 925-0951, x2444
deady@cityofsantamaria.org

3. Project Sponsor's Name and Address

Ray Water Company
Kristy Gilbertson, Ray Water Company Representative
(805) 680-7841
rkskg@aol.com

4. General Plan Designation

City of Santa Maria, *Mahoney Ranch North Specific Plan*

- Right-of-Way (no designation)

County of Santa Barbara

- General Industry

5. Zoning Designation

City of Santa Maria

- Right-of-Way (no designation)

County of Santa Barbara

- M-2 (General Industry)

6. Brief Description of Project

The primary source for the project description provided below is the Engineering Report for Ray Water Company, prepared by Weber, Hayes & Associates, dated October 22, 2021. This document is included in **Appendix A** to this document. Additional information was received via email correspondence from Weber, Hayes & Associates in August 2021.

6.1 INTRODUCTION

This Initial Study has been prepared to evaluate the potential environmental effects associated with the Ray Water Project (“project” or “proposed project”), located in the City of Santa Maria and unincorporated Santa Barbara County. This document has been prepared in accordance with the California Environmental Quality Act (“CEQA”), Public Resources Code §21000 et. seq., and the State CEQA Guidelines, California Code of Regulations (“CCR”) §15000 et. seq.

An Initial Study is an informational document prepared by a Lead Agency to determine if a project may have a significant effect on the environment (CEQA Guidelines §15063, subd. (a)). If there is substantial evidence that a project may have a significant effect on the environment, an Environmental Impact Report (“EIR”) must be prepared, in accordance with CEQA Guidelines §15064(a). However, if the Lead Agency determines that revisions in the project plans or proposals made by or agreed to by the applicant to mitigate the potentially significant effects to a less than significant level, a Mitigated Negative Declaration (“IS/MND”) may be prepared instead of an EIR (CEQA Guidelines §15070, subd. (b)). The Lead Agency prepares a written statement describing the reasons a proposed project would not have a significant effect on the environment and, therefore, why an EIR need not be prepared. This IS/MND conforms to the content requirements under CEQA Guidelines §15071.

The City of Santa Maria is acting as the Lead Agency pursuant to CEQA Guidelines §15050(a). As the Lead Agency, the City of Santa Maria prepared this IS/MND pursuant to CEQA Guidelines §15063, §15070, and §15152. This IS/MND will be circulated for agency and public review during a 30-day public review period pursuant to CEQA Guidelines §15073. Comments received by the City of Santa Maria on this IS/MND will be reviewed and considered as part of the deliberative process in accordance with CEQA Guidelines §15074.

The following section is consistent with the requirements of CEQA Guidelines §15124 to the extent that it is applicable to the project. This section contains a detailed description of the project location, historical background and context, project components and relevant project characteristics, project goals and objectives, and applicable regulatory requirements.

6.2 PROJECT LOCATION

The proposed project, described below, is located on the western edge of the City of Santa Maria. The proposed project components, described below in **Section 6.5**, are primarily within the Betteravia Road right-of-way, with some components located to the south of Betteravia Road, on Rayville Lane. The west portion of the proposed project is located within unincorporated Santa Barbara County and the east portion (the majority of the project) is located within the City of Santa Maria (see **Figure 1. Regional Project Map** and **Figure 2. Project Location**). The proposed project would be located on the following assessor's parcels on Rayville Lane:

- 111-030-005
- 111-030-006
- 111-030-007
- 111-030-008
- 111-030-009
- 111-030-011
- 111-030-012
- 111-030-013
- 111-040-010

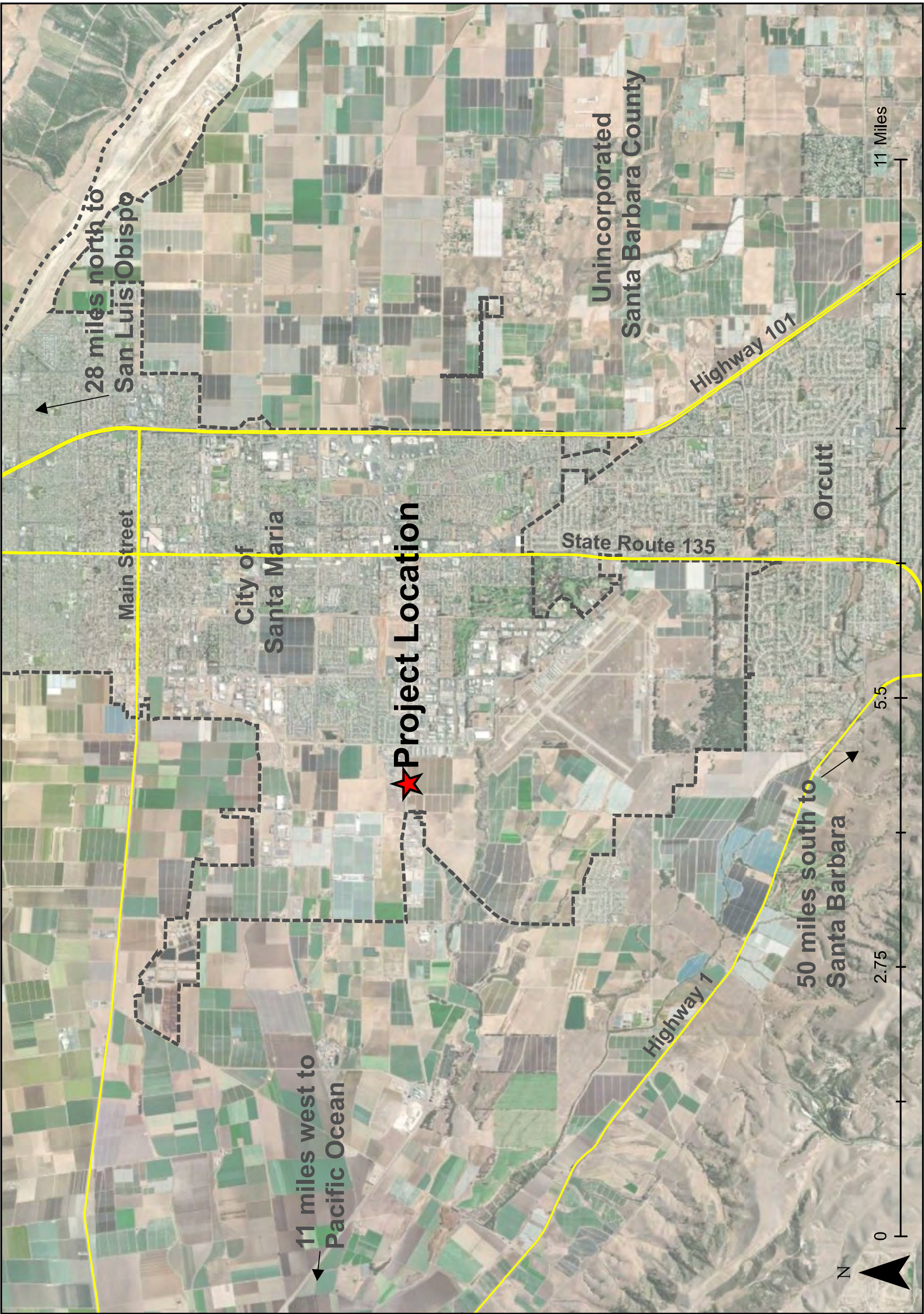
Regional access to the project site is provided from U.S. Route 101 and Betteravia Road. The proposed project is surrounded primarily by agricultural and industrial uses. In addition, residential and commercial office uses are located to the east of the project. The project site currently consists of paved road right-of-way and industrial land. It should be noted that although the area in and around Rayville Lane is designated as industrial land, there are existing residences that the proposed project will serve.

6.3 EXISTING GENERAL PLAN LAND USE DESIGNATION

The eastern portion of the project area is governed by the Santa Maria General Plan. This area does not have a land use designation because it is within the right-of-way of Betteravia Road. The western portion of the project area is governed by the Santa Barbara County Comprehensive Plan and is designated as General Industry. See **Figure 3. Land Use Map**. It should be noted that the area within the jurisdiction of Santa Barbara County is located within the City of Santa Maria Sphere of Influence (City of Santa Maria, 2011).

6.4 PROJECT BACKGROUND

Ray Water Company ("RWC") is a small water company located just outside the City of Santa Maria's city limits. RWC was issued a Santa Barbara County water system permit in 1976 but existed prior to that. Over the years, RWC has had ongoing difficulties meeting regulatory requirements – primarily due to aging and outdated infrastructure. Based on these challenges, RWC received a Technical Assistance Grant to help bring their water system into regulatory compliance.



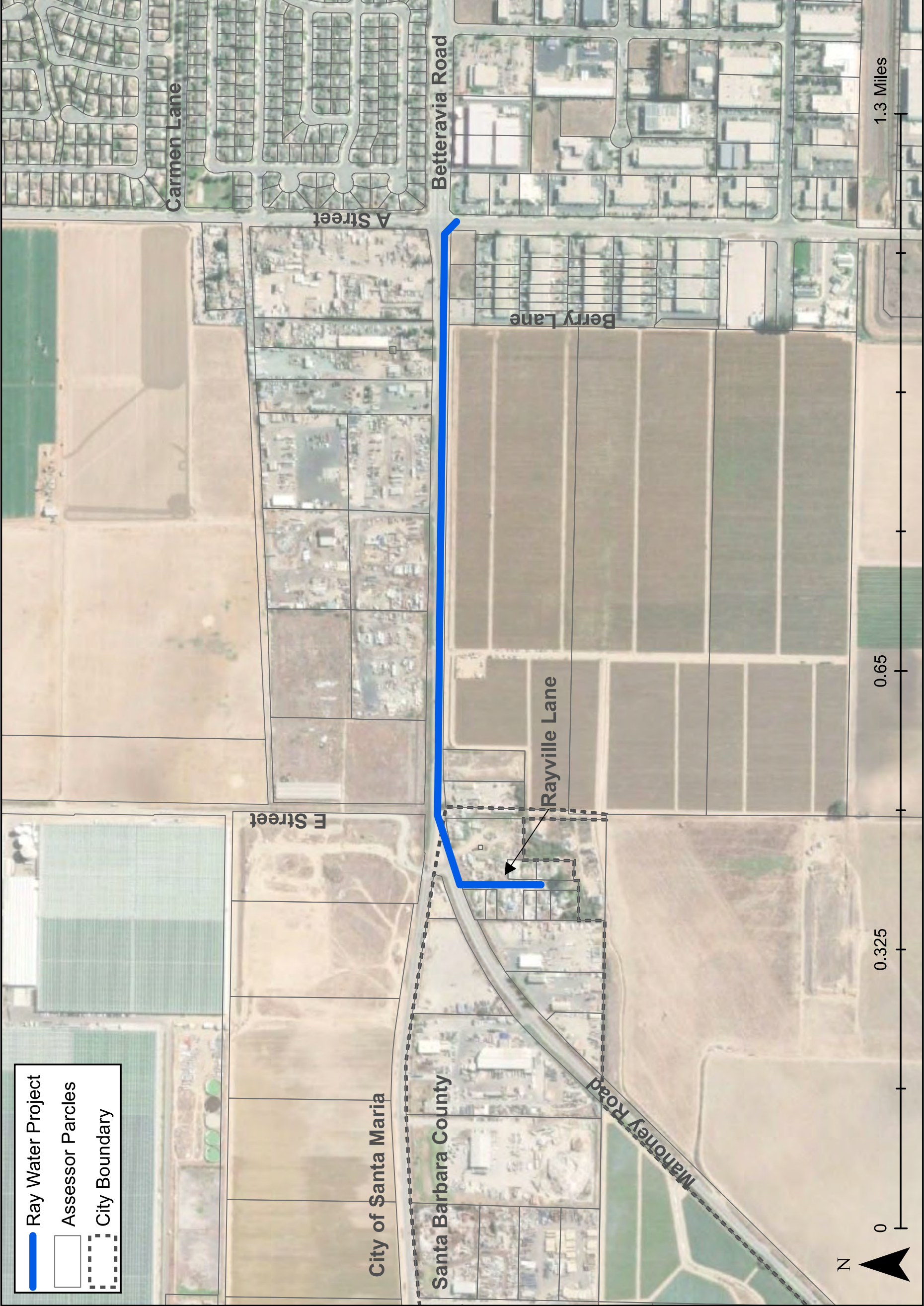
Title: **Regional Project Map**

Date: 09/15/2021
 Scale: 1 inch = 1.26 miles
 Project: 2020-40



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 947 Cass Street, Suite 5
 Monterey, CA 93940
 (831) 373-4341

Figure **1**

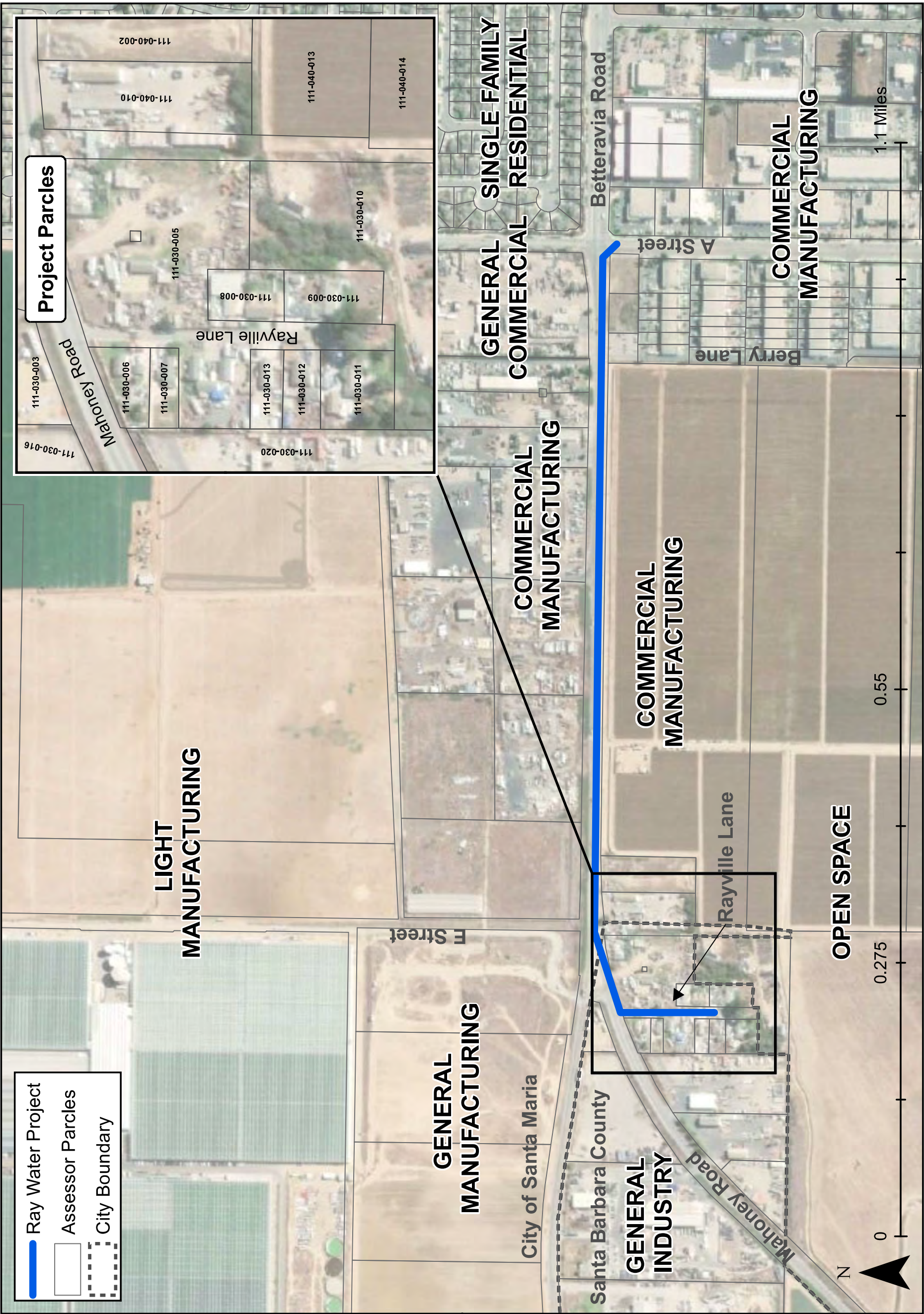


Title: **Project Location**

Date: 09/15/2021
 Scale: 1 inch = 0.14 miles
 Project: 2020-40



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Title: Land Use Map

Date: 09/16/2021
 Scale: 1 inch = 0.12 miles
 Project: 2020-40



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Figure 3

6.4.1 Existing System

RWC has been governed by various appointed residents of the water system, which have changed over time. Currently, ownership is equally distributed among ten residents. There are a total of 13 service connections (11 residential, 2 commercial). The total population served is approximately 45 residents. The service area boundaries are shown on **Figure 4. Site Plans**.

Based on State Water Resources Control Board (“SWRCB”) 2020 data for the City of Santa Maria water usage, the average daily demand (“ADD”) is 65.4 gallons per day (per resident) and the maximum daily demand (“MDD”) is 108.56 gallons per resident. The RWC system currently serves 45 residents, therefore, the entire RWC MDD is 4,885 gallons per day. RWC utilizes groundwater as its drinking water source. The capacity of this source is unknown, because RWC does not meter the well or regularly monitor depth to groundwater. In addition, the RWC system uses one steel water storage tank. Santa Barbara County documentation indicates that the steel tank is 32-feet tall, 12-feet in diameter, with a capacity of approximately 25,000-gallons.

RWC has received numerous notices of violation (from Santa Barbara County) dating back to 1980. The most relevant violation includes repeated nitrate concentrations above the maximum contaminant levels (“MCL”), starting at least as early as June 24, 1980. Other violations included (but not limited to) coliform bacteria detections, failure to perform the required analytical testing, failure to properly inform residents of MCL exceedances, and failure to resolve the nitrate issue.

Santa Barbara County issued RWC an enforcement action Compliance Order on March 6, 2020 due to ongoing nitrate concentrations above the MCL. The Compliance Order required RWC to inform all residents of the elevated nitrate concentrations, submit a progress report, and submit a corrective action plan to resolve the nitrate issue. The proposed project is a result of this Compliance Order.

6.5 PROJECT DESCRIPTION

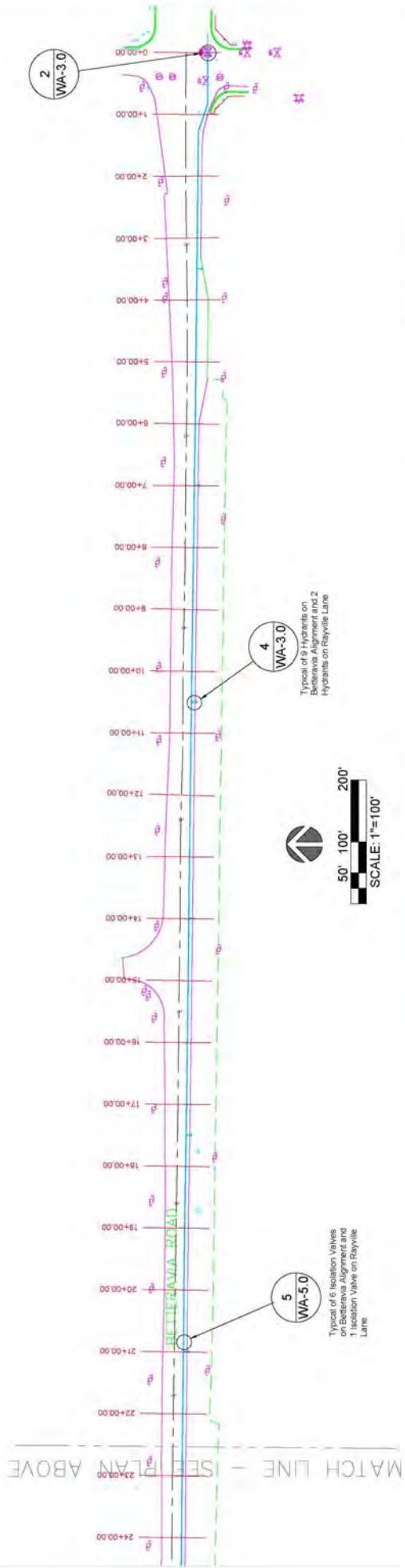
6.5.1 Project Objectives

The primary project goal is to provide RWC residents with safe and reliable drinking water. To best meet the primary goal, the project’s key objectives are:

- Supply safe and reliable drinking water;
- Comply with regulatory requirements;
- Meet the water system’s O&M needs;
- Be financially viable;
- Satisfy public concerns; and
- Meet environmental requirements.

6.5.2 Project Components

The proposed project consists of consolidating RWC with the City of Santa Maria’s water system. The proposed project consists of a water main, a distribution line, and service connections. In total, these components include 4,860 linear feet (0.92 miles) of new pipelines. These components are explained in more detail below.



SHEET NOTES

4
WA-3.0
Typical of 9 Hydrants on Bettervia Alignment and 2 Hydrants on Rayville Lane

5
WA-5.0
Typical of 6 Isolation Valves on Bettervia Alignment and 1 Isolation Valve on Rayville Lane

50' 100' 200'
SCALE: 1"=100'

Source: Weber, Hayes & Associates, 2021.

Figure
4

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Date: 09/16/2021
Scale: NA
Project: 2020-40

Site Plans



Water Main

The water main will extend from the intersection Mahoney Road and Rayville Lane to the intersection of Betteravia Road and A Street to connect with the City of Santa Maria water system. The water main will be approximately 3,400 feet in length. See **Figure 4. Site Plans** for more information.

Distribution Line

At the intersection of Mahoney Road and Rayville Lane, the water main transitions into an eight (8) inch water distribution line. This distribution line runs south down Rayville Lane. The distribution line will connect the water main described above to each of the service connections described below. This line will be approximately 500 feet in length. See **Figure 4.**

Service Connections

The proposed project includes 15 service connections on Rayville Lane, see **Figure 4.** Each service connection from the distribution line to the residences may vary in length; an average of 60 linear feet per connection has been used to generate a total approximate length of 780 feet for all of the service connections. A typical service line is one (1) to (2) inches in diameter.

6.5.3 Project Construction

Site Preparation and Trenching

The project site is generally flat and consists of existing road right-of-way and general industrial uses. The proposed project includes trenching of approximately 13,100 square feet (0.3 acres). Site preparation activities are anticipated to be completed within approximately 10 days and trenching activities are anticipated to be completed within 60 days. The proposed project involves approximately 56,700 cubic feet (2,100 cubic yards) of cut and the same amount of fill. This estimate includes the water main, distribution line, and service lines. The project would require some import or export of cut and fill materials. Sand would be imported for the utility trenches and a minimal amount of material would be exported. The water main trench will be between 24 and 36-inches wide; and the distribution line trench will be between 24 and 32-inches wide.

Schedule

Construction is anticipated to occur over the course of approximately three (3) months (Mixan. 2021).¹ Construction is expected to begin in February 2023.² Construction activities would include site preparation, trenching, and paving. The anticipated schedule of these construction activities is as follows:

1. Site Preparation: This construction phase will last approximately 10 days.
2. Trenching: This construction phase will last approximately 60 days.
3. Paving: This construction phase will last approximately 60 days.

¹ A local contractor has estimated that it would take 28 days to complete the proposed project, however, considering all aspects of construction and accounting for potential delays, the project engineer predicts that a three-month construction period is reasonable (Mixan. 2021).

² The Draft Engineering Report dated July 2, 2021, states that construction will begin between August 17, 2022 and February 17, 2023. Assuming that this project may encounter typical delays and postponements, this analysis uses a start date estimate of February 2023.

The construction contractor will determine the precise sequencing of the construction phase above. Due to the linear nature of the proposed project, it is probable that multiple construction phases will occur simultaneously.

Construction Circulation and Access

During construction, the project site would be accessed by Betteravia Road. It is currently unknown how many vehicle trips would be generated by the construction of the proposed project. The project's staging area would be located along the northern edge of the water main along an undeveloped portion of Betteravia Road.

6.5.4 Project Operation

With the exception of fire hydrants, the entirety of the proposed project will be underground after construction is complete. It is not expected that operation of the proposed project will require maintenance on a regular basis. It is not anticipated that the City of Santa Maria will need to hire additional employees to accommodate the additional connections generated by the proposed project. The proposed project would require little to no vehicle trips during operation of the proposed project.

Once operational, the RWC will no longer exist and current RWC customers would receive water directly from the City of Santa Maria.

7. Surrounding Land Uses and Setting

North: Agricultural and Industrial

South: Agricultural

East: Residential and Commercial

West: Industrial and Agricultural

8. Other Public Agencies Whose Approval is Required

State

- State Water Resources Control Board – State Revolving Fund Financing Approval
- California Department of Fish and Wildlife – Section 1602 Lake and Streambed Alteration Agreement*

Regional/Local

- Regional Water Quality Control Board – Water Quality Certification*
- City of Santa Maria – Outside Users Agreement
- City of Santa Maria Public Works – Encroachment Permit
- Santa Barbara County Public Works (Orta. 2021) – Encroachment Permit

*These permits may not be applicable if the applicant can work within the potential waters of the state, see Mitigation Measure BIO-4 for more information

1. AESTHETICS

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

SETTING:

The proposed project is located within the Santa Maria Valley. The City of Santa Maria is located to the east of the proposed project area. There are no State-designated scenic highways located within the vicinity of the proposed project, the nearest State-designated scenic highway is U.S. Route 101 which is designated as eligible for scenic highway status and is located approximately two (2) miles to the east (Caltrans. 2021). In addition, there are no County-designated scenic highways within the vicinity of the proposed project area.

The eastern portion of the proposed project area is within a paved road right-of-way and the western portion of the proposed project is in an industrial area, however, there are a number of residences located within the industrial area. The lands surrounding the proposed project area are primarily agricultural and industrial. In addition, there is an agricultural ditch located to the south of a portion of the proposed project site, see **Section 4. Biological Resources** for more information. The aesthetic quality of the site has previously been altered by the current uses described above. Vehicle traffic on Betteravia Road is the primary source of public viewership for the proposed project. See **Figure 5. Site Photos**. The topography of the proposed project site and surrounding area is flat.

Construction of the proposed project will include trenching with the use of heavy equipment. Construction of the proposed project would not require any nighttime construction, and, therefore, construction activities would not result in any new nighttime lighting or glare. Construction is anticipated to last approximately three months.



Photo 1. View from Betteravia Road, looking south toward Rayville Lane.

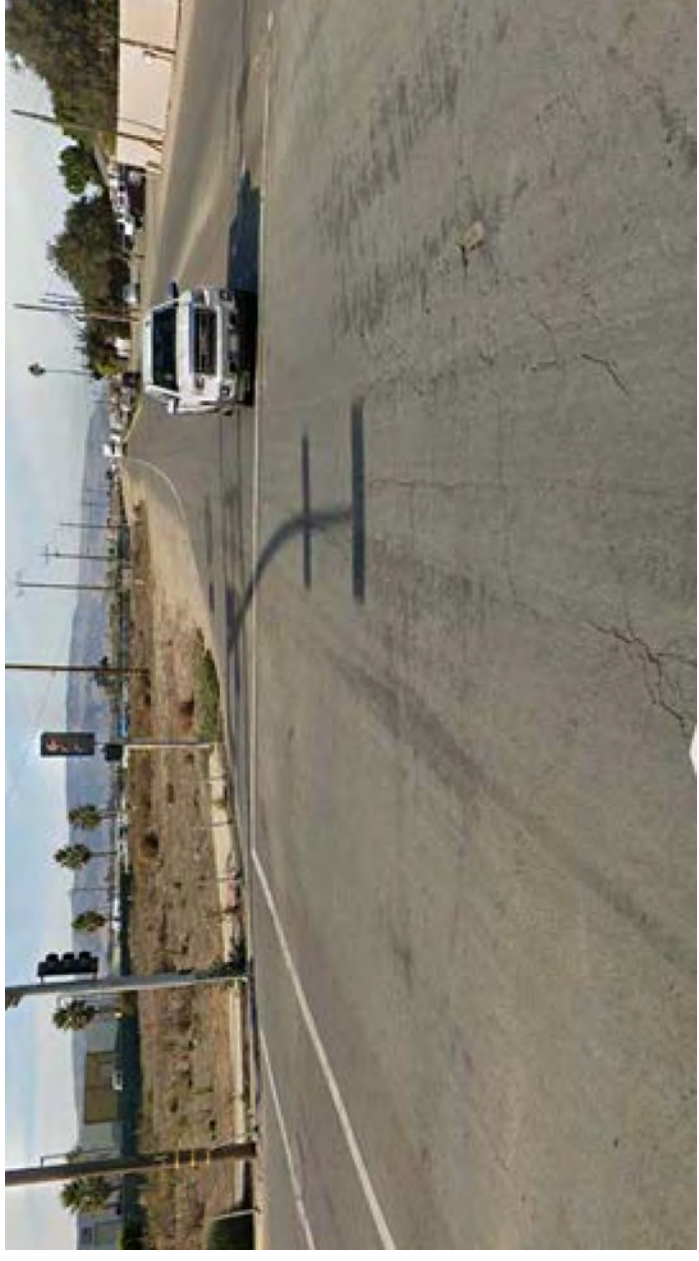


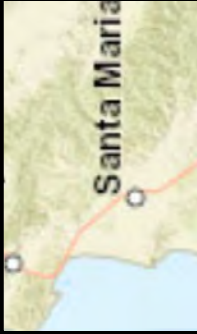
Photo 2. View from corner of A Street and Betteravia Road, looking west down Betteravia Road.



Photo 3. View from part way down distribution main, looking west down Betteravia Road.



Photo 4. View from part way down the distribution main alignment, looking east up Betteravia Road.



Title:

Site Photos

Date: 09/15/2021
 Scale: NA
 Project: 2020-40



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Figure
5

Once operational, the distribution pipeline and laterals would be entirely underground; the components of the project would not be visible.

IMPACT DISCUSSION:

- a. The majority of the project site is located within existing right-of-ways and disturbed areas. With the exception of fire hydrants, all the project components would be underground and would not be visible after construction is complete. The project would not impact scenic vistas and is not located within a scenic corridor. Construction of the project may be temporarily visible from a small number of private residences and vehicles traveling on Betteravia Road. Impacts to private views in a project's immediate vicinity are not considered under CEQA. The proposed project would have a ***less than significant impact*** on scenic vistas.
- b. There are no scenic resources within the immediate vicinity of the project. Construction and operation of the project would result in a ***less than significant impact*** to scenic resources.
- c. The existing visual character of the project site is comprised of rural land uses, including agriculture and residential. The site's overall visual quality is considered low due to the surrounding agricultural open space and industrial use. The residential land within the vicinity of the project site does not enhance the area's aesthetic value. Construction impacts would include the presence of construction vehicles, equipment and materials, stockpiles, and exposed soils. These impacts would be temporary in nature. Once the proposed project is completed, the land would be restored to its pre-construction condition. For these reasons, the proposed project would result in a ***less than significant impact*** on the existing visual character or quality of public views of the site and its surroundings.
- d. The proposed project does not propose any new sources of light or glare, as the new water main, distribution line, and service connections will be underground and therefore would not include nighttime lighting. Construction will not occur at night; therefore, no safety lighting will be needed. The proposed project would have ***no impact*** resulting from light and glare.

2. AGRICULTURE AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection. These resources include the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project, and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

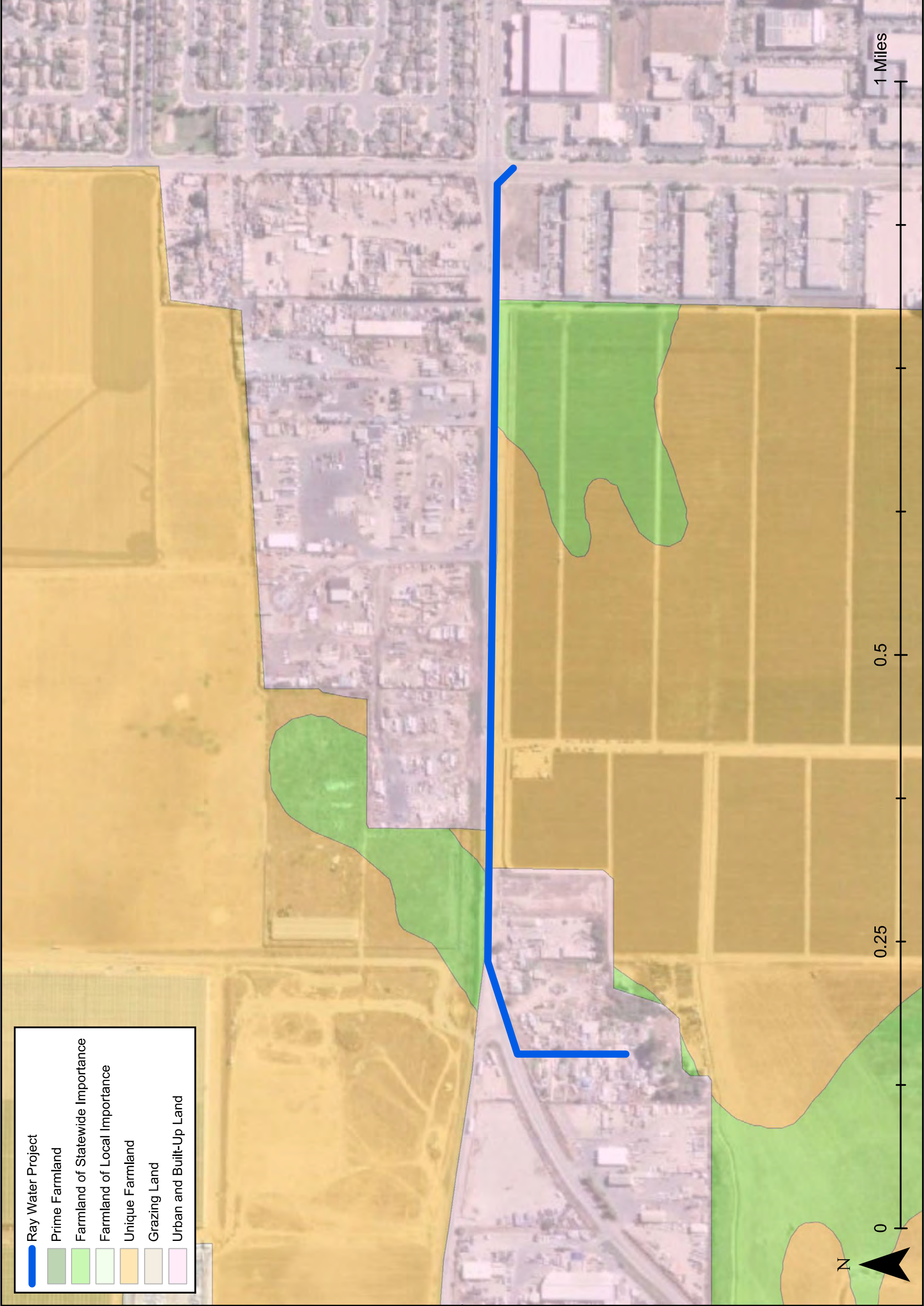
Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING:

Agriculture has historically played an important role in the economy and development of Santa Maria and the Santa Maria Valley. Soil quality, water supply, year-round growing season, and level topography have made the Santa Maria Valley one of the most productive agricultural regions in the country.

Areas to the north and south of the proposed project area are currently utilized for agriculture. A portion of the proposed project area is zoned as General Industrial, and the remainder is within the right-of-way. The proposed project area is not under a Williamson Act contract, nor is it zoned for an agricultural use (SBC Atlas. 2021). Neither construction nor operation of the proposed project would encroach into agricultural land. See **Figure 6. Important Farmlands**.

According to California Public Resources Code (PRC) Section 12220(g), forest land is defined as land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Timberland is defined as land, other than land owned by the federal government and land designated by the State Board of Forestry and Fire Protection, as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. The project site does not support any forest land or timberland.



	Ray Water Project
	Prime Farmland
	Farmland of Statewide Importance
	Farmland of Local Importance
	Unique Farmland
	Grazing Land
	Urban and Built-Up Land



Title:

Important Farmlands Map

Date: 09/15/2021
 Scale: 1 inch = 0.11 miles
 Project: 2020-40



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Figure 6

IMPACT DISCUSSION:

- a. The project site includes lands designated as “Urban and Built-Up,” and “Other,” on the Important Farmlands Map for Santa Barbara County prepared by the Farmland Mapping and Monitoring Program of the California Resources Agency (California Department of Conservation. 2021). The water main and distribution pipeline are located within the Betteravia Road right-of-way, and the service lines would be located within Rayville Lane. Land designated as “Unique Farmland,” and “Farmland of Statewide Importance” is located on either side of Betteravia Road, however, these areas are not part of the proposed project and therefore will not be encroached upon. The proposed project would have **no impact** resulting from the conversion of prime farmland, unique farmland, or farmland of statewide importance.
- b. The project site is not located on or near land enrolled under the Williamson Act. For this reason, the proposed project would have **no impact** resulting from a conflict with existing zoning for agricultural use, or a Williamson Act contract.
- c. The project site does not contain any forest land as defined in Public Resources Code Section 12220(g), timberland as defined by Public Resources Code Section 4526, or property zoned for Timberland Production as defined by Government Code Section 51104(g). The proposed project would have **no impact** resulting from a conflict in zoning for these land uses.
- d. As mentioned above, there is no forest land within the project vicinity. **No impact** would result from the conversion of forest land to a non-forest use.
- e. The proposed project would not involve changes in the existing environment, which could result in conversion of farmland or agricultural land due to their location or nature. Construction impacts adjacent to agricultural resources would occur within existing disturbed areas and would be temporary in nature. The proposed project is a water system improvement project and would not convert any land for other use. For these reasons, this is considered a **less than significant impact**.

3. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING:

An Air Quality Memorandum was prepared for the proposed project, which is contained in **Appendix B** of this document.

The project lies within the South Central Coast Air Basin ("SCCAB"). The Santa Barbara County Air Pollution Control District ("SBCAPCD") is the local agency authorized to regulate stationary air quality sources in the project area. The Federal Clean Air Act and the California Clean Air Act mandate the control and reduction of specific air pollutants. Under these Acts, the U.S. Environmental Protection Agency ("EPA") and the California Air Resources Board ("CARB") have established ambient air quality standards for specific "criteria" pollutants, designed to protect public health and welfare. Primary criteria pollutants include carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO_x), particulate matter (PM₁₀), sulfur dioxide (SO₂), and lead (Pb). Secondary criteria pollutants include ozone (O₃), and fine particulate matter (PM_{2.5}).

The EPA administers National Ambient Air Quality Standards ("NAAQS") under the Federal Clean Air Act. The EPA sets the NAAQS and determines if areas meet those standards. Violations of ambient air quality standards are based on air pollutant monitoring data and evaluated for each air pollutant. Areas that do not violate ambient air quality standards are considered to have attained the standard.

The SBCAPCD monitors air pollutant levels to ensure that air quality standards are met and, if not met, develop strategies to meet the standards. Depending on whether or not the standards are met or exceeded, the SCCAB is classified as being in "attainment" or as "non-attainment." See **Table 1. Santa Barbara County Air Pollution Control District Attainment Status** below for a summary of the attainment status for SBCAPCD.

Table 1.
Santa Barbara County Air Pollution Control District Attainment Status

Pollutant	State Designation	National Designation
Ozone (O ₃)	Attainment	Unclassified / Attainment
Inhalable Particulates (PM ₁₀)	Nonattainment	Attainment
Fine Particulates (PM _{2.5})	Unclassified	Unclassified / Attainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO ₂)	Attainment	Unclassified / Attainment
Sulfur Dioxide (SO ₂)	Attainment	-
Lead	Attainment	Unclassified

Source: Santa Barbara County Attainment & Nonattainment Classification Summary, <https://www.ourair.org/air-quality-standards/>

Plans to attain these standards already accommodate the future growth projections available at the time these plans were prepared. Any development project capable of generating air pollutant emissions exceeding regionally established criteria is considered significant for purposes of CEQA analysis, whether or not such emissions have been accounted for in regional air planning. Any project that would directly cause or substantially contribute to a localized violation of an air quality standard would generate substantial air pollution impacts. The same is true for a project that generates a substantial increase in health risks from toxic air contaminants or introduces future occupants to a site exposed to substantial health risks associated with such contaminants.

The 2019 Ozone Plan is the ninth triennial update to the initial state Air Quality Attainment Plan (“AQAP”) adopted by the SBCAPCD Board of Directors in 1991 (SBCAPCD. 2019). SBCAPCD’s 2019 Ozone Plan still serves as an important regulatory tool to maintain attainment status and address the many factors that threaten to increase regional NO_x and volatile organic compounds (“VOC”) emissions in the future. To be determined to be consistent with the current air quality attainment plan (2019 Ozone Plan), the proposed project’s direct and indirect emissions must be accounted for in the growth assumptions in the 2019 Ozone Plan, and the proposed project must be consistent with the policies adopted in the 2019 Ozone Plan. Additionally, in determining consistency with the 2019 Ozone Plan, commercial and industrial projects must be tracked pursuant to the local Congestion Management Plan (“CMP”) and are determined to be consistent with the 2019 Ozone Plan if they are consistent with SBCAPCD rules and regulations. The Ozone Plan relies primarily on the land use and population projections provided by Santa Barbara Council of Associated Governments (“SBCAG”) and CARB on-road emissions forecast as a basis for vehicle emission forecasting (SBCAPCD. 2017).

Common sources of odors and odor complaints include wastewater treatment plants, transfer stations, coffee roasters, painting/coating operations, and landfills. The proposed project is located in an industrial/agricultural area and would not generate significant odors during construction or operation.

Sensitive receptors are more susceptible to the effects of air pollution than the general population. Land uses that are considered sensitive receptors include residences, schools, and health care facilities. Sensitive receptors in the vicinity of the proposed project consist of residences of Rayville Lane and residences located to the northeast of the A Street and Betteravia Road intersection.

IMPACT DISCUSSION:

- a) CEQA Guidelines §15125(b) requires that a project be evaluated for consistency with applicable regional plans, including the Ozone Plan. The SBCAPCD is required to update their Ozone Plan once every three years; the most recent update was adopted in December 2019. This plan addresses attainment of the State ozone standard and Federal air quality standard. The Ozone

Plan accommodates growth by projecting growth in emissions based on population forecasts prepared by the Santa Barbara County Association of Governments (SBCAG) and other indicators. Consistency determinations are issued for commercial, industrial, residential, and infrastructure related projects that have the potential to induce population growth. A project is considered inconsistent with the Ozone Plan if it has not been accommodated in the forecast projections considered in the Ozone Plan. The project does not include new housing or commercial development, and operation and maintenance of the project components would not require new employees. The proposed project would not cause and/or otherwise induce population growth, as the new water system improvements would serve only existing Ray Water Company customers. In addition, due to the lack of operational emissions, the proposed project would not cause any long-term adverse air quality affects. As a result, the proposed project would result in **a less than significant impact** resulting from conflicts with and/or otherwise obstruct the implementation of SBCAPCD’s Ozone Plan AQAP.

- b. The SBCAPCD is currently designated “attainment” for the federal 8-hour ozone standard of 0.070 parts per million (“ppm”). Effective July 1, 2020, Santa Barbara County has been designated as attainment for the state ozone standards as well. The county is designated unclassifiable/attainment for the federal PM_{2.5} standard, unclassified for the state PM_{2.5} standard, and nonattainment for the state PM₁₀ standard.

Construction Emissions

Based on the 90% Design Plans and information provided by Weber Hayes Associates (“WHA”), short-term construction emissions associated with the proposed project were estimated using the California Emission Estimator Model (“CalEEMod”).

SBCAPCD has not established quantitative thresholds of significance for short-term air pollutant emissions. However, the SBCAPCD recommends lead agencies to use a 25 tons/year significance threshold for construction emissions of reactive organic gases (ROG) and oxides of nitrogen (NO_x), as well as other criteria emissions with the exception of carbon monoxide (CO). A comparison of estimated construction emissions and applicable SBCAPCD-recommended thresholds are provided in **Table 2**, below.

**Table 2.
Construction Air Pollutant Emissions for the Ray Water Project**

	Emissions in Pounds/Day					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Significance Threshold (SBCAPCD)	25	25	NA	25	25	25
Ray Water Project Emissions	0.0	0.0	0.0	0.0	0.0	0.0
Exceed Threshold?	No	No	NA	No	No	No
Source: Summary of Air Quality Modeling for Ray Water Company, Denise Duffy and Associates, 2021.						

Construction of the proposed project would emit small amounts of the pollutants included in **Table 2** above, however, when rounded to the nearest tenth of a pound per day, the estimates all round down to zero. The proposed project would not result in the exceedance of any short-term construction threshold as recommended by SBCAPCD. However, because Santa Barbara County violates the state standard for PM₁₀, dust control measures are required for all projects involved in earthmoving activities regardless of the significance of the fugitive dust impacts. Therefore, the standard construction best management practices identified below would be incorporated into the proposed project in accordance with local regulatory policies.

During site preparation and construction activities, the following measures shall be implemented, to the extent feasible, to minimize short-term construction fugitive dust emissions:

1. During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency should be required whenever the wind speed exceeds 15 miles per hour. Reclaimed water should be used whenever feasible. However, reclaimed water should not be used in or around crops for human consumption.
2. Minimize amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less on unpaved areas.
3. If importation, exportation, and/or stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be tarped from the point of origin.
4. Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads.
5. After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur.
6. The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the SBCAPCD prior to grading/building permit issuance and/or map clearance.

Operational Emissions

Operation of the proposed project would not result in a significant impact due to air pollution emissions since the only operational effects would be related to minimal vehicle trips to the site for maintenance activities. In addition, the proposed project would not require any new staff. There would be an incremental increase in the amount of power required by the City of Santa Maria water system to serve the new connections. This would result in a nominal increase in emissions related to electricity production.

Based on the above analysis, the project would have a **less than significant impact** resulting from a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

- c. Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with a margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. CARB identifies sensitive receptors as "land uses where sensitive individuals are most likely to spend time," such as "schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential

communities” (CARB. 2005). Because the project includes the installation of new water connections, construction will occur within the immediate vicinity of residences, specifically along Rayville Lane.

Implementation of the project would result in short-term emissions of fugitive dust associated with construction activities. However, as noted in **Table 2**, above, the project would not result in emissions that would exceed SBCAPCD’s significance thresholds. Applicable SBCAPCD thresholds are designed to be protective of public health. Compliance with applicable SBCAPCD regulations would minimize potential nuisance impacts to occupants of nearby land uses. For these reasons, construction activities would be considered to have a **less than significant impact** to nearby sensitive residential receptors.

- d. There may be intermittent odors from construction associated with diesel exhaust that could be noticeable at times to residences in close proximity. However, given the limited construction duration, potential intermittent odors are not anticipated to result in odor complaints and would not affect a substantial number of people. Operation of the project would not result in other emissions that would adversely affect a substantial number of people. A **less than significant impact** would result from other emissions, including odors.

4. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING:

DD&A Natural Resources Division prepared a Biological Resources Report for the project, contained in **Appendix C**. The report describes the existing biological resources within and adjacent to the project site, including any special-status species or sensitive habitats known or with the potential to occur within and adjacent to the site. This report also assesses the potential impacts to biological resources that may result from the project, and recommends appropriate avoidance, minimization, and mitigation measures necessary to reduce those impacts to a less-than-significant level in accordance with CEQA (DD&A, 2021).

The project is located on the western edge of the City of Santa Maria; however, a portion of the project site is also located within unincorporated Santa Barbara County. The proposed project components are primarily within the Betteravia Road right-of-way, with some components located to south of West Betteravia Road, on Rayville Lane. This analysis includes an analysis of the entire Ray Water Company service area, which is larger than the project’s impact area.

Two vegetation types were mapped within the survey area: riparian and ruderal; however, only ruderal vegetation is present within the project site. No special-status species have the potential to occur within the survey area based on lack of appropriate habitat, and no known occurrences within the vicinity of the project. Raptors and other avian species protected under California Fish and Wildlife Code have the potential to nest within trees present within and adjacent to the survey area and project site. All other species evaluated have a low potential to occur, are assumed unlikely to occur, or were determined not present within the survey area.

The survey results include mapping and quantification of the acreage of two vegetation types within the survey area, as shown in **Figure 7. Habitat Types.**³ **Table 3. Summary of Vegetation Types** provides a summary of the acreage of each area:

Table 3.
Summary of Vegetation Types

Vegetation Type	Area	
	Survey Area	Project Site
Ruderal / Disturbed	6.3 acres	1.5 acres
Riparian	0.7 acres	0
Developed	11.1 acres	0.8 acre ⁴

The floristic alliance occurring within the riparian habitat is listed as sensitive on the California Department of Fish and Wildlife’s (“CDFW’s”) List Vegetation Alliances and Associations (CDFW. 2020). Portions of the riparian area may be federal wetlands and a drainage is present within the survey area, which may be jurisdictional other waters of the U.S. or state, regulated by the U.S. Army Corps of Engineers (“ACOE”) and/or California Regional Water Quality Control Board (“RWQCB”). There are no adopted Habitat Conservation Plans (“HCP”) or Natural Community Conservation Plans (“NCCP”) associated with the evaluation area.

Vegetation Types

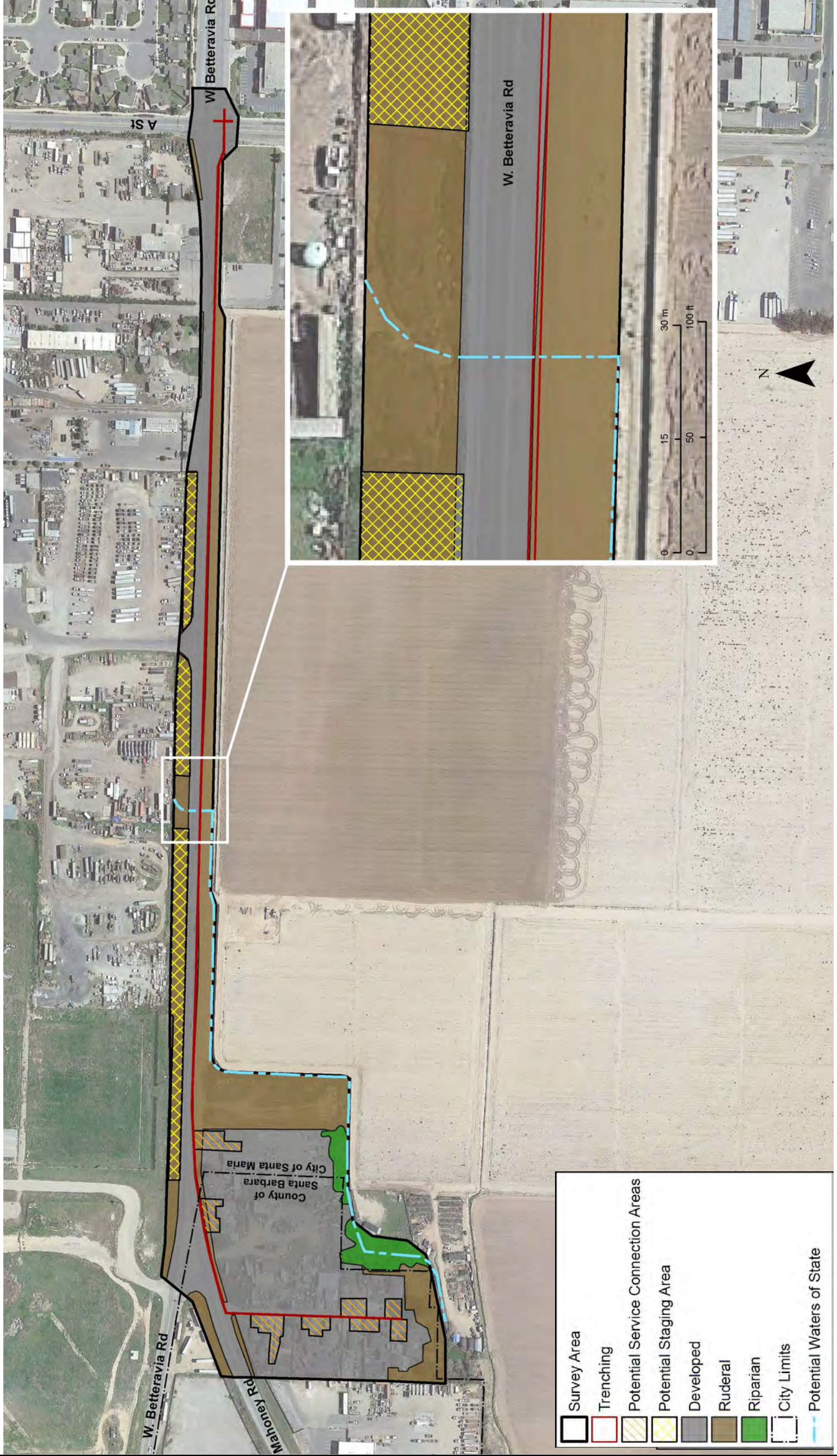
Ruderal/Disturbed

Ruderal areas are those areas which have been disturbed by human activities and are dominated by nonnative annual grasses and other “weedy” species. Most of the undeveloped portions of the survey area consist of ruderal habitat dominated by non-native weedy plant species, such as hottentot fig (*Carpobrotus sp.*), cheeseweed (*Malva parviflora*), wild radish (*Raphanus sativus*), mustard (*Brassica sp.*), riggut brome (*Bromus diandrus*), filaree (*Erodium sp.*), and telegraph weed (*Heterotheca grandiflora*). Approximately 6.3 acres of ruderal/disturbed areas are present within the survey area; however, only 1.5 acres would be impacted by the project, associated mostly with staging on the south side of West Betteravia Road.

Ruderal areas have low biological value because they are generally dominated by non-native plant species and consist of relatively low-quality habitat from a wildlife perspective. Common wildlife species which do well in urbanized and disturbed areas that may occur within the ruderal habitat include American crow (*Corvus brachyrhynchos*), Steller’s jay (*Cyanocitta stelleri*), striped skunk (*Mephitis mephitis*), scrub jay (*Aphelocoma californica*), European starling (*Sturnus vulgaris*), western fence lizard (*Sceloporus occidentalis*), and rock dove (*Columba livia*).

³ The survey area represents a larger study area and potential impacts are greater than the actual project impact area, as noted earlier.

⁴ Please note that the exact locations of the service connections have not yet been determined. As such, this number includes the general areas shown for service connections on **Figure 4**. The actual work area will likely be less.



Title:

Habitat Types

Date: 09/16/2021
 Scale: NA
 Project: 2020-40



Monterey | San Jose
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Figure
7

Riparian

Riparian habitats are those plant communities supporting woody vegetation found along rivers, creeks, streams, canyon bottom drainages, and seeps. They can range from a dense thicket of shrubs to a closed canopy of large mature trees. Within the survey area, this habitat type is dominated by Arroyo willow (*Salix lasiolepis*). Approximately 0.7 acres of riparian habitat are present within the survey area; however, the project will not impact the riparian habitat.

Riparian areas provide habitat for many wildlife species, particularly birds and herpetofauna. Common species that may be found within the riparian habitat in the site includes Sierran treefrog (*Pseudacris sierra*), red-winged blackbird (*Agelaius phoeniceus*), and song sparrow (*Melospiza melodia*).

Developed

Developed areas within the survey area include roadways, residences, businesses, and associated yards. Vegetation within these areas consist only of ornamental plants, lawns, and sparse weeds. As such, developed areas are considered to have no biological value. Approximately 11.1 acres of developed areas is present within the survey area; however, only approximately 0.8 acres will be impacted by the project.

Special-Status Species

Raptors and other avian species protected under California Fish and Wildlife Code have the potential to nest within trees present within and adjacent to the project site. All other special-status wildlife species, including the California tiger salamander (“CTS”) and the California red-legged frog (“CRLF”), are assumed unlikely to occur or have a low potential to occur, and therefore are unlikely to be impacted by the project. For further explanation regarding the likelihood of occurrence for special status species at the proposed project site, see Appendix B. Special Status Species Table, of **Appendix C. Biological Resources Report**. No special-status plant species were observed during the field survey, and none are expected to occur based on the lack of suitable habitat within the project site. Therefore special-status plant species are unlikely to be impacted by the project and are not discussed further.

Raptors, their nests, and other nesting birds are protected under California Fish and Wildlife Code. While the life histories of these species vary, overlapping nesting (approximately February through August) and foraging similarities allow for their concurrent discussion. Most raptors are breeding residents throughout most of the wooded portions of the state. Stands of live oak, riparian deciduous, or other forest habitats, as well as open grasslands, are used most frequently for nesting. Breeding occurs February through August, with peak activity May through July. Prey for these species includes small birds, small mammals, and some reptiles and amphibians, and many raptor species hunt in open woodland and along habitat edges. Various species of raptors, such as red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), great horned owl (*Bubo virginianus*), American kestrel (*Falco sparverius*), and turkey vulture (*Cathartes aura*), have a potential to nest within any of the large trees present within the survey area.

IMPACT DISCUSSION:

- a. Nesting raptors and other protected avian species have the potential to occur within the project site. Construction activities may result in direct mortality of individuals or disturbance of nests.

This is considered a ***less than significant impact with mitigation incorporated***, see Mitigation Measure BIO-1 below.

- b. The floristic alliance occurring within the riparian habitat is listed as sensitive on the CDFW's California's Natural Communities List (CDFW. 2020) and in the Resources Management Element of the Santa Maria General Plan (City of Santa Maria. 2009). Riparian habitat is under CDFW jurisdiction per Fish and Wildlife Code Section 1602. The project will not result in direct impacts to riparian habitat; however, if an accident during construction were to result in the release of hazardous materials (e.g., fuel for construction equipment, oil, solvents, or paints) into the environment, there is a potential to degrade the adjacent riparian habitat. The project is subject to existing regulatory requirements pertaining to the use and disposal of hazardous materials. This is considered a ***less than significant impact with mitigation incorporated***, see Mitigation Measure BIO-2 below.
- c. A ditch is present within the survey area that conveys waters of the state likely under the jurisdiction of the RWQCB and CDFW. In addition, wetlands under RWQCB jurisdiction may be present where the ditch flows through the riparian habitat. The project will not result in direct impacts to the potential wetlands; however, if an accident during construction were to result in the release of hazardous materials (e.g., fuel for construction equipment, oil, solvents, or paints) into the environment, there is a potential to degrade the adjacent habitat and impact water quality. The project has the potential to directly impact waters of the state where the project intersects the culvert that runs under West Betteravia Road or if work were to occur outside of the project limits. These considered a ***less than significant impact with mitigation incorporated***, see Mitigation Measures BIO-2, BIO-3, and BIO-4 below.
- d. With the exception of fire hydrants, all project features would be below ground and would not permanently remove any wildlife habitat. The majority of the project site and the surrounding areas are developed and disturbed and provide little habitat for wildlife species. As a result, the development of the project, would not 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. This represents a ***less than significant impact*** and no mitigation is required.
- e. The project will not conflict with the City of Santa Maria General Plan, nor with the Santa Barbara County Comprehensive Plan; therefore ***no impact*** would result from implementation of the project.
- f. There are no adopted HCPs, NCCPs, or other approved local, regional or state habitat conservation plans located within the project area. ***No impact*** would result from conflict with these plans.

Mitigation Measures incorporated into the project:

- BIO-1** To avoid and reduce impacts to nesting raptors and other nesting avian species, construction activities can be timed to avoid the nesting season period. Specifically, construction activities can be scheduled after September 1 and before January 31 to avoid impacts to these species. Alternatively, if avoidance of the nesting period is not feasible, a qualified biologist shall be retained to conduct pre-construction surveys for nesting raptors and other protected avian species within 250 feet of proposed construction activities if construction occurs between

February 1 and August 31. Pre-construction surveys will be conducted no more than 14 days prior to the start of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). Because some bird species nest early in spring and others nest later in summer, some breed multiple times in a season, surveys for nesting birds may be required to continue during construction to address new arrivals. The necessity and timing of these continued surveys will be determined by the qualified biologist based on review of the final construction plans.

If raptors or other protected avian species nests are identified during the pre-construction surveys, the qualified biologist will notify the project applicant and an appropriate no-disturbance buffer will be imposed within which no construction activities or disturbance should take place as determined by the qualified biologist to ensure avoidance of impacts to the individuals. The buffer will remain in place until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.

- BIO-2** Cleaning and refueling of equipment and vehicles will occur only within designated staging areas on paved or graded parking areas. No maintenance, cleaning or fueling of equipment will occur within riparian areas, or within 100 feet of such areas if possible. At a minimum, all equipment and vehicles will be checked and maintained on a daily basis to ensure proper operation and avoid potential leaks or spills. During construction, all project-related spills of hazardous materials within or adjacent to proposed project area will be cleaned up immediately. Spill prevention and clean-up materials will be onsite at all times during construction. Construction materials/debris will also be stored within the designated staging areas. No debris, soil, silt, sand, oil, petroleum products, cement, concrete, or washings thereof will be allowed to enter into, or be placed where they may be washed by rainfall or runoff, into riparian habitat.
- BIO-3** The project shall avoid work within the potential waters of the state to the extent feasible. No Staging shall occur within potential waters of the state. Protective fencing shall be placed so as to keep construction vehicles and personnel from impacting potential waters of the state adjacent to the proposed project area outside of work limits. Typically, protective fencing, also referred to as Environmentally Sensitive Area (“ESA”) fencing, is four feet in height and is made of a highly visible color of polypropylene plastic.
- BIO-4** If avoidance of waters of the state is not feasible, the project applicant shall comply with the Clean Water Act and Fish and Wildlife Code and coordinate with the RWQCB to obtain a Water Quality Certification and CDFW to obtain a Section 1602 Lake and Streambed Alteration Agreement prior to construction. All measures included in the permits to avoid, reduce, or mitigate impacts to waters of the state shall be implemented. These measures may include, but not be limited to, construction timing restrictions, monitoring, and reporting.

5. CULTURAL RESOURCES

Would 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 pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SETTING:

A Phase 1 Cultural Resource Inventory was prepared for the project by Albion Environmental, Inc. (Albion, 2021). This document is included as **Appendix D** to this document. Albion's study was conducted to comply with requirements under CEQA guidelines (Public Resources Code 21000 et seq.). The purpose of this Phase I cultural resource inventory was to document cultural resource identification efforts for the project. The study included archival and background research, a search of records at the California Historical Resources Information System's Central Coast Information Center ("CCoIC"), Native American stakeholder outreach; and a pedestrian survey of the proposed project area.

A search of records at the CCoIC indicated that four previous cultural resource studies have been conducted within the project area and that two previous cultural resource studies have been conducted within a 1/4-mile radius of the project area. According to the record search, there are no previously identified cultural resources within the project area and no cultural resources within a 1/4-mile radius of the project area.

After reviewing the record search results, Albion conducted an intensive pedestrian survey of the project area. During the survey, ground surface visibility was generally poor due to the project area being covered by existing roadway/roadside, residential development, hardscaping, and landscaping. Visual inspection of the project area revealed no archaeological materials on the surface of the project area and no evidence of intact precolonial or historic-era archaeological deposits within the project area. Albion's investigation indicates that a historical resource or potentially significant cultural materials are not located in the project area.

The Native American Heritage Commission ("NAHC") provided the results of a Sacred Lands File search and list of Tribal stakeholders on July 14, 2021. According to the NAHC, the Sacred Lands File search is negative. The Native American stakeholder list includes groups or individuals who may have knowledge of cultural resources in the area. Letters containing a brief project description and maps of the proposed Project Area were sent via USPS certified mail on July 15, 2021. To date, Albion's outreach effort documented Tribal concerns about receiving information regarding the project and the records search

results, as well as being involved in formal Assembly Bill 52 consultation regarding the project with the Santa Ynez Band of Chumash Indians, this is discussed further in **Section 18. Tribal Resources**.

Prehistorically, the San Luis Obispo, Santa Barbara, and Ventura regions were home to the maritime Chumash, considered one of the most complex hunter-gatherer societies on earth. They had economic and socio-political systems unusually complex relative to most ethnographically known hunter-gatherers.

The project Area was part of the Rancho Punta de Laguna, a 26,648-acre Mexican Era granted by Governor Manuel Micheltorena to Luis Arellanes and Emigdio Miguel Ortega in 1844. Following the Land Act of 1851, Luis Arellanes and Emigdio Miguel Ortega filed a claim for Rancho Punta de Laguna from the Public Land Commission in 1852, and had the grant patented in 1873.

An aerial image from 1943 shows the project area and general vicinity, which illustrates the area was largely farmland and farm residences. This continues to be the case in consulted aerial images from 1956 and 1970. Within the project area, no building or other built environment resources had been developed at the time of the photographs except for the extreme western and eastern ends of the project area, which show apparent residences within the immediate vicinity. The western end, at Rayville Lane, retains business and residential structures clustered around the lane, while the eastern end is a now-vacant lot abutting A Street, which is surrounded by apartment complexes, industrial yards, and residential development. The two apparent residential structures visible in the 1943 (and 1956) aerial photographs at the corner of Betteravia Road and A Street are replaced with one structure in the 1970 aerial photograph.

IMPACT DISCUSSION:

- a. CEQA Guidelines §15064.5 describes a historical resources as: 1) any resource that is listed in, or determine to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources; 2) a resource included in a local register of historical resources; and, 3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant based on substantial evidence in light of the whole record. The fact that a resource is not listed in or determined to be eligible for listing does not preclude a lead agency from determining that the resource may be a historical resource (CEQA Guidelines §15064.5(4)). A substantial change includes the physical demolition, destruction, relocation, or alteration of a resource or its immediate surroundings such that the significance would be materially impaired (CEQA Guidelines §15064.5(b)).

The project would not cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5. The project area does not contain any historic resources listed in the California Inventory of Historical Resources, California Historical Landmarks, or the National Register of Historic Places. There are no structures or other items of historic significance within the project area. Therefore, the project will have **no impact** on historical resources as defined in CEQA Section 15064.5.

- b. Public Resources Code §21083.2 requires that lead agencies evaluate potential impacts to archaeological resources. Specifically, lead agencies must determine whether a project may have a significant effect or cause a substantial adverse change in the significance of an archaeological resource. The findings of the Phase I cultural report did not document any confirmed evidence of an archaeological resource. Accordingly, the project would not significantly impact a known archaeological resource. Although not anticipated, there is the potential for inadvertent discovery of archaeological resources during construction, which may result in

potential inadvertent damage or disturbance to a resource. This is considered **a less than significant impact with mitigation incorporated**, see Mitigation Measure CR-1 below.

- c. Human graves are often associated with prehistoric occupation sites. Section 7050.5 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human burial and Section 5097.99 of the Public Resources Code defines the obtaining or possession of Native American remains or grave goods to be a felony.

Although not anticipated, there is the potential for inadvertent discovery of human remains and potential inadvertent damage or disturbance during construction. This is a **less than significant impact with mitigation incorporated**, see Mitigation Measure CR-2 below.

Mitigation Measure(s) incorporated into the project:

CR-1 If archaeological resources are unexpectedly discovered during construction, work shall be halted within 50 meters (±160 feet) of the find until it can be evaluated by a qualified professional archaeologist. If the find is determined to be significant, appropriate mitigation measures shall be formulated and implemented, with the concurrence of the City of Santa Maria.

CR-2 If human remains are unexpectedly discovered during construction, work shall be halted within 50 meters (±160 feet) of the find. The County Coroner shall be notified in accordance with provisions of Public Resources Code 5097.98-99 in the event human remains are found and the Native American Heritage Commission shall be notified in accordance with the provisions of Public Resources Code section 5097 if the remains are determined to be of Native American origin. The Commission will designate a Most Likely Descendant who will be authorized to provide recommendations for management of the Native American human remains. (California Public Resources Code Section 5097.98; and Health and Safety Code Section 7050.5)

6. ENERGY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING:

The proposed project includes a connection to the City of Santa Maria water distribution system. Operation of the proposed project would result in an incremental increase in the City of Santa Maria’s

energy usage; however, this increase would be offset by the reduction in energy used by the existing well that currently serves Rayville Lane. Pacific Gas and Electric Company (“PG&E”) has historically been the primary electricity provider for the City of Santa Maria.

Beginning in January 2021, Santa Maria customers began to receive their electricity from Central Coast Community Energy (“3CE”) (previously known as Monterey Bay Community Power [“MBCP”]). 3CE is a community choice energy agency that has committed to providing its customers with 100% carbon-free energy by the year 2030 (3CE. 2021). Community choice energy agencies allow local governments to procure power on behalf of their residents, businesses, and municipal accounts from an alternative supplier while still receiving transmission and distribution service from their existing utility provider (in this case, PG&E). This is typically an attractive option for communities that want more local control over their electricity sources, more clean energy than their default utility offers, and/or lower electricity prices. Per Public Utilities Code Section 366.2, customers have the right to opt-out of the community choice energy program and continue to receive service from the incumbent utility (PG&E) if they so choose (City of Santa Maria. 2019).

The City of Santa Maria has not adopted a climate action plan; however, the General Plan Resources Management Element includes goals for achieving increased energy conservation use. The Resources Management Element encourages increasing the energy efficiency of buildings, appliances, buildings, and promotes the development and use of alternative forms of energy. Current measures applied in the city include energy-conserving building standards, recycling, and transportation system improvements. The Resources Management Element also identifies energy conservation policies. These policies include encouraging the use of innovative site and building orientation and landscaping to maximize energy efficiency. And, includes policies regarding fuel efficiency standards and promotes the development of alternative energy sources (City of Santa Maria. 2001).

IMPACT DISCUSSION:

- a. Electricity and natural gas for the project site will be provided by PG&E. The project’s construction and operational energy usage are included in **Appendix B**, based on GHG and modeling using CalEEMod, version 2020.4.0. Electricity and natural gas consumption are compared to existing consumption in the PG&E service areas. Project modeling provides an estimate of construction and operational emissions and energy consumption. The project will not consume large amounts of energy outside the functions commonly found within water systems. The anticipated construction schedule assumes that the project would be built out over a maximum of three months. The construction phase would require energy for the preparation of the site (e.g., excavation, and grading), and the actual construction of the facilities. Petroleum based fuels such as diesel fuel and gasoline would be the primary sources of energy for these tasks. The overall construction of the project has been designed to be energy-efficient in order to avoid excess fuel and rental equipment costs. During operation, the project would consume energy in the form of electricity primarily for pumping for water distribution. Based on the discussion above, the project would result in a **less than significant impact** during the construction and operational phases related to energy use.
- b. The project would comply with existing state energy standards and would not conflict with or obstruct a state or local plan for renewable energy or energy-efficiency. The project would be designed to comply with the California Green Building Code, Title 24 energy efficiency requirements, 2019 California Building Energy Standards requirements, and Assembly Bill (“AB”) 1881 water-efficient landscape requirements. The project would result in a **less than significant**

impact resulting from conflict or obstruction with a state or local plan for renewable energy or energy efficiency

7. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the most recent Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING:

The proposed project is located within the Santa Maria Valley, an east–west trending alluvial valley bounded to the north by the San Rafael Range and to the south by the Casmalia Range and the Solomon Hills. The Santa Maria River traverses the valley from east to west, emptying into the Pacific Ocean just west of the town of Guadalupe. The Santa Maria River is formed by the convergence of the Cuyama and the Sisquoc Rivers at Fugler Point near Garey.

The Santa Maria basin⁵ is a significant hydrocarbon-producing (i.e., oil and gas) coastal (and off-shore) basin in California. The basin lies at the juncture between the north–west-trending southern Coast Range province and the east–west-trending Transverse Range province. The basin contains a relatively thick Miocene through Holocene age sequence of sedimentary rocks, some of which are prolific petroleum producing formations and others that are highly productive groundwater aquifers (U.S. Department of the Interior. 2004).

The Santa Maria Valley is located within a structural fold and thrust fault area; the axes of most of the structural elements in the region run northwest–southeast, parallel to the valley. The Santa Maria basin and adjacent southern Coast Ranges have been subjected to considerable uplift during the last two million to five million years and are considered to be seismically active. Relatively little direct evidence of active faulting (such as offset of bedding or structures observed at a surface fault) has been observed in the region; however, broad bands of seismicity unrelated to surface faults and other evidence indicate the region is seismically active.

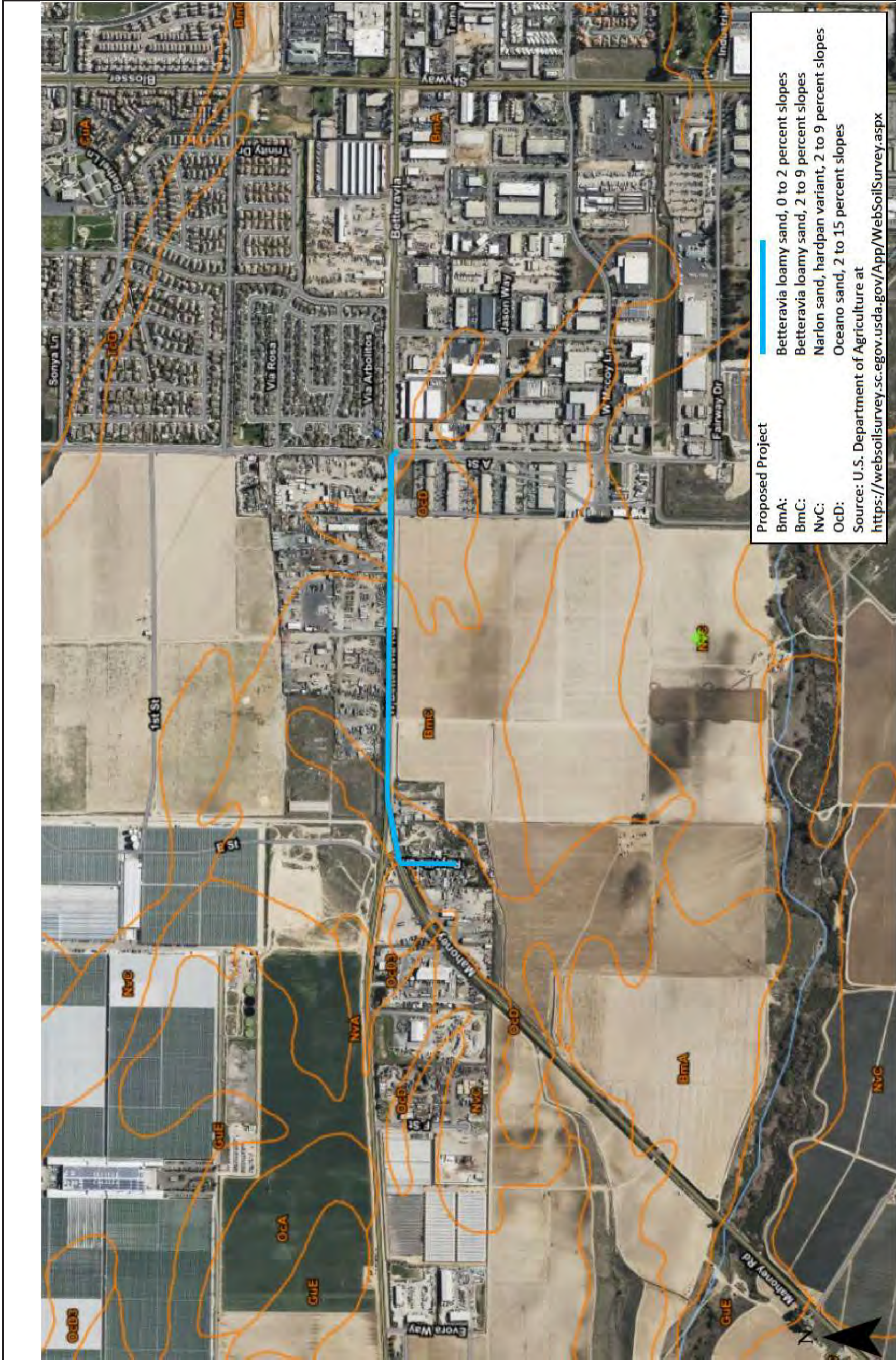
According to the City of Santa Maria General Plan Safety Element, several active, potentially active, and inactive faults exist within the basin and region, and generally trend north–west (City of Santa Maria. 1995). The major faults include the Santa Maria, Santa Maria River, and Casmalia Faults. None of these faults qualify for Earthquake Fault Zone status as identified by the State Geologist under the Alquist-Priolo Earthquake Fault Zones Act.

The City of Santa Maria General Plan Safety Element also states that the liquefaction potential from ground shaking is generally low within the City of Santa Maria due to the relatively deep groundwater levels that are ordinarily over 70 feet below the ground surface. However, several areas of perched groundwater in the vicinity of the Santa Maria Public Airport could cause liquefaction during an earthquake. The proposed project area has a low liquefaction potential.

Landslides could potentially occur in areas with steep slopes. The proposed project area is not located within a designated landslide zone or within an area with steep slopes or shallow groundwater that indicate a potential for landslides to occur. The project site is relatively flat and is not located in the vicinity of slopes that would be susceptible to landslides.

The proposed project area is underlain primarily by Oceano sand, 2% to 15% slopes and Betteravia loamy sand, 2% to 9% slopes (U.S. Department of Agriculture. 2021). There are also small portions of the project area that are underlain by Betteravia loamy sand, 0% to 2% slopes and Narlon sand, hardpan variant, 2% to 9% slopes. See **Figure 8. Geology Map** for more information (U.S. Department of Agriculture. 1972).

⁵ A geological basin is a large low-lying area.



Source: USDA, January 2022



Title:

Geology Map

Date: 01/24/2022
 Scale: N/A
 Project: 2020-40



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Figure
8

- Betteravia loamy sand, 0% to 2% slopes – Permeability is very slow. Surface runoff is very slow, and the hazard of water erosion is none to slight. The hazard for soil blowing is high. Fertility is very low.
- Betteravia loamy sand, 2% to 9% slopes – Permeability is very slow. Surface runoff is low to medium, and the hazard of water erosion is light to moderate. The hazard for soil blowing is high. Fertility is very low.
- Narlon sand, hardpan variant, 2% to 9% slopes – Permeability is very low. A perched water table sometimes forms after rain or irrigation. Surface runoff is medium, and the hazard of soil blowing is high. Fertility is very low.
- Oceano sand, 2% to 15% slopes – Permeability is rapid. Surface runoff is slow to medium, and the hazard of soil blowing is very high. Fertility is very low.

IMPACT DISCUSSION:

- a.i. Although the project site is in a region with several active faults, it is not mapped within an Alquist-Priolo Earthquake Fault Zone. The nearest fault is the Santa Maria Fault, located 3.5 miles to the northeast (California Department of Conservation. 2021). In addition, the project would be subject to standard construction standards and seismic requirements. This is considered a **less than significant impact**.
- a.ii. Seismic ground shaking is influenced by the proximity of the site to an earthquake fault, the intensity of the seismic event, and the underlying soil composition. As described above, the project site is located within 3.5 miles of the Santa Maria fault. The Safety Element in the City's General Plan identifies the project site as being located within Zone B, which is described as being underlain by Pleistocene age non-marine terrace deposits. Zone B is the less hazardous of the two zones (Zone A and Zone B). In addition, the Probabilistic Seismic Hazard Maps on the California Department of Conservation's website indicate that the entire Santa Maria Valley is located in a lower hazard area (California Department of Conservation. 2016). The effect of seismic ground shaking would be minimized through the implementation of the seismic requirements and applicable City standards for earthquake-resistant construction; therefore, potential impacts would be **less than significant**.
- a.iii. Liquefaction tends to occur in loose, saturated and fine-grained cohesionless sands, coarse silts or clays with a low plasticity. In order for liquefaction to occur there must be the proper soil type, soil saturation, and cyclic accelerations of sufficient magnitude to progressively increase the water pressures within the soil mass. Non-cohesive soil shear strength is developed by the point-to-point contact of the soil grains. As the water pressures increase in the void spaces surrounding the soil grains the soil particles become supported more by the water than the point-to-point contact. When the water pressures increase sufficiently, the soil grains begin to lose contact with each other resulting in the loss of shear strength and continuous deformation of the soil where the soil appears to liquefy.

According to the City of Santa Maria General Plan, the proposed project area has a low liquefaction potential. Liquefaction induced lateral spreading occurs when a liquefied soil mass fails toward an open slope face or fails on an inclined topographic slope. Due to the relatively flat project site and low liquefaction potential, the risk of lateral spreading is also considered to be low. The proposed project would result in a **less than significant impact** resulting from its potential to cause substantial adverse effects involving seismic-related ground failure, including liquefaction.

- a.iv. The subject site and immediate vicinity are relatively flat to gently sloping. The potential for landsliding to occur and adversely affect the proposed development is considered negligible. This is considered a ***less than significant impact***.
- b. The underlying soil is primarily Oceano sand, 2% to 15% slopes and Betteravia loamy sand, 2% to 9% slopes. These soils have been severely eroded through soil blowing, Surface runoff medium to low, and the hazard of soil blowing is high. Construction activities may result in wind driven and, to a lesser degree, water driven soil erosion. Best management practices (“BMPs”) would be implemented by the construction contractor during construction to reduce soil erosion. Applicable measures may include the following:
- Stockpiling and disposing of demolition debris, concrete, and soil.
 - Protecting existing storm drain inlets and stabilizing disturbed areas.
 - Hydroseeding/re-vegetating disturbed areas.
 - Minimizing areas of impervious surfaces.
 - Implementing runoff controls (e.g., percolation basins and drainage facilities).
 - Properly managing construction materials.
 - Managing waste, aggressively controlling litter, and implementing sediment controls.
 - Limiting grading to the minimum area necessary for construction and operation of the project.

For these reasons, this constitutes a ***less than significant impact***.

- c. See impact discussions for a.i-a.iv above. Any impact resulting from unstable soil would be temporary, as construction is anticipated to last three months. Risks to life and property would not occur during operation of the project, because the project will be entirely underground. The project contractor would fully comply with all state, federal, and other laws, rules, regulations to ensure worker safety during construction. This represents a ***less than significant impact***.
- d. According to the Safety Element of the City’s General Plan, the project site is not located within an area with expansive soils. Construction of the project would be required to comply with the most recent regulatory requirements, which would ensure the protection of structures and occupants from geo-seismic hazards, such as expansive soils; therefore, impacts would be ***less than significant***.
- e. The project is a water distribution system improvements project and does not propose any septic tanks or alternative wastewater disposal systems. ***No impact*** would occur.
- f. The City’s General Plan Safety Element identifies the project site as being underlain by Pleistocene age non-marine terrace deposits, a young substrate generally considered to have a very low potential to contain unique geologic or paleontological resources (U.S. Department of the Interior. 1950). As such, the project would not result in the risk of encountering underlying formations that have a potential for paleontological resources. Therefore, potential impacts to a unique paleontological resource or site, or unique geologic feature would be ***less than significant***.

8. GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING:

Greenhouse gases (“GHGs”) are gases that absorb and re-emit infrared radiation in the atmosphere. The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and landfills.

In 2007 the County of Santa Barbara (“County”) completed a GHG emissions inventory for the unincorporated county using 2007 as the base year. In 2010 the County updated the 2007 emissions inventory as a result of changes to the regulatory structure since the creation of the initial inventory, including an update to the State CEQA Guidelines. Emissions from unincorporated county sources totaled 1,192,970 MTCO₂e in the baseline year 2007, with transportation sources identified as the largest contributor, accounting for approximately 44% of total countywide emissions. Residential energy uses were the second-largest contributor, accounting for approximately 16% of total emissions, followed by commercial energy uses, offroad uses, and solid waste. Other major emission sources included agriculture, water and wastewater, industrial energy, and aircraft (Santa Barbara County. 2015).

The significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds or consistency with a regional GHG reduction plan (such as a Climate Action Plan). The SBCAPCD has developed a GHG threshold of 10,000 MTCO₂e/ year for stationary source projects, which includes equipment, processes, and operations that require an APCD permit to operate.

State Requirements

Assembly Bill 32

In response to an increase in man-made GHG concentrations over the past 150 years, California has implemented AB 32, the “California Global Warming Solutions Act of 2006.” AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15% reduction below 2005 emission levels) and the adoption of regulations to require reporting and verification of statewide GHG emissions.

Senate Bill 32

On September 8, 2016, the governor signed Senate Bill (“SB”) 32 into law. SB 32 extends GHG reduction goals beyond the initial target year of 2020 in AB 32, directing the CARB to ensure that GHGs are reduced to 40% below the 1990 level by 2030.

Climate Change Scoping Plan

CARB’s 2017 Climate Change Scoping Plan reflects the statewide GHG emissions reductions of 40 percent below 1990 emissions levels by 2030, as mandated by SB 32. A significant part of achieving the SB 32 goals are strategies to promote sustainable communities, such as the promotion of zero net energy buildings, and improved transportation choices that result in reducing vehicle miles traveled (“VMT”). Other measures include the increased use of low-carbon fuels and cleaner vehicles.

Executive Order B-55-18

Executive Order (“EO”) B-55-18 was issued in September 2018, establishing a new statewide goal to achieve “carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.”

Local Requirements

The Regional Transportation Plan (“RTP”) and Sustainable Communities Strategy (“SCS”), both prepared by SBCAG, are local plans that include goals and policies related to the reduction of GHG emissions. The RTP is a long-range planning document that defines how the region plans to invest in the transportation system over the next twenty years based on regional goals, multi-modal transportation needs for people and goods, and estimates of available funding. The RTP includes the SCS as required by SB 375⁶. The SCS sets forth a forecasted development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, will reduce GHG emissions from passenger vehicles and light trucks to achieve the GHG reduction targets set by the California Air Resources Board. The future land use and transportation scenario presented in the SCS must accommodate forecast population, employment, and housing sufficient to meet the needs of all economic segment of population, including the State-mandated Regional Housing Needs Assessment (“RHNA”), while considering State housing goals.

⁶ SB 375 directs CARB to set regional targets for reducing greenhouse gas emissions. The law establishes a “bottom up” approach to ensure that cities and counties are involved in the development of regional plans to achieve those targets. SB 375 builds on the existing framework of regional planning to tie together the regional allocation of housing needs and regional transportation planning in an effort to reduce GHG emissions from motor vehicle trips.

IMPACT DISCUSSION:

- a. As discussed in above, implementation, construction, and operation of the project will not exceed established thresholds for air quality emissions. Operation of the project would not generate emissions since the project consists primarily of linear pipelines with no increase in staff. Limited vehicular trips to the site will be required intermittently for maintenance. Project construction would generate an estimated on-time emission of 3.02 MT of CO₂e. This falls far below the threshold on 10,000 MT of CO₂e per year. For this reason, this is considered a **less than significant impact**.
- b. The project would be consistent with the City of Santa Maria General Plan, the SBCAG 2040 Regional Transportation Plan and Sustainable Communities Strategies (RTP and SCS), the 2017 Climate Change Scoping Plan, and Executive Order B-55-18, which are regulations adopted to implement a statewide, regional, or local plan to reduce or mitigate greenhouse gas emissions. Based on the modeling results, project-related GHG emissions would not exceed defined significance threshold established. Furthermore, the operational component of the project would not result in an increase in existing operation and maintenance related emissions. This represents a **less than significant impact**.

9. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

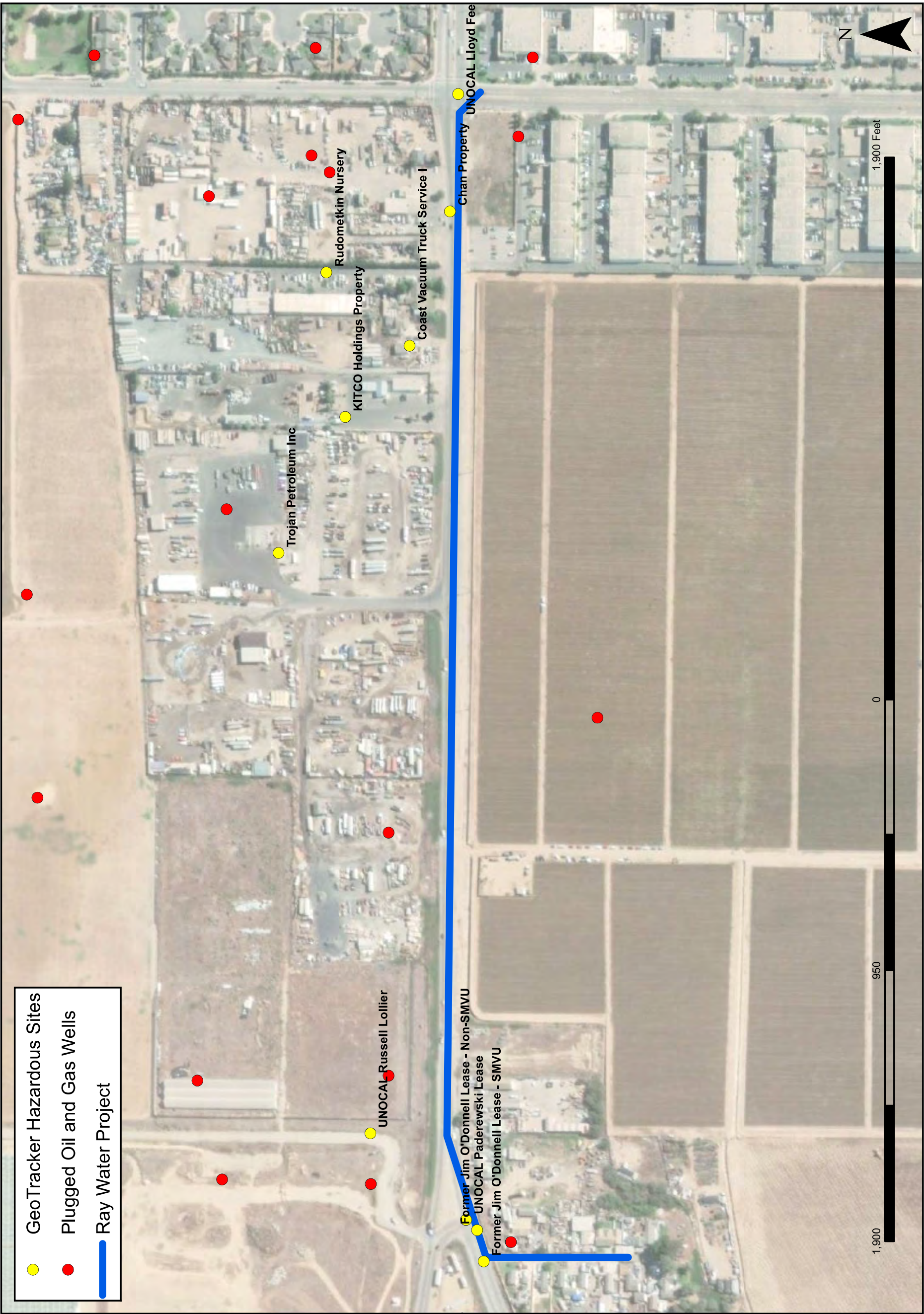
Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING:

The Hazardous Waste and Substances Site (“Cortese”) List is a planning tool used by the state, local agencies, and developers to comply with CEQA requirements related to the disclosure of information about the location of hazardous materials release sites. California Government Code Section 65962.5 requires the California EPA (“CalEPA”) to develop at least annually an updated Cortese List. Various state and local government agencies are required to track and document hazardous material release information for the Cortese List. The proposed project area is not within 0.25 miles of a hazardous materials site on the Cortese Site.

The California Department of Toxic Substance Control (“DTSC”) EnviroStor database tracks DTSC cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known contamination, such as federal superfund sites, state response sites, voluntary cleanup sites, school cleanup sites, school investigation sites, and military evaluation sites.

The SWRCB GeoTracker database contains records for sites that impact, or have the potential to impact, water in California, such as Leaking Underground Storage Tank (“LUST”) sites, Department of Defense sites, and Cleanup Program Sites (SWRCB. 2021). **Table 4** below includes a summary of the sites that are within 0.25 miles of the project site. These sites are also shown in **Figure 9. Hazardous Sites with Project Vicinity.**



- GeoTracker Hazardous Sites
- Plugged Oil and Gas Wells
- Ray Water Project



Title:

Hazardous Sites within Project Vicinity

Date: 09/16/2021
 Scale: 1 inch = 433 feet
 Project: 2020-40



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Figure 9

Table 4.
Geotracker Sites within 0.25 Mile of the Project

Site	GeoTracker Number	Site Type	Cleanup Status
Former Jim O'Donnell Lease - SMVU	T10000004137	Cleanup Program Site	Open – Site Assessment as of 6/13/2012
Former Jim O'Donnell Lease - NON-SMVU	T10000004139	Cleanup Program Site	Open – Site Assessment as of 6/13/201
Trojan Petroleum, Inc.	T0608300727	LUST Cleanup Site	Completed – Case closed as of 5/17/2012
Kitco Holdings Property	T10000006621	Cleanup Program Site	Completed – Case closed as of 7/10/2003
Coast Vacuum Truck Service I	T0608300515	LUST Cleanup Site	Completed – Case closed as of 2/17/1993
Rudometkin Nursery	T0608300743	LUST Cleanup Site	Completed – Case closed as of 8/5/1993
Chan Property	T10000005124	Cleanup Program Site	Completed – Case closed as of 4/4/1994
Unocal Lloyd Fee	T10000012516	Cleanup Program Site	Completed – Case closed as of 10/29/2002
Patricia Wells	T10000006394	Cleanup Program Site	Completed – Case closed as of 5/12/2000

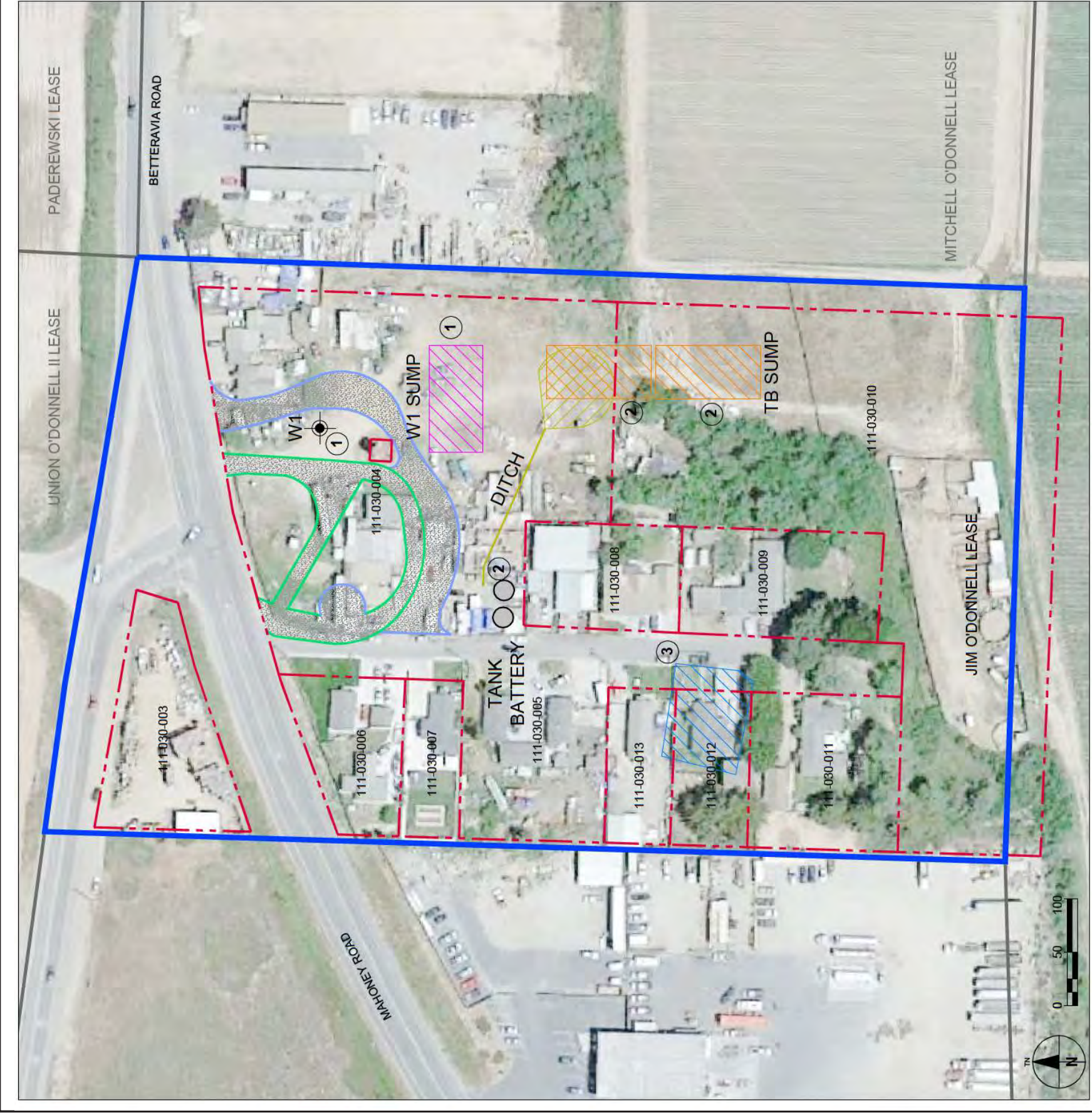
As noted above, there are two sites that are considered “Open:” 1) Former Jim O’Donnell Lease – SMVU (Santa Maria Valley Oil and Gas Unit), and 2) Former Jim O’Donnell Lease – Non-SMVU. These sites represent a former oil field property, the Jim O’Donnell Lease.

In addition to the Jim O’Donnell Lease, the project also falls within two other former oil leases: the Mitchell O’Donnell Lease Tract 94, and the Mitchell O’Donnell Lease Tract 95. The abandonment and associated documentation for the two (2) Mitchell O’Donnell Leases predates the requirements for that documentation to be uploaded to the Geotracker Database. All of the former oil leases mentioned as well as the surrounding area are located in an area designated as the Santa Maria Valley Oil and Gas Field. Below are the descriptions of each of the former oil lease properties.

The distribution line and the service connection components of the project are located within the former Jim O’Donnell Lease. The description of the former oil field property as well as the discussion of the chemicals of concern at the Former Jim O’Donnell Lease included below were summarized from the Site Assessment Report and Site Restoration Plan (“SARSRP”) for the Former Jim O-Donnell Lease, prepared by AECOM dated October 9, 2013. The Jim O’Donnell Lease contains relic oil and gas features including and abandoned oil well and associated sump, a former tank battery and associated sump, a sump feature of unknown origin, lease roads, and pipeline, these features are shown on **Figure 10. Historic Oil Field Features**. These elements were identified using historical documents including aerial photographs. These seven features are all within the lease area; however, the tank battery and associated sump as well as the lease roads and pipelines are within the Santa Maria Valley Oil and Gas Unit (“SMVU”), whereas the abandoned oil and well sump are not within the SMVU (i.e., Non-SMVU).

The SMVU is an administrative boundary created by former participating oil companies in the Santa Maria Valley for company-specific financial purposes and not a physical boundary found on a map. As such, Geotracker identifies these as two separate cases, each case is associated with a responsible party and a clean-up objective. The sump of unknown origin is not part of the SMVU or the Non-SMVU.

Between August 2012 and August 2013 site assessment activities were performed including research of previously prepared documentation and aerial photographs, the preparation of a Health and Safety Plan, soil borings, trenching, a geophysical survey, and laboratory analysis. Soil samples were collected from each of the features and were analyzed for total petroleum hydrocarbons (“TPH”), volatile organic compounds (“VOCs”), and polynuclear aromatic hydrocarbons (“PAHs”). Select soil samples were also analyzed for semi-volatile organic compounds (“SVOCs”), polychlorinated biphenyls (“PCBs”), pesticides,



LEGEND

- HISTORIC WELL HEAD AS INTERPRETED FROM HISTORICAL AERIAL PHOTOGRAPHY
- HISTORIC TANK BATTERY/AST AS INTERPRETED FROM HISTORICAL AERIAL PHOTOGRAPHY
- LEASE BOUNDARY
- ASSESSOR'S PARCEL BOUNDARY
- HISTORICAL LEASE ROAD AS INTERPRETED FROM HISTORICAL AERIAL PHOTO 1943
- HISTORICAL LEASE ROAD AS INTERPRETED FROM HISTORICAL AERIAL PHOTO 1954 AND 1963
- SUSPECTED SUMP LOCATIONS INTERPRETED FROM HISTORICAL AERIAL PHOTOGRAPHY 1943 (UNIT)
- SUSPECTED SUMP LOCATIONS INTERPRETED FROM HISTORICAL AERIAL PHOTOGRAPHY 1943 (NON-UNIT)
- SUMP OF UNKNOWN ORIGIN LOCATION INTERPRETED FROM HISTORICAL AERIAL PHOTOGRAPHY 1943 NOT A PART OF THIS PROJECT
- SUSPECTED SUMP LOCATIONS INTERPRETED FROM HISTORICAL AERIAL PHOTOGRAPHY 1954 (UNIT)

NOTES:

- ① THESE FEATURES ARE ADDRESSED IN THE REPORT TITLED "SITE ASSESSMENT WORK PLAN FORMER JIM O'DONNELL LEASE NON-UNIT"
- ② THESE FEATURES ARE ADDRESSED IN THE REPORT TITLED "SITE ASSESSMENT WORK PLAN FORMER JIM O'DONNELL LEASE UNIT"
- ③ THIS ORPHAN SUMP FEATURE OF UNKNOWN ORIGIN IS NOT INCLUDED AS PART OF THIS PROJECT.

THIS REPORT ONLY ADDRESSES THE UNIT PORTION OF THE LEASE.

Source: AECOM, July 2013



Title: **Historic Oil Features**

Date: 7/16/2013
 Scale: 4cm = 100ft.
 Project: 2020-40



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Figure **10**

and CAM 17⁷. Based on analytical results the separate reports were prepared for the SMVU and Non-SMVU lease features. These reports are referred to as titled *Site Assessment Report and Site Assessment Plans* (“SAPSAPs”), and were prepared by AECOM. The SARSRPs concluded that non-hazardous petroleum hydrocarbon-impacted soil requiring remediation is present at features associated with the tank battery sump and lease roads (see **Figure 10**). Additionally, benzene and TPH in excess of the Santa Barbara County Environmental Health Services (“SBCEHS”) and California Department of Public Health maximum contaminant level (“CDPH MCL”) were present in the groundwater assessment sample.

By law, the parties responsible (referred to as the “responsible party” in this document) for the transportation, use, storage, and disposal of hazardous substances and oil are liable for costs. This liability applies to the cost of containment, cleanup, and damages resulting from a release related to their own activities. EPA's goal is to identify the responsible parties and ensure that they pay these costs (USEPA, 2022).

The water main component of the project is located within the former Mitchell O'Donnell Lease, Tracts 94 and 95.

The project site is located primarily within existing road right-of-ways and previously disturbed areas and it is not within the vicinity of hazardous waste facilities. No hazardous materials are anticipated to be stored on-site during construction other than typical construction equipment fluids, including gasoline, diesel, and lubricants for maintaining equipment. In addition, there are no schools within 0.25 miles of the proposed project area.

The Santa Barbara County Association of Governments (“SBCAG”) serves as the Airport Land Use Commission (“ALUC”) for Santa Barbara County (SBCAG, 2021). The ALUC adopted the Santa Barbara County Airport Land Use Plan (“ALUP”) in 1993. This plan covers all of the public airports within Santa Barbara County. In August 2019, the ALUC released draft ALUPs for each of the public airports within Santa Barbara County. The 2019 Draft ALUP was prepared in order to promote compatibility between the Santa Maria Airport and the land uses that surround it, and to serve as a tool for SBCAG, to use in fulfilling its duty to review land use plans and development proposals within the Airport Influence Area (“AIA”). In addition, the 2019 Draft ALUP provides compatibility policies and criteria applicable to local agencies in their preparation or amendment of general plans and to landowners in their design of new development.

Draft ALUPs have been prepared for each of the public airports within Santa Barbara County. When adopted, the ALUP for each airport would replace the 1993 ALUP adopted by SBCAG. The 2019 Draft ALUP identifies policies that have the dual objectives of: (1) protecting against constraints on airport expansion and operations that can result from the encroachment of incompatible land uses, and (2) minimizing the public's exposure to excessive noise and safety hazards (ESA, 2019). To meet these objectives, the 2019 Draft ALUP addresses potential airport compatibility impacts related to four specific airport-related factors:

1. Noise: Exposure to aircraft noise;
2. Safety: Land use that affects safety for both people on the ground and in aircraft;

⁷ This term refers to a group of heavy metals identified in the California Administrative Manual (“CAM”). These metals include Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium, and Zinc.

3. Airspace Protection: Protection of airport airspace; and
4. Overflight: Annoyance and other general concerns related to aircraft overflights.

According to Exhibit A-6, Safety Compatibility Data Map: Santa Maria Airport, a small portion of the proposed project area are within Zone 2 - Inner Approach/Departure Zone (SBCAG. 2019). The majority of the proposed project area is within Zone 4 - Outer Approach/Departure Zone and Zone 6 - Traffic Pattern Zone. The project is not located within an airport noise contour.

IMPACT DISCUSSION:

- a. No hazardous materials are anticipated to be stored on-site during construction other than typical construction equipment fluids, including gasoline, diesel, and lubricants for maintaining equipment. These materials would be handled and stored in compliance with all local, State, and Federal regulations pertaining to hazardous materials. This is considered a *less than significant impact*.
- b. There are typically two types of hazardous materials releases that could occur during construction: (1) the accidental release of hazardous materials that are routinely used during construction activities; and (2) the potential for construction activities to encounter and excavate contaminated soil or groundwater that are already present at the construction site and thus release it to expose new receptors to the hazard.

Hazardous materials that could be used during construction activities include typical construction equipment fluids. Storage and use of hazardous materials at construction sites could potentially result in the accidental release of small quantities of hazardous materials, which could pose a risk to construction workers and the environment, such as degradation of soil and/or surface water quality. However, as discussed in **Section 10. Hydrology and Water Quality**, the construction contractor would be required to prepare a Water Pollution Control Plan. The Water Pollution Control Plan would list the hazardous materials (including petroleum products) proposed for use and describe measures for preventing spills, inspecting equipment and fuel storage, and providing immediate response to spills. Through compliance with applicable hazardous materials storage and storm water permitting regulations, the impacts from potential releases of hazardous materials or petroleum products during construction would be less than significant.

The greatest potential for encountering contaminated soil and groundwater during construction would be in areas where past or current land uses have resulted in soil contamination. Properties with known soil and/or groundwater contamination are identified in **Table 4**, above. Nine (9) environmental cases were identified using GeoTracker that may have potentially affected soil or subsurface conditions at project sites. As described above two (2) of these sites are listed as "Open;" the remainder are considered "Completed – Case Closed," meaning that a closure letter or other formal closure decision document has been issued for the site.

Encountering soil or groundwater contamination could result in exposures to construction workers, the public, or the environment, resulting in a potentially significant impact. Construction within the former Jim O'Donnell Lease could result in exposure to petroleum hydrocarbon-impacted soil. Soil disturbance during construction could further disperse existing contamination into the environment and expose construction workers or the public to contaminants. Specifically, construction of the distribution line located just to the south of the intersection of Rayville Lane and Mahoney Road has the potential to encounter petroleum hydrocarbon-impacted soil found in the "Historic Lease Roads" shown on **Figure 10**. It should be noted that the SARSRP prepared

by AECOM found that the hydrocarbon-impacted soils found in the “Historic Lease Roads” is considered to be non-hazardous.

There is also potential to encounter this material during trenching of Betteravia Road and Mahoney Road, however, this is not certain. These hazards are not shown on **Figure 10** because their presence cannot be determined using historic aerial photographs and assuming the presence of hydrocarbon-impacted soils would be speculation (Underwood. 2021). In addition, construction of the distribution lateral to APN 111-030-01 has the potential to encounter the “Sump of Unknown Origin” shown on **Figure 10**. It should be noted that the “Sump of Unknown Origin,” while within the same vicinity as the other lease features, is not associated with the former Jim O’Donnell Lease. A responsible party has not been identified for this feature. The “Sump of Unknown Origin” has the potential to contain hazardous hydrocarbon-impacted material. Potential impacts associated with encountering hazardous materials at the former Jim O-Donnell Lease are considered potentially significant.

A Soils Management Plan (“SMP”) will be prepared by the responsible party for the former Jim O’Donnell Lease prior to construction of the proposed project. The SMP will include contact from the responsible party and process for cleanup of contaminated soils. It should be noted that the remediation of the “Sump of Unknown Origin” would not be covered in the SMP, as a responsible party has not been identified for that feature. The required SMP together with Mitigation Measure HM-1, included below, would reduce the impact from encountering contaminated soil during construction to a less than significant level. This impact is considered ***less than significant with mitigation incorporated***.

Operation of the proposed project would not result in exposure to hazardous materials because all components of the project would be underground. Any potential hazardous materials on the site would not be accessible to the public or nearby residents.

- c. The project site is not located within ¼ mile of any proposed or existing schools. Therefore, ***no impact*** would result.
- d. The project site is not on or within the vicinity of a hazardous site as designated by Government Code Section 65962.5 (i.e., Cortese List). Therefore, ***no impact*** would result.
- e. There are no private airstrips within the vicinity of the project area. The Santa Maria Airport is located approximately one mile to the southeast. Due to the fact that all project features would be underground, operation of the project would not affect airport operations or create a safety hazard.

A small portion of the proposed project area is within Zone 2 - Inner Approach/Departure Zone (SBCAG. 2019). The majority of the proposed project area is within Zone 4 - Outer Approach/Departure Zone and Zone 6 - Traffic Pattern Zone. Proposed uses within these areas would be developed in compliance with applicable standards and regulations set forth in the applicable airport land use plan as well as policies established by the Federal Aviation Administration (“FAA”) and advisory circulars. Table 3-2 Santa Maria Airport Compatibility Criteria in the ALUP includes the safety compatibility of a variety of proposed land use actions. While extension of a water distribution system is not specifically included in this table, it does include a general category of Transportation, Communication, and Utilities. Land uses in this category are all considered compatible uses, except for those in Zone 1. Therefore, construction of the project

would be compatible with the ALUP. The project is not located within an airport noise contour. This is considered a **less than significant impact**.

- f. The project does not include any characteristics or features that would interfere with an adopted emergency response plan or emergency evacuation plan. Once operational all components of the project would be underground, for these reasons, this is considered a **less than significant impact**.
- g. The project site is located within an area that is primarily used for agriculture and industrial uses. While there is potential for wildland fires in such a land use type, the project would not increase the risk of wildfires to residents because construction of the project would not involve any equipment or activities that present a severe fire risk. Furthermore, the project consists of water supply improvements that would increase municipal water availability in the area. Implementation of the proposed project would not further expose people or structures to wildland fires, this is considered a **less than significant impact**. See also **Section 20. Wildfire**.

Mitigation Measure(s) incorporated into the project:

HM-1 The applicant’s contractor shall immediately stop work and notify Santa Barbara County Public Health Department – Environmental Health Services Division at (805) 346-8216, if soil contamination is suspected or encountered during construction activities (e.g., unusual soil discoloration or strong odor). In addition, the applicant’s contractor shall contact the project engineers and the City of Santa Maria Public Works Department. All work in the area of suspected contamination shall cease, the work area shall be sectioned off, until appropriate health and safety procedures have been determined and implemented.

10. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i. result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING:

The project site is located within the Santa Maria Watershed, one of the largest coastal drainage basins in California, and includes all areas tributary to the Cuyama, Sisquoc, and Santa Maria Rivers. The Santa Maria Watershed overlies the Santa Maria River Valley Groundwater Basin (“SMRVGB”), covering more than 280 square miles in the southwestern corner of San Luis Obispo County and the northwestern corner of Santa Barbara County.

The project area is located within the Santa Maria River Valley Groundwater Basin (3-012.01) (California Department of Water Resources. 2021). The Santa Maria River Valley Groundwater Basin is adjudicated. The adjudication, implemented in 2008, specifies that monitoring shall be sufficient to determine groundwater conditions, land and water uses, sources of water supply, and the disposition of all water supplies in the Santa Maria River Valley Groundwater Basin. In the adjudication process, the Santa Maria Valley River Groundwater Basin was divided into three management areas. The largest was the Santa Maria Valley Management Area, which overlies the City of Santa Maria. The provisions of the adjudication require that an annual assessment be prepared for the Santa Maria Valley Management Area. According to the 2020 Annual Report, the conditions of the Santa Maria Valley Management Area do not satisfy all of the criteria delineated in the adjudication for defining a severe water shortage. As a result, the Annual Report concluded that there is no finding of severe water shortage conditions in the Santa Maria Valley Management Area as of 2020 (Luhdorff and Scalmanini. 2021).

In 2015, the State legislature approved the groundwater management law known as the Sustainable Groundwater Management Act (“SGMA”). The purpose of SGMA is to protect groundwater resources over the long-term. SGMA requires local agencies to form groundwater sustainability agencies (“GSAs”) for the high and medium priority basins. GSAs develop and implement groundwater sustainability plans (“GSPs”) to avoid undesirable results and mitigate overdraft within 20 years (California Department of Water Resources. 2021). The Department of Water Resources (“DWR”) implements regulatory oversight of the GSAs.

DWR designated the Santa Maria River Valley Groundwater Basin as a high priority basin. However, SGMA does not apply to the portion of the Santa Maria River Valley Groundwater Basin that is adjudicated, provided that certain requirements are met. As shown in the map titled, *Santa Maria Basin Fringe Areas Groundwater Sustainability Agencies*, prepared by San Luis Obispo County, dated February 29, 2019, the adjudicated areas of the SMRVGB cover a majority of the basin, and are managed by the Northern Cities Management Area, Nipomo Mesa Management Area, and the Santa Maria Valley Management Area (San Luis Obispo County. 2019)

Historically, the City of Santa Maria pumped water from the SMRVGB as its sole water supply until the City of Santa Maria began receiving State Water Project (“SWP”) water from the Central Coast Water Authority (“CCWA”) in 1997. As stated above, the SMRVGB is currently under a 2008 court-ordered stipulation that allows the City of Santa Maria to obtain its water supply from local groundwater, associated return flows from imported SWP water that may be recaptured in the basin, and a share of the yield of Twitchell Reservoir operations.

The proposed project would require trenching, which could result in minimal erosion of onsite soils and potential sedimentation during heavy wind or rain events. The project would be required to comply with all local, state, and federal requirements. In addition, the BMPs included in **Section 7. Geology and Soils**, would be implemented by the construction contractor to control the discharge of pollutants, including sediment from erosion into local surface water drainages.

According to the Federal Emergency Management Agency (“FEMA”), the proposed project site is not located within the 100-year flood zone (Santa Barbara County. 2021). In addition, the project area is not within a tsunami inundation area (Santa Barbara County. 2017).

IMPACT DISCUSSION:

- a. The proposed project would require on-site trenching, which could result in the erosion of onsite soils and sedimentation during heavy wind or rain events. However, as discussed in **Section 7. Geology and Soils** above, the contractor would implement BMPs to reduce erosion. Additionally, the project would comply with the adopted standards contained within the City of Santa Maria’s Municipal Code, Chapter 8-12 (Wastewater Collection, Treatment, and Disposal) Section 8-12A (Stormwater Runoff Pollution Prevention). With implementation of BMPs and incorporation of the design provisions and permit review and approval procedures associated with the aforementioned municipal code sections, the project would not violate water quality standards and waste discharge requirements; therefore, impacts would be **less than significant**.
- b. The project involves new connections to the City of Santa Maria’s existing water system infrastructure and would not impede sustainable groundwater management in the basin. The City of Santa Maria derives water from multiple supply sources, including local groundwater, purchased water from the SWP, associated return flows recaptured from the Santa Maria

Groundwater Basin, assigned rights to water from the Santa Maria Groundwater Basin, and assigned rights to augmented yield from Twitchell Reservoir. The City’s water supply is expected to reliably meet the projected water demand and have an available water supply in excess through 2040, with the majority of the demand being met by imported SWP water. In addition, the RWC currently pumps groundwater from SMRVGB to serve the residents. Once the project is operational, this groundwater will no longer be pumped, resulting in an increase to local groundwater supplies. For these reasons, the project would not lead to a substantial depletion of groundwater supplies, and impacts would be **less than significant**.

- c.i-iv. The project includes the construction of a water main, distribution line, and new service connections in order to serve the existing area. Construction activities for pipeline installation would involve trenching and other pipeline installation methods that would disturb both paved roadways and unpaved land within the project site, this disturbance would be temporary. Construction would be required to comply with BMPs and City of Santa Maria’s Municipal Code requirements which would reduce impacts related to erosion and surface runoff. After construction, the project area would be restored to its original condition, and any drainage pattern within the right-of-way would be returned to existing conditions following project construction activities. In addition, the proposed project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite or 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. BMPs would be implemented during construction activities to minimize runoff and erosion. Finally, the project would not impede or redirect flood flows, since the project consists of underground pipelines. For these reasons, **less than significant impacts** would result from construction and operation of the project.
- d. Tsunamis or “tidal waves” are seismic waves created when displacement of a large volume of seawater occurs as a result of movement on seafloor faults. The project site is located outside a tsunami hazard zone. The project site is not located within any flood zones. Therefore, the project would have **no impact** related to the risk release of pollutants due to project inundation due to these areas.
- e. As described above under the project setting, the SMRVGB is part of an adjudicated basin, the DWR considers it already managed by the court and, thus, SGMA groundwater resource planning requirements do not apply (Luhdorff and Scalmanini. 2021). Therefore, the project would have **less than significant impacts** regarding conflicting with or obstructing applicable water quality control plans or sustainable groundwater management plans.

11. LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING:

The proposed project is located within the City of Santa Maria and within unincorporated Santa Barbara County, see **Figure 1**.

The majority of the proposed water main is located within the City of Santa Maria. The water main is within the right-of-way of Betteravia Road. For this reason, it does not have a land use designation or a zoning designation. Surrounding land uses include agriculture and industry to the north, agriculture to the south, residential and commercial to the east, and industrial and agriculture to the west.

A small portion of the water main, the distribution line and the service connections are not located within the City limits, however, they are within the City’s sphere of influence. A sphere of influence is a planning boundary outside of an agency’s legal boundary that designates the agency’s probable future boundary and service area. Factors considered in a sphere of influence review focus on the current and future land use, the current and future need and capacity for service, and any relevant communities of interest (CALAFCO. 2021a).

The Local Agency Formation Commission (“LAFCO”) is a State-created agency which exists in every county in California. Santa Barbara County LAFCO coordinates logical and timely changes in local governmental boundaries, conducts special studies that review ways to reorganize, simplify, and streamline governmental structure, and prepares a sphere of influence for each city and special district within each county. LAFCO’s efforts are directed toward seeing that services are provided efficiently and economically while agricultural and open-space lands are protected (CALAFCO. 2021b).

Santa Barbara County LAFCO will be responsible for approving the additional connections to the City of Santa Maria water system associated with the proposed project. As described above, the 15 new water connections are located outside the City limits, but within the City’s Sphere of Influence. Government Code Section 56133 states:

- a) A city or district may provide new or extended services by contract or agreement outside its jurisdictional boundary only if it first requests and receives written approval from the commission.
- b) The commission may authorize a city or district to provide new or extended services outside its jurisdictional boundary but within its sphere of influence in anticipation of a later change of organization.

As stated above, a small portion of the water main, all of the distribution line, and all of the service connections are located in unincorporated Santa Barbara County. The portion of the water main located

within unincorporated Santa Barbara County is within the right-of-way of Betteravia Road, and therefore does not have a land use designation. The distribution line and service connections are located on Rayville Lane, which is a private road and is zoned as General Industry (M-2) by the Land Use Element of the Santa Barbara County Comprehensive Plan, amended December 2016 (Santa Barbara County, 2016). The General Industry land use is applied to areas to provide for all types of industrial uses while providing the level of project review necessary to ensure that adverse impacts will be minimized and that these uses will be compatible with surrounding properties (Santa Barbara County, 1995). The proposed project area is not within a Santa Barbara County Community Planning area (Santa Barbara County, 2021).

IMPACT DISCUSSION:

- a. The project consists of a water distribution system. The project includes the extension of water lines and construction of water system improvements in order to serve the project area. All pipeline components will be installed underground and will not physically divide the community in any way. No changes in land use are planned and the community would not be divided by the actions of the proposed project. Therefore, the proposed project would not physically divide an established community and **no impact** would result.
- b. The project would not conflict with any policy adopted for the purposes of avoiding and/or mitigating an adverse environmental effect. Construction of the project is limited to trenching for pipeline installation primarily within the road right-of-way. As a result, potential impacts would be minimized. Where appropriate, this IS/MND has identified a number of mitigation measures to further ensure that impacts would be less than significant. The improvement of a municipal water system is consistent with the land use designations on the site and within the project area. This is considered a **less than significant impact**.

12. MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING:

The City of Santa Maria’s primary mineral resources are sand, rock, and oil. The Santa Maria River channel is considered to be a valuable mineral resource. The Santa Maria River contains the largest resources of Portland Cement Concrete-grade aggregate and almost 90% of the available alluvial sand

and gravel resources in the Santa Barbara/San Luis Obispo County region. The Santa Maria basin is also a significant hydrocarbon producing basin, historically allowing for the development of the oil industry throughout the region. Many of the area's oil wells have since been capped and abandoned due to the development and urbanization of the City of Santa Maria. Based on the City's Resource Management Element, a portion of the project site is located in MRZ 3, meaning that it is an area containing mineral deposits, the significance of which cannot be evaluated from available data. The other portion of the project does not have a designation (City of Santa Maria. 2001).

The California Department of Conservation, Geologic Energy Management Division's online mapping application, Well Finder, presents California's oil and gas industry information from a geographic perspective. The Well Finder locates oil and gas wells and other types of related facilities throughout the state. According to the Well Finder, there are several plugged/abandoned oil wells within the vicinity of the project area (California Department of Conservation. 2021). One plugged oil well exists within very close proximity of the distribution line, see **Figure 9. Hazardous Sites within Vicinity of the Project.**

IMPACT DISCUSSION:

- a. Based on the Resource Management Element of the Santa Maria General Plan, the project area is located in an area containing mineral deposits, the significance of which cannot be evaluated from available data at the time. Although the project site may overlie valuable oil and gas minerals, oil extraction activity at the site has been abandoned and much of the surrounding area has been built-out with more urban uses. Therefore, the potential for future mining uses at the site is negligible. This constitutes a **less than significant impact**.
- b. There are no known or mapped mineral resources in the project area and the likelihood of future mining of important resources within the project area is very low. Therefore, this is considered a **less than significant impact**.

13. NOISE

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

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				

SETTING:

In the context of this document, “noise” is defined as unwanted sound. The primary source of existing noise in the proposed project area is traffic on adjacent roadways, primarily Betteravia Road.

Community noise levels are typically measured in terms of A-weighted decibels (“dBA”). A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear. Equivalent noise level (Leq) is the average noise level on an energy basis for a specific time period. The duration of noise and the time of day at which it occurs are important factors in determining the impact of noise on communities. The Community Noise Equivalent Level (“CNEL”) and Day-Night Average Level (“Lnd”) account for the time of day and duration of noise generation. These indices are time-weighted average values equal to the amount of acoustic energy equivalent to the time-varying sound over a 24-hour period. The Noise Element of the City’s General Plan includes compatibility standards for noise exposure by land use (City of Santa Maria. 2009). These include interior and exterior noise standards as shown in **Table 5. Interior and Exterior Noise Standards.**

**Table 5.
Interior and Exterior Noise Standards**

Land Use Categories		Standard dB CNEL	
Category	Uses	Interior	Exterior
Residential	Single Family, Duplex, Multiple Family, Mobile Home	45	60
Noise-Sensitive Land Uses	Motel, Hospital, School Nursing Home, Church, Library, and Other	45	60
Commercial	Retail, Restaurant, Professional Offices	55	65
Industrial	Manufacturing, Utilities, Warehousing, Agriculture	65	70
Open Space	Passive Outdoor Recreation	-	65

The County of Santa Barbara General Plan, Noise Element, dated May 2009, provides regulation and guidelines regarding noise (Santa Barbara County. 2009). The County of Santa Barbara noise thresholds for industrial land uses are:

- Under 75 dB CNEL is considered normally acceptable
- Between 70 dB CNEL and 80 dB CNEL is considered conditionally acceptable
- Between 75 dB CNEL and 85 dB CNEL is considered normally unacceptable

IMPACT DISCUSSION:

- a. Sensitive receptors in the area include nearby residences within the immediate vicinity of the pipelines on Rayville Lane and Betteravia Road. Project construction would generate a temporary increase in noise associated with the use of construction equipment. Noise generated by pipeline installation can vary greatly depending on the specific equipment selected by the construction

contractor. The contractor will be using standard equipment associated with pipeline construction including excavators, loaders, dump trucks, and hauling vehicles. Using guidance provided by the Federal Highway Administration, it is estimated that noise will reach a maximum of 85 decibels at a distance of 50 feet from construction.

Noise impacts to nearby sensitive receptors during construction would be temporary. Assuming installation of the distribution pipeline at a rate of approximately 200 feet per day, pipeline trenching activities would proceed along the project alignment at a rate of approximately 1,000 feet per five working days; approaching and departing any one receptor location over a fairly short duration. Construction phases include site preparation, grading, trenching, and paving that will take place over a maximum of three months. General work hours would be between 7 A.M. to 5 P.M., Monday through Friday.

Construction noise levels exceeding the threshold for more than two weeks would represent a substantial temporary noise increase to nearby residences. The proposed pipeline trenching activities at any one location along the alignment would be limited to a few days. Although, construction noise would exceed the conditionally acceptable significance criteria at most locations along the alignment, the duration would be less than two weeks at any one location, and construction would be limited to daytime hours. Therefore, temporary noise increases due to construction would not be substantial, and noise impacts at this for the project would be ***less than significant***.

The distribution pipeline would not generate any permanent noise during project operation, as it will be entirely underground. The project would result in a ***less than significant impact*** because it will not create a permanent increase in ambient noise levels.

- b. The project is not subject to substantial groundborne vibration, nor would it generate any permanent source of groundborne vibration at nearby sensitive receptors. Construction activities may generate groundborne vibration, however, these activities would be temporary, and the vibration effects of typical construction equipment is not expected to affect nearby sensitive residential receptors. This constitutes a ***less than significant impact***.
- c. The project area is located approximately one mile northwest of the Santa Maria Airport. Based on the ALCP and the City of Santa Maria General Plan Safety Element. The project area is not located within the noise contours for the Santa Maria Airport. Additionally, the proposed project consists of new service connections to the City water system and would not place new development within vicinity of the Santa Maria Airport. Therefore, this is considered a ***less than significant impact***.

14. POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING:

Since the early 1990s, the City of Santa Maria has experienced a consistent increase in population, largely due to a growing migrant workforce for nearby agriculture. The City of Santa Maria is one of the fastest growing areas in Santa Barbara County, largely due to the affordable housing the City provides relative to other cities in Santa Barbara and San Luis Obispo Counties. The City of Santa Maria has also developed a number of programs and policies to further encourage growth and development.

The project is comprised of a new water main, new distribution line, and 15 new water service connections. The 15 service connections would serve 45 residents on Rayville Lane and Betteravia Road. The new water service connections would be replacing existing service connections associated with RWC. The project would not displace any existing housing.

IMPACT DISCUSSION:

- a. Although the project would include a new water service connection, these connections would only serve existing residences that are currently served by RWC. RWC does not have adequate quality for potable water and connection to the City of Santa Maria water system would provide potable water to the existing residences. Upon project completion, RWC would no longer operate and therefore would no longer pump groundwater to serve its customers. The project will construct needed improvements to deliver a reliable and potable water supply to the community. Therefore, the project would serve an existing community and would not induce substantial population growth in the area. This is a **less than significant impact**.
- b. The project involves the construction and operation of a new water main, distribution line, and service connections to the City of Santa Maria water system. The new service connection would only serve the existing customers of the RWC. The project would not displace substantial numbers of existing people, housing, or necessitate the construction of replacement housing elsewhere. Therefore, **no impact** would result.

15. PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING:

Fire and police protection services for the project area are provided by the City of Santa Maria. Six fire stations serve the City, the nearest station to the proposed project is Station No. 2, located at 416 West Carmen Lane. The City of Santa Maria Police Department provides law enforcement services for the City. Orcutt and the other unincorporated areas of the County are served by the Santa Barbara County Sheriff's Department. The Santa Maria-Bonita School District serves the City's elementary and junior high-schools, where the high-schools are served by the Santa Maria Joint Union High School District.

IMPACT DISCUSSION:

- a.i, ii. Because the project is a water supply project, it will have no post-construction impact on the City Fire Department or Police Department. Although unlikely, these departments could be required to respond to potential construction-related emergencies. Construction is expected to be completed within three months and will not significantly impact fire protection or police protection services or require the construction of new or remodeled facilities. This represents a **less than significant impact**.
- a.iii, iv, v. The water supply project would have no physical impact on schools, parks, or other public facilities and would not require the construction of new or remodeled facilities. **No impact** would result from implementation of the proposed project

16. RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING:

The proposed project is a water system project. The project does not include any recreational facilities. There are not any existing recreational facilities within the vicinity of the proposed project.

IMPACT DISCUSSION:

a, b. The project is a water system project and would not increase the use of surrounding recreational facilities and would therefore not contribute to the physical deterioration of park facilities or necessitate the construction of new recreational facilities. **No impact** to recreational facilities would result from implementation of the project.

17. TRANSPORTATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING:

The project is located on the western boundary of the City of Santa Maria. Regional access to the project site is provided via Betteravia Road and U.S. Route 101, which is located approximately 2.7 miles to the east of the proposed project area. In the Circulation Element of the City of Santa Maria General Plan, Betteravia Road is considered a primary arterial. Betteravia Road is also considered a Class II Bike Lane (City of Santa Maria. 2011).

The project will require excavation within the Santa Barbara County and City of Santa Maria right-of-way on Betteravia Road for the water main trenching. The project applicant will be responsible for obtaining an encroachment permit from both of these entities prior to the start of construction. The encroachment permit will require a traffic control plan.

The proposed project would not generate any trips after construction has been completed. It is anticipated that construction of the project would result in eight (8) trips per day⁸, resulting in approximately 66 vehicle miles traveled (“VMT”)⁹ generated during construction, which is expected to last three months.

IMPACT DISCUSSION:

- a. The proposed project would not generate any vehicle trips once operational. The project would result in a temporary increase in traffic during construction. Construction-related vehicle trips would include workers traveling to and from the project construction sites and staging area(s) and other trucks associated with equipment and material deliveries. Construction worker trips are assumed to be eight (8) daily trips for a three-month project duration. Truck trips for materials and hauling for the distribution system pipeline and well site construction will vary depending on delivery of materials and construction vehicles. Compared to the existing level of traffic traveling on Betteravia Road, the temporary construction related traffic would be minimal. Construction activities along Betteravia Road could include lane narrowing and/or lane closures. No sidewalks or bike lanes exist along the pipeline alignments. Lane closures during pipeline construction activities may be necessary, though are not anticipated. In the event of any type of closure, clear

⁸ In an email dated August 26, 2021, WHA provided an estimate of 500 trips required for construction for the duration of construction. Construction is anticipated to last 3 months, or approximately 60 working days. The total number of trips was divided by the number of working days to calculate the number of trips per day.

⁹ An estimate of 8.3 miles per trip length was used to calculate the VMT. This is consistent with the methodology used by CalEEMod.

signage (e.g., closure and detour signs) must be provided to ensure vehicles, pedestrians and bicyclists are able to adequately reach their intended destinations safely. The construction contractor would prepare a construction Traffic Control Plan as part of the encroachment permit from the City of Santa Maria and Santa Barbara County. This plan should address the construction schedule, street closures and/or detours, construction staging areas and parking, and planned truck routes. Construction is a short-term, temporary activity and construction trips would account for a relatively small portion of existing traffic on area roadways. Construction-related traffic impacts would be reduced through implementation of the required Traffic Control Plan. Therefore, traffic flow impacts during construction would be **less than significant**.

- b. An assessment of VMT required estimating or measuring the full length of trips people take by purpose as work trips, deliveries, shopping, etc. The City of Santa Maria Environmental Procedures and Guidelines includes a list of discretionary development project that are not subject to VMT analysis. Specifically, the City has adopted a screening threshold stating that small discretionary development projects that would generate fewer than 110 daily trips, are not subject to VMT analysis. The proposed project falls within this category. The proposed project would not generate any trips once operational. As stated above, it is estimated that the project would generate eight (8) trips per day during the three-month construction period. The falls below the threshold of 110 trips per day, therefore the project has a **less than significant impact** on the transportation system.
- c. The project would not substantially increase hazards due to a design feature (for example, sharp curves or dangerous intersections) or incompatible uses. The project would not generate any trips once operational. The project does not include the construction of hazardous design features and would not result in incompatible uses with the surrounding developed area. Implementation of a Traffic Control Plan would minimize potential traffic hazards during construction. This constitutes a **less than significant impact**.
- d. The Traffic Control Plan would include traffic control measures in the event of a lane closure and would give priority access to emergency vehicles. The proposed project consists of new pipelines and would not impact emergency access. Therefore, **no impact** would result.

18. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 or 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:				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. 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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SETTING:

To recognize California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments, and to respect the interests and roles of project proponents, the State Legislature enacted AB 52 (Gatto. 2014) Native Americans: California Environmental Quality Act. California AB 52, in effect since July 2015, provides CEQA protections for tribal cultural resources. All lead agencies approving projects under CEQA are required, if formally requested by a culturally affiliated California Native American Tribe, to consult with such tribe regarding the potential impact of a project on tribal cultural resources before releasing an environmental document. Prior to the enactment of AB 52, the State of California found that current laws provided limited protection for sites, features, places, objects, and landscapes with cultural value to California Native American Tribes. Under California Public Resources Code §21074, tribal cultural resources include site features, places, cultural landscapes, sacred places, or objects that are of cultural value to a tribe and that are eligible for or listed on the California Register of Historical Resources (“CRHR”) or a local historic register, or that the lead agency has determined to be of significant tribal cultural value.

The City of Santa Maria maintains a list of tribes that are traditionally and culturally affiliated with the geographic area. The City of Santa Maria sent letters to the local Native American the NAHC on August 10, 2021. On August 19, 2021, the City received a letter requesting formal consultation on the proposed project from the Santa Ynez Band of Chumash Indians. A site visit with a representative from the Santa Ynez Bard of Chumash Indians was conducted on October 1, 2021. The representative requested and received a copy of the Phase 1 Cultural Resource Inventory prepared by Albion Environmental, Inc. (**Appendix D**). To date, no additional requests have been made by the Santa Ynez Band of Chumash Indians.

IMPACT DISCUSSION:

a.i, ii There are no historical structures on the site. Records indicate that the project site, which is primarily within the road right-of-way and contains several residences on Rayville Lane, is not

listed on the California Register of Historic Places or on Santa Barbara County’s local list. Professional archaeologists studied a project boundary larger than the proposed project site disturbance. After initial consultation, a field survey of the project area was completed. The studies indicate the area of proposed development is not within an archaeological site eligible to be designated as a historical resource applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. Should archaeological resources be unexpectedly discovered during construction, work shall be halted until it can be evaluated by a qualified professional archaeologist and determined to be significant, and appropriate mitigation measures formulated and implemented, as identified in Mitigation Measures CR-1 and CR-2. The project would have a less-than-significant impact on tribal cultural resources.

Please see **Section 5. Cultural Resources** of this IS/MND and **Appendix D** for additional discussion.

Mitigation Measure(s) incorporated into the project:

CR-1 The full text of this mitigation is included in **Section 5. Cultural Resources**.

CR-2 The full text of this mitigation is included in **Section 5. Cultural Resources**.

19. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING:

Ray Water Company is the current water service purveyor to the project area; the project service area’s population does not have any water use or connections to the City of Santa Maria water system. The Santa Barbara County Resource Recovery & Waste Management Division (Santa Barbara County) or the City of Santa Maria Utilities Department (City of Santa Maria) is currently responsible for the collection of solid waste in the project area. Waste from the project area is transported to Tajiguas Landfill (Santa Barbara County) or Santa Maria Regional Landfill (City of Santa Maria). Pacific Gas & Electric Co. provides electric service to the proposed project site. Residents in the project area dispose of wastewater through onsite septic systems.

The existing Ray Water Company system currently utilizes a well to pump groundwater as the primary source of water. Numerous investigations have shown that the well has elevated concentrations of nitrate and arsenic. Nitrate concentrations are above the MCL set by the EPA and the State of California, and therefore pose a health risk. Arsenic concentrations are close to, yet just below the MCL. The Ray Water Company system serves 13 service connections along Rayville Lane and Betteravia Road.

The project will construct improvements to the existing system to deliver a reliable and potable water supply to the residents. There are no individual water meters on the existing distribution system currently serving the area. The project will include new individual meters for all homes served by the new system.

WHA prepared an Engineering Report (**Appendix A**) during project development, which explored several alternative methods of supplying potable water to the area. In addition, the Engineering Report found that the ADD is 64.5 gallons per day for each resident in the Ray Water Company system and MDD is 108.6 gallons per day for each resident. The current number of residents served by the Ray Water Company is 45, therefore to entire Ray Water Company MDD is 4,885 gallons per day.

IMPACT DISCUSSION:

- a. The project proposes to eliminate the existing well used by the Ray Water Company and connect to the City of Santa Maria water system. The project would not generate any additional wastewater or exceed or impact wastewater treatment requirements of the applicable Regional Water Quality Control Board. The project would not increase wastewater generation. The project would not require additional construction or relocation of utility facilities which would cause significant environmental effects. The potential adverse environmental effects associated with the water expansion project are fully evaluated in this IS/MND. With implementation of recommended mitigation measures, construction of new water service facilities would result in a ***less than significant impact***.

- b. Water quality test results for the Ray Water Company have exceeded acceptable nitrate levels since 1980, according to the Engineering Report Water quality tests have indicated that the area currently does not have a potable water supply in conformance with state drinking water standards. The project proposes to connect to the existing City of Santa Maria water system. The project includes a water main, distribution line, and individual water service connections. The City of Santa Maria water system receives its water from local groundwater, associated return flows from imported SWP water that may be recaptured in the basin, and a share of the yield of Twitchell Reservoir operations. As stated above, the City's water supply is expected to reliably meet the projected water demand and have an available water supply in excess through 2040, with the majority of the demand being met by imported SWP water. Therefore, this is a **less than significant impact**.
- c. The primary objective of the project is to provide a high-quality water source, which will provide for long-term water supply reliability for the community. The project does not require wastewater service or expansion. There would be **no impact** in connection with the project.
- d. The proposed project would not generate significant solid waste. The landfills that serve the project area: the Tajiguas Landfill and the Santa Maria Regional Landfill, have adequate capacity to serve the existing and future planned development in the region. Therefore, there would be **no impact** in connection with the project.
- e. Waste disposal to landfills would be minimized, and all waste would be properly disposed of in a safe, appropriate, and lawful manner in compliance with all applicable regulations of local, state (California Integrated Waste Management Act of 1989 & California Green Building Standards), and federal regulations related to solid waste. Since the project will require compliance with all county, state, and federal regulations and conditions, there will be no violation of the regulations concerning solid waste disposal as conditions for approval. This constitutes a **less than significant impact**.

20. WILDFIRE

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING:

Fire Hazard Severity Zones (“FHSZ”) are defined by the California Department of Forestry and Fire Protection (“CALFIRE”) based on the presence of fire-prone vegetation, climate, topography, assets at risk (e.g., high population centers), and a fire protection agency’s ability to provide service to the area (CalFire. 2021). FHSZs are designated as “Very High,” “High,” or “Moderate.” The City and project site is not located within a designated Very High, High, or moderate FHSZ. Wildland fires in the Santa Maria area are characterized as limited grassland and brush fires due to the absence of extensive tracts of mountainous, brush covered terrain. The project site is entirely with previously disturbed areas.

IMPACT DISCUSSION:

- a. The proposed project does not include any characteristics or features that would interfere with an adopted emergency response plan or emergency evacuation plan. The project would not result in the closure of any roads. For these reasons, this is considered a **less than significant impact**.
- b. The project site is currently used for either industrial activities or is within an existing road right-of-way and is surrounded by agricultural and industrial activities. The site is relatively flat and lacks physical and biological features that would be conducive to wildland fire. The project site is not located within or adjacent to a designated FHSZ or a wildland area. Therefore, the project would not be exposed to risks from wildland fires. This is a **less than significant impact**.
- c. The site is currently used for either industrial uses or is within an existing road right-of-way and is surrounded by agricultural and industrial uses. The project would include the installation of emergency fire hydrants along the water main alignment, thereby allowing for more efficient firefighting in the unlikely event of a wildfire. The project does not include infrastructure facilities that would exacerbate fire risk, therefore **no impact** would result.
- d. As mentioned in the previous discussions above, the project is not located within State Responsibility Area (“SRA”) Fire Hazard Zone, therefore, is not at risk of downslope or downstream flooding or landslides resulting in **no impact**.

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U.S. Department of the Interior. 1950. *Geology and Paleontology of the Santa Maria District California*. Available at: <https://pubs.usgs.gov/pp/0222/report.pdf>. Accessed September 15, 2021.

U.S. Department of the Interior. 2004. *Quaternary Tectonic Setting of South-Central Coastal California*. Available at: https://pubs.usgs.gov/bul/1995/aa/b1995aa_text.pdf. Access on July 26, 2021.

CONSULTATION AND DATA SOURCES

CONSULTATION SOURCES

City Departments Consulted

<input type="checkbox"/>	Administrative Services
<input type="checkbox"/>	Attorney
<input type="checkbox"/>	Fire
<input type="checkbox"/>	Library
<input type="checkbox"/>	City Manager
<input type="checkbox"/>	Police
<input checked="" type="checkbox"/>	Public Works
<input checked="" type="checkbox"/>	Utilities
<input type="checkbox"/>	Recreation and Parks

State/Federal Agencies Consulted

<input type="checkbox"/>	Army Corps of Engineers
<input type="checkbox"/>	Caltrans
<input checked="" type="checkbox"/>	CA Fish and Game
<input type="checkbox"/>	Federal Fish and Wildlife
<input type="checkbox"/>	FAA
<input type="checkbox"/>	Regional Water Quality Control Bd.
<input type="checkbox"/>	Integrated Waste Management Bd.
<input type="checkbox"/>	Other (list)

County Agencies/Departments Consulted

<input type="checkbox"/>	Air Pollution Control District
<input type="checkbox"/>	Association of Governments
<input type="checkbox"/>	Flood Control District
<input checked="" type="checkbox"/>	Environmental Health
<input type="checkbox"/>	Fire (Hazardous Materials)
<input checked="" type="checkbox"/>	LAFCO
<input type="checkbox"/>	Public Works
<input checked="" type="checkbox"/>	Planning and Development
<input type="checkbox"/>	Other (list): Certified Unified Program Agency

Special Districts Consulted

<input type="checkbox"/>	Santa Maria Public Airport
<input type="checkbox"/>	Airport Land Use Commission
<input type="checkbox"/>	Cemetery
<input type="checkbox"/>	Santa-Maria Bonita School District
<input type="checkbox"/>	Santa Maria Joint Union High School
<input type="checkbox"/>	Laguna County Sanitation District
<input type="checkbox"/>	Cal Cities Water Company

DATA SOURCES

General Plan

<input checked="" type="checkbox"/>	Land Use Element
<input checked="" type="checkbox"/>	Circulation Element
<input checked="" type="checkbox"/>	Safety Element
<input checked="" type="checkbox"/>	Noise Element
<input checked="" type="checkbox"/>	Housing Element
<input checked="" type="checkbox"/>	Resources Management Element

Other

<input checked="" type="checkbox"/>	Agricultural Preserve Maps
<input checked="" type="checkbox"/>	Archaeological Maps/Reports
<input type="checkbox"/>	Architectural Elevations
<input checked="" type="checkbox"/>	Biology Reports
<input checked="" type="checkbox"/>	CA Oil and Gas Maps
<input checked="" type="checkbox"/>	FEMA Maps (Flood)
<input type="checkbox"/>	Grading Plans
<input checked="" type="checkbox"/>	Site Plan
<input type="checkbox"/>	Topographic Maps
<input checked="" type="checkbox"/>	Aerial Photos
<input type="checkbox"/>	Traffic Studies
<input type="checkbox"/>	Trip Generation Manual (ITE)
<input type="checkbox"/>	URBEMIS Air Quality Model
<input checked="" type="checkbox"/>	Zoning Maps
<input type="checkbox"/>	Other (list)

MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

IMPACT DISCUSSION:

- The proposed water main, distribution line, and service connections are primarily within the public right-of-way that does not contain suitable habitat for fish and wildlife species. Mitigation measures are recommended to address potential direct and indirect impacts to nesting raptors that may be present on the project site as well as potential impacts to the riparian and wetland areas adjacent to the proposed project site. Based on this analysis, the project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community or substantially reduce the number or restrict the range of a rare or endangered plant or animal. The proposed water main, distribution line, and service connections would be constructed within existing roadways right-of-way and on a previously disturbed paved road that does not contain important examples of the major periods of California history or prehistory. Additionally, mitigation measures to protect cultural resources require work to stop and finds evaluated should unanticipated archaeological resources be discovered during construction. Therefore, the project would not eliminate important examples of the major periods of California history or prehistory with implementation of mitigation measures identified in this document. This is a **less than significant impact with mitigation incorporated**.

2. Section 15355 of the CEQA Guidelines defines “cumulative impacts” as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. It is important to address whether the proposed project would result in an impact that would be found to be cumulatively considerable. Cumulative impacts could occur due to indirect growth-inducing impacts, which includes consideration of whether the project would remove an obstacle to additional growth and development. The project area and community to be served by this project is already receiving waters and developed. The project would not include housing or development in areas that could induce growth and would also not remove any barriers that could result in population growth. As described in the previous analysis, the proposed project would result in less-than-significant impacts to aesthetics, agricultural resources, air quality, biological resources, cultural resources, energy, geology/soils, greenhouse gas emissions, hazards and hazardous materials, hydrology/water quality, land use and planning, noise, population and housing, public services, utilities/service systems, and wildfire. The majority of project impacts are temporary and localized along the pipelines during the construction period. Upon operation, the project would not have significant adverse environmental impacts or induce new development in the area that could combine with other projects’ effects to create cumulatively significant impacts. Project operational activities would not significantly alter the existing environment, particularly in the distribution pipelines which will be underground. There are no known projects in the immediate project vicinity of a similar nature proposed or reasonably foreseeable for development. When considered cumulatively along with past, current, and probable future projects that may occur in the area, the project’s contribution is considered negligible and would not be cumulatively considerable. This is a ***less than significant impact***.
3. The project would not result in environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly. The project involves construction of the proposed components within already developed areas within an established community. Project operational activities would not significantly alter the environmental baseline condition. Construction of the proposed project would result in temporary minor incremental reductions in air quality and traffic in the project vicinity, however, these were found to be minor, temporary and localized. The project would result in less-than-significant impacts to air quality, greenhouse gas emissions, and hazards and hazardous materials. The primary source of criteria air pollutant and GHG emissions would stem from the use of equipment during construction activities. Additionally, the project would not create any significant air emissions or impacts from construction-related noise due to the short-term and localized nature of the project. This is a ***less than significant impact***.

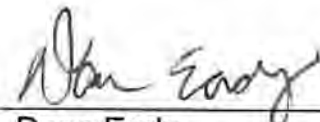
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS

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

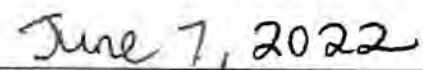
Determination

On the basis of the Initial Study, the staff of the Community Development Department:

- Finds that the proposed project is a Class ___ **CATEGORICAL EXEMPTION** and no further environmental review is required.
- Finds that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- Finds that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- Finds that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- Finds that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to acceptable standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on the attached sheets. An **ENVIRONMENTAL IMPACT REPORT (EIR)/SUBSEQUENT EIR/SUPPLEMENTAL EIR/ADDENDUM** is required, but it must analyze the effects that remain to be addressed.
- Finds that although the proposed project could have a significant effect on the environment, because all significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to acceptable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.


 Dana Eady
 Environmental Analyst


 Chuen Ng
 Environmental Officer


 Date


 Date



City of Santa Maria
 Community Development Department
 110 South Pine Street, #101
 Santa Maria, CA 93458
 805-925-0951

PUBLIC REVIEW DRAFT

Appendix A

Engineering Report

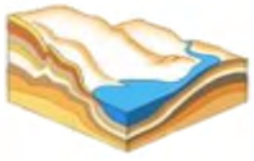
Ray Water Company
SP2021-0008

June 2022
Appendices

ATTACHMENT E

PUBLIC REVIEW DRAFT

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WEBER, HAYES & ASSOCIATES
Hydrogeology and Environmental Engineering
(831) 722-3580 www.weber-hayes.com

Engineering Report

Ray Water Company



Santa Maria, California

October 22, 2021

Prepared for:

Ray Water Company

via a Technical Assistance Grant from

California State Water Resources Control Board / University Enterprises, Inc

Technical Assistance Work Plan 6160-A / WHA Project 2t059

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Figure 4	Ray Water Company Distribution System Layout

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Table 2:	Engineer's Opinion of Probable Costs for New Distribution System
Table 3:	Engineer's Opinion of Probable Costs for Treatment System (Alternative #2)
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Appendix A:	Environmental Analysis of Engineering Alternatives
Appendix B:	Consolidation Alternative 90% Design Drawings
Appendix C:	Fire Prevention Flow Calculations



1. Introduction

This is the *Engineering Report* (ER) for the Ray Water Company (RWC), located near the intersection of Betteravia Road and Rayville Lane in Santa Maria, California. See Figure 1 for the project location.

This ER was prepared by Weber, Hayes & Associates on behalf of RWC under a Technical Assistance (TA) Grant from the California State Water Resources Control Board (State Water Board) administered by Sacramento State University / University Enterprises, Inc. (UEI) under TA Work Plan 6160-A, assigned by the State Water Board to UEI.

The intent of this *Engineering Report* (ER) is summarized below:

- Define the problems Ray Water Company (RWC) is facing
- Identify and evaluate alternatives to provide RWC residents with safe and reliable drinking water
- Choose the best alternative and develop a corresponding set of 90% complete technical design drawings to implement the selected alternative

The best alternative was chosen based on the following:

- Ability to supply safe and reliable drinking water and to comply with regulatory requirements
- Meet the water system's Operation and Maintenance (O&M) needs
- Be financially viable
- Satisfy public concerns
- Meet environmental requirements

The most cost-effective long-term solution is RWC consolidation with the City of Santa Maria's water system.

A. Background

Ray Water Company (RWC) is a small water company located just outside the Santa Maria city limits. RWC was issued a Santa Barbara County water system permit in 1976 though it existed prior to that. Over the years, RWC has had ongoing difficulties meeting regulatory requirements – primarily due to aging and outdated infrastructure. Based on these challenges, RWC received a Technical Assistance Grant to help bring their water system into regulatory compliance. This Engineering Report identifies the problems, presents and evaluates alternative solutions, and provides initial plans / design drawings for the solution selected to bring RWC into compliance.



B. Problem Statement

Ray Water Company's (RWC) current water source is a well, which has elevated nitrate and arsenic concentrations. This is the primary problem with RWC. Nitrate concentrations are above the Maximum Contaminant Level (MCL) set by the Environmental Protection Agency (EPA) and the State of California, and therefore pose a health risk. Arsenic concentrations are close to, yet just below the MCL. The recent concentrations and corresponding MCL's are presented in the table below:

Ray Water Company Source Water – Contaminants of Concern

Analyte	Date	Concentration (mg/L)	MCL (mg/L)
Nitrate as N	3/25/21	29	10
Nitrate as N	4/22/21	28	10
Nitrate as N	2/19/21	31	10
Nitrate as N	1/12/21	28	10
Arsenic	11/11/20	0.0096	0.010

mg/L = milligrams per Liter

Aside from elevated nitrate and arsenic concentrations, there are various secondary problems at RWC. The complete list of system deficiencies is summarized below in Section 2-F.

C. Project Objective

The overall project objective is to provide Ray Water Company (RWC) residents with safe and reliable drinking water. To this end, the *Engineering Report* (ER) identifies and evaluates alternative solutions, and selects the best option – based on the following:

- Ability to supply safe and reliable drinking water
- Ability to comply with regulatory requirements
- Meet the water system’s O&M needs
- Be financially viable
- Satisfy public concerns; and
- Meet environmental requirements

Based on the criteria cited above, the best alternative is consolidation with the City of Santa Maria’s water system.

We evaluated four alternatives:

- No Action
- Treating the water from the existing well
- Drilling a new well that will (hopefully) be free of nitrates
- Consolidation with a nearby water system that has a reliable water source

Additional information on each alternative is presented in Section 3, below. The consolidation alternative is discussed further in Section 4. Figure 2 shows the proposed new consolidation water main alignment connecting RWC with the City of Santa Maria’s Water System.



2. Existing Facilities

A. Water System Description

Ray Water Company (RWC) operated for some time before its first temporary Water Supply Permit was issued in 1976. RWC has been governed by various appointed residents of the water system, which have changed over time. Ownership of RWC was equally distributed among nine residents in 1976. Currently, ownership is equally distributed among ten residents.

There are a total of 13 service connections (11 residential, 2 commercial). The total population served is approximately 45 residents. The service area boundaries are shown on Figure 1.

The Local Primacy Agency with jurisdiction over Ray Water Company (RWC) is Santa Barbara County, Public Health Department, Environmental Health Services (Santa Barbara County).

Based on State Water Resources Control Board 2020 data for Santa Maria water usage, the Average Daily Demand (ADD) is 65.4 gallons per day (per resident). To determine the Maximum Daily Demand (MDD), we multiplied the ADD by 1.66:

$$65.4 \text{ gal/day} \times 1.66 = 108.56 \text{ gallons MDD per RWC resident}$$

The current number of residents is 45. So, the entire Ray Water Company MDD is:

$$108.56 \times 45 = 4,885 \text{ gallons per day}$$

Ray Water Company currently charges a flat rate of \$100 per month for each of the 13 service connections. The most recent rate increase went into effect on May 1, 2021.

RWC has received numerous notices of violation (from Santa Barbara County) dating back to 1980. The most relevant violation includes repeated nitrate concentrations above the MCL, starting at least as early as June 24, 1980. Other violations included (but not limited to) coliform

bacteria detections, failure to perform the required analytical testing, failure to properly inform residents of MCL exceedances, and failure to resolve the nitrate issue.

Santa Barbara County issued RWC an enforcement action Compliance Order on March 6, 2020 due to ongoing nitrate concentrations above the MCL. The Compliance Order required RWC to inform all residents of the elevated nitrate concentrations, submit a progress report, and submit a corrective action plan to resolve the nitrate issue. This Engineering Report (ER) is part of the response to the Compliance Order.



B. Source

Ray Water Company (RWC) utilizes groundwater as its drinking water source. The capacity of this source is unknown, because RWC does not meter the well or regularly monitor depth to groundwater.

A Santa Barbara County sanitary survey report letter dated September 11, 2017 indicated the following for the existing well:

- 320-foot deep vertical well with a 75-foot annular seal. 6-inch diameter well casing. Well screen from 270 to 320-feet. In late 2016, the 5-Horsepower Submersible pump was replaced and set deeper into the well at 230-feet.

Per our understanding, there is not a current drinking water source assessment and protection (DWSAP) Report for RWC.

The water quality data from 2019 to 2021 is presented in Table 1.

C. Treatment

Ray Water Company (RWC) chlorinates the well source drinking water as a precautionary measure. This is the only water treatment technique used. A chlorine solution is injected into the system prior to storage by a Stenner peristaltic pump with a maximum capacity of 12 gallons per day at 150 psi. The chlorine solution is stored in a 25-gallon plastic container and all disinfection equipment is housed in a small shed. The water storage tank feeds a booster pump, which pressurizes the water through the distribution system. See Figure 3 for a schematic of the treatment train.

D. Storage

Ray Water Company (RWC) uses one steel water storage tank. Santa Barbara County documentation indicates that the steel tank is 32-feet tall, 12-feet in diameter, with a capacity of approximately 25,000-gallons. This tank was originally used to store bulk petroleum products. A “Shell Oil” logo is still faintly visible on the storage tank. According to the contractor who provided the tank, the inside of the tank was cleaned and then sand-blasted until bare metal was visible. Then it was painted with 3 coats of Henry’s #107 tank paint manufactured by W. W. Henry Company of Huntington Park, CA, which was specially formulated for coating water tanks (information provided in a letter from the contractor to Santa Barbara County on September 9, 1972).

The storage tank dates to the 1950’s and has prevalent rust stains and significant signs of aging. The water tank can only be partially filled, because of holes located higher up on the tank.

Figure 4 shows the water tank location.



E. Distribution System

A 4-inch galvanized steel outlet pipe exits the bottom of the 25,000-gallon storage tank then reduces to 1½-inch and feeds a ½ horsepower booster pump. There are no pressure vessels, so the booster pump supplies all the pressure to the distribution system. The booster pump constantly runs to keep the distribution system pressurized at 40-60 psi. The constant wear on the booster pump necessitates replacement every few years. The booster pump is Sta-Rite Model BMG-41S and was last replaced in 2021, according to RWC. The booster pump feeds a 4-inch steel water main running down Rayville Lane and a 2-inch PVC pipe to the two properties on Betteravia Road: with ¾ and ½-inch laterals to 13 total service connections. See Figure 4 for a layout of the existing distribution system.

In general, the distribution system components are old and near (or beyond) the end of their service life. More details are presented in the section below.

F. System Deficiencies

Ray Water Company system deficiencies include the following:

- Nitrate concentrations above the Drinking Water Maximum Contaminant Level (MCL). Santa Barbara County enforcement action due to ongoing high nitrate concentrations.
- Arsenic concentration close to, yet just below the MCL
- Currently no water meters at the well or service connections
- No emergency power source. If RWC loses power, the customers have no water.
- The electrical system servicing the well is old (circa 1940's) and in need of an upgrade.
- Old, hobbled together, and decayed distribution system piping. Pipe leaks in the ground are common. Most of the steel pipe connections are "frozen" (i.e., fused together). Some

2-inch lines are only open $\frac{3}{4}$ -inch due to rust/mineralization. System pressure is suboptimal (too low).

- Inadequate fire suppression capacity
- No pressure tanks, requiring booster pumps to run constantly to pressurize distribution system
- Water storage tank has holes rusted through it, limiting its capacity, and providing a potential pathway for bacteria and other pathogens to enter the water system

The primary need and overall project objective are to provide Ray Water Company (RWC) residents with safe and reliable drinking water. Four alternatives to reach the project objective are presented and analyzed in the next section.



3. Alternatives Analysis - Projects

To address the project objective described above in Section 1-C, we evaluated four potential alternatives:

- No Action
- Treatment System for Nitrate and Arsenic
- Drilling a New Well
- Full Consolidation with an Existing Water System

The four alternatives are presented in the sections below.

A. Project Alternative #1 – Take No Action

Project Alternative #1 involves taking no corrective actions. This alternative does not address the primary problem of nitrate concentrations above the Maximum Contaminant Level (MCL). The ramification of not addressing this issue includes RMC residents potentially becoming ill. Project Alternative #1 also does not address the various secondary problems presented above in Section 2F.

For these reasons, we do not recommend Alternative #1.

B. Project Alternative #2 – Treatment System for Nitrate & Arsenic

Project Alternative #2 involves installing a Reverse Osmosis (RO) treatment system to remove nitrate from the groundwater. Alternative #2 addresses the primary problem of nitrate concentrations above the Maximum Contaminant Limit (MCL). This treatment system could also remove arsenic from the groundwater.

Alternative #2 would also require an upgraded water distribution system and a new water storage tank. The problems (and corresponding need for upgrade) of these items are explained above in Section 2-F.

The advantages of Alternative #2 include removing nitrate and arsenic from the groundwater. The disadvantages include the following:

- High cost to install RO treatment system, upgraded water distribution system, and new water storage tank. High monthly Operations and Maintenance (O&M) cost to maintain the treatment system, especially to deal with filtrate (high concentration wastewater produced by the system).
- A new water well may need to be installed sometime in the next 20-years as either a back-up or replacement for the existing well. The existing water well is currently operational; but was installed in 1978 (43-years old).
- Ray Water Company (RWC) would remain in operation. Primarily due to financial constraints, RWC has been generally unreliable and inconsistent as water system managers dating back to the 1970's. They have not demonstrated the financial capacity to maintain a relatively complex RO system, nor to consistently perform water quality analytical testing per county/state requirements.

Per the disadvantages listed above, we do not recommend Alternative #2.

Table 2 summarizes costs for a new distribution system. Table 3 summarizes costs for the entire Alternative #2 (new distribution system + treatment system).



C. Project Alternative #3 – Drilling a New Well

Project Alternative #3 involves installing a new well in search of non-impacted groundwater (i.e., groundwater without significant nitrate or arsenic concentrations present).

Alternative #3 addresses the primary problem of elevated nitrate and arsenic concentrations.

Alternative #3 would also require an upgraded water distribution system and water storage tank. The problems (and corresponding need for upgrade) of these items are explained above in Section 2-F.

The advantage of Alternative #3 includes a potentially clean groundwater source.

The disadvantages include the following:

- High cost to install a new well, upgraded water distribution system, and water storage tank. Moderate monthly Operations and Maintenance (O&M) costs to maintain the new well and distribution system. The monthly costs would be difficult to secure payment for over the next few decades.
- There is a significant chance that the new well may also contain elevated nitrate and arsenic concentrations. There is also a chance that other contaminants may be encountered. There is a good possibility that several test wells would be required to locate quality water. Even then, there is no guarantee of finding it.
- Ray Water Company (RWC) would remain in operation. Primarily due to financial constraints, RWC have been generally unreliable and inconsistent as water system managers dating back to the 1970's. They have not shown the financial capacity to maintain a new well and distribution system, nor to consistently perform water quality analytical testing per county/state requirements.

Based on the disadvantages listed above and the uncertainty of finding nitrate-free groundwater, we do not recommend Alternative #3.

Table 2 summarizes costs for a new distribution system. Table 4 summarizes costs for the entire Alternative #3 (new distribution system + new well).

D. Project Alternative #4 – Full Consolidation with Existing Water System

Project Alternative #4 involves full consolidation with an existing water system. A new water main would be constructed between Ray Water Company (RWC) and the City of Santa Maria (City) water system. The City water system is the closest public water system to RWC. The other public water system in the vicinity is Golden State Water Company, which is significantly further away. See Figure 1 for locations.

Alternative #4 addresses the primary problem of elevated nitrate and arsenic concentrations by providing clean and reliable potable water.

Alternative #4 also requires an upgraded water distribution system. The problems (and corresponding need for upgrade) of these items are explained above in Section 2-F. A new water storage tank is not needed, because the City's water system already has sufficient storage capacity.

Local Agency Formation Commission (LAFCO) approval is required for this consolidation project. City of Santa Maria staff plan to complete the LAFCO Out-of-Agency service agreement application. Estimated LAFCO fees are included in Table 5.

The California Public Utilities Commission (CPUC) regulates privately owned water systems. Because the City of Santa Maria water system is not privately-owned, CPUC approval is not required for this project.

The advantages of Alternative #4 include a clean / reliable long-term water source, sharing operations and maintenance costs with a larger community, and transfer of water system management responsibilities to the City.



The disadvantages include moderate initial cost to construct a water main connecting RWC to the City's water system, and to upgrade the existing RWC distribution system.

Alternative #4 is the most reliable and cost-effective long-term solution.

Table 2 summarizes costs for a new distribution system. Table 5 summarizes costs for the entire Alternative #4 (new distribution system + new water main consolidation).

E. Comparison of Various Alternatives

Of the four Project Alternatives presented above, Alternative #4 (full consolidation) most effectively resolves Ray Water Company's issues and meets the project objectives. The long-term sustainability of Alternative #4 is superior to the other Alternatives [including technical, managerial, and financial (TMF) requirements]. This is because the City (and not RWC) would manage all aspects of the water system for the existing RWC residents.

A 20-year period life cycle cost analysis was performed on the four Alternatives. The analysis is summarized in Tables 2 through 5. Table 6 shows a side-by-side comparison of the various alternatives. The life cycle cost analysis indicates that Alternative #4 provides the best long-term, cost-effective solution.

The environmental impacts of the four Alternatives are generally low. Alternative #1 has minor environmental impacts, including high nitrate water entering the septic systems. Alternative #2 has minor environmental impacts, including land disturbance associated with replacing the distribution system and water storage tank; and installing the treatment system. There are also emissions from hauling away the wastewater generated. Alternative #3 has limited environmental impacts including installation of a new well, and land disturbance associated with replacing the distribution system and water storage tank. Alternative #4 has limited environmental impacts including land disturbance associated with installation of a new water

main and replacing the distribution system. A detailed Environmental Analysis of Engineering Alternatives is included in Appendix A.

The Environmental Package *Initial Study* is in the process of being completed by Denise Duffy and Associates. Once complete, the Initial Study will reference the Biologic and Cultural Reports.

The sites and easements required to implement the various alternatives are presented in the table below:

Alternative #	Sites & Easements Required	Properties or leases need to be acquired for this Alternative?
1	None	No
2	None	No
3	None	No
4	Need easement for City water infrastructure on Mahoney Road. City already has existing easements within Betteravia Road	No
4	Need easement for City water infrastructure on Rayville Lane	No
4	Need easement for property at far south end of Rayville Lane, so City can flush south end of distribution pipe into an existing agricultural ditch	No

Alternative #4 (full consolidation) most effectively resolves Ray Water Company's issues and meets the project objective.



4. Recommended Option

A. Project Description

The proposed construction project consists of consolidating Ray Water Company (RWC) with the City of Santa Maria's (City) water system. The individual components include:

- Approximately 3,400-feet of new 12-inch water main extending from RWC east along Betteravia Road to connect with the City water system near the intersection of Betteravia Road and A Street. See Figure 2 for details.
- A new upgraded distribution system extending from the new RWC water main connection to various resident's homes. An 8-inch diameter distribution water line will supply the various service connections to the resident's homes.

Tables 2 & 5, and the 90% design drawings (Appendix B) provide additional project detail.

Appendix C presents fire prevention flow calculations, which indicate that the proposed design meets the California Fire Code standards.

B. Preliminary Schedule

Submit Engineering Report (ER) and Draft 90% Plans to TA Team:	October 22, 2021
TA Team Review and response:	Nov 19, 2021
Submit Final Engineering Report and design plans to the TA Team	January 28, 2022
Construction application complete	February 28, 2022
Construction application approved / funding agreement issued	+ 6 to 9 months
Project bid documents and contractor selection	+ 3 to 6 months
Project construction	+ 3 to 6 months

C. Comprehensive Response to Climate Change

This section describes climate change preparedness for the project and is organized as follows:

Vulnerability – Describes the effects of climate changes that the proposed project is susceptible to, including critical threshold conditions that may cause damage to the facility or result in loss of services

Adaptation – Describes the applied adaptation measures considered for the project, including adaptation measures deemed unnecessary, and explains why such measures were eliminated

Mitigation – Describes the mitigation measures considered for the project, including mitigation measures deemed unnecessary, and explains why such measures were eliminated



Vulnerability

Vulnerability is used to identify effects of climate change that the project may be susceptible to. Vulnerability includes sea level rise, water supply depletion, adverse water supply quality, flooding/storm surges, wildfires, and drought.

The climate change effects the Project may be susceptible to are discussed below.

Sea Level Rise

The project is not susceptible to sea level rise.

Water Supply Quality issues

the City has the following water sources available for urban water supplies:

- State Water Project (SWP) surface water supplies
- Groundwater from an adjudicated basin

A significant portion of Santa Barbara County is occupied by forest land, and wildfire is a common occurrence in the Region due primarily to the warm, dry climate. Longer and warmer seasons are likely to result in a low to moderate increase in fire risk according to the Integrated Regional Water Management Plan (IRWMP). This could result in increased sedimentation to reservoirs, possibly negatively impacting water quality.

Statewide, rainfall and snowfall are expected to change in terms of both type and timing, also as indicated by the IRWMP. The state has experience decreased snowpack in the Sierra Nevada, which has implications for SWP deliveries. At the local level, changes in the timing and intensity of precipitation could negatively affect groundwater recharge and the local groundwater supply.

The Coastal Branch of the SWP delivers water originating in Northern California to water agencies in Santa Barbara County including the City of Santa Maria. The Sacramento–San Joaquin River Delta is the central hub of the SWP. Potential impacts to the Delta resulting from

climate change include increased risk of levee failure, reduced water quality, and reduced water supply, all of which could significantly impact SWP operations, and the reliability of the supply of water delivered to the City. Sea-level rise threatens to disrupt deliveries from the SWP if saltwater advances into the Delta and increased quantities of fresh water would need to be released to protect water quality.

Impacts to SWP from climate change and sea level rise have both been taken into account in determining the future reliability and allocations as presented in the 2019 SWP Delivery Capability Report (DWR, 2020). The project will help the residents of RWC deal with reduced SWP allocations by aligning them with the City of Santa Maria.

Flooding/Storm Surges

The project is not susceptible to flooding or storm surges.

Forest Fires

The project is not susceptible to forest fires.

Drought

Longer or more frequent droughts due to climate change may adversely affect all water supplies. This could lead to water supply issues for all of California, including the City of Santa Maria. Water conservation should be practiced to help insure a long-term water supply.

Other

No other vulnerability effects of climate change were identified for the Project.

Adaptation

Adaptation is the term used to identify measures taken as a direct response to climate change effects. Multiple measures can be taken in response to a single vulnerability. For example, in



response to sea level rise an agency may investigate constructing sea walls or levees in order to prevent flooding. Flood contingencies could also be explored to protect the project if the levees fail or in the event of severe storm surges.

Adaptive measures in the Project in response to Climate Change are described below.

Renewable Energy Sources

No renewable energy sources are directly involved with the project. Energy will not be directly involved in the project as water will be delivered from the City of Santa Maria's system. As the overall fraction of renewable energy in the California grid grows, renewable energy will be incorporated into the project.

Drought Resiliency and Flood Contingency

The multiple sources of water for the City of Santa Maria provide some drought resiliency. The project is not subject to flooding.

Permeable Pavements

No permeable pavements are incorporated in the Project.

Elevated Construction, Sea Walls, Levees

No elevated construction, sea walls or levees are necessary for the Project, and none have been incorporated into the Project.

Green Roofing

No green roofing has been incorporated in the Project, as no structures or roofing is involved.

Fire Resistant Water Connections and Hydrants

Fire hydrants and the necessary flow and pressure to ensure their proper operation are part of the Project. Fire resistant water connections are not part of the Project.

Other

No other adaptations were included in the Project.

Mitigation

Mitigation is the term used to identify measures taken to slow or stop changes caused by greenhouse gas emissions in the atmosphere. Measures identified in adaptation may also be used for mitigation. For example, water conservation may be an adaptation response to drought vulnerability but a mitigation measure by reducing the energy consumed to move excessive volumes of water. Green roofing as an adaptation measure will help to reduce the heat island effect of an urban community, and as a mitigation measure will reduce the energy consumed to heat and cool the building.

Mitigation measures taken to reduce concentrations of greenhouse gases in the atmosphere as part of the Project are described below.

Renewable Energy Sources

There is no direct energy use by the project and no renewable energy sources are incorporated in the Project.

Energy Conservation

There is no direct energy use by the project and no energy conservation practices are incorporated in the Project.



Water Conservation

Water conservation components of the Project include:

- New water main and distribution lines which will be “tight” (no leaks)
- Removal of the leaking storage tank
- Water meters for each connection

Other

No other mitigation measures were included in the Project.

Limitations


Our service consists of professional opinions and recommendations made in accordance with generally accepted engineering principles and practices. This warranty is in lieu of all others, either expressed or implied. The analysis and conclusions in this report are based on site observations and existing data, some of which have been conducted or collected by others, all of which are necessarily limited. Additional data from future work may lead to modifications of the opinions expressed herein. All work was conducted under the direct supervision of a Professional Engineer, registered in the state of California, and experienced in drinking water system design and water resource engineering.


Thank you for the opportunity to prepare this Engineering Report. If you have any questions or comments regarding this project, please contact us at 831-722-3580.


Sincerely yours,

Weber, Hayes and Associates

A California Corporation

By: 
Shawn Mixan, EIT, D2, T2
Project Engineer

And: 
Rich Peterson, EIT
Staff Engineer

And: 
Craig B. Drizin, PE
Principal Engineer



References

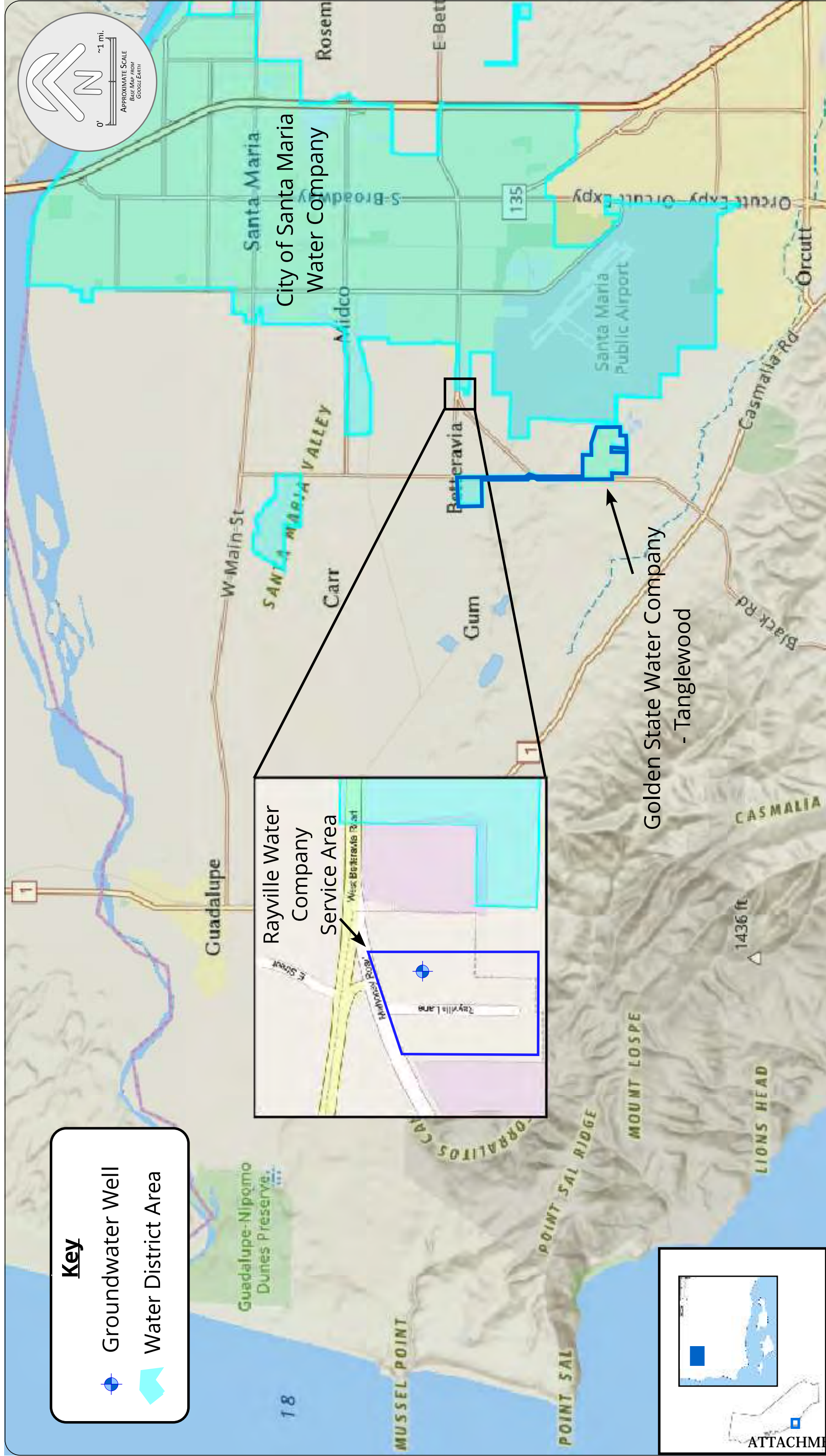
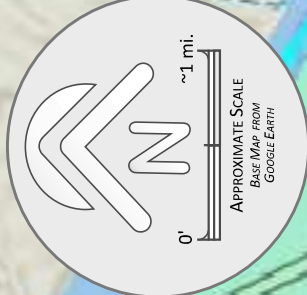
- State Water Resources Control Board water usage data for the City of Santa Maria; June 2014 – April 2021 Urban Water Supplier Monthly Reports (Raw Dataset). File found on Water Board website:
https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.html
- *City of Santa Maria Urban Water Management Plan, 2020 Update*, Provost & Pritchard Consulting Group, June 2021

FIGURES

Weber, Hayes & Associates

Key




- Groundwater Well
- Water District Area

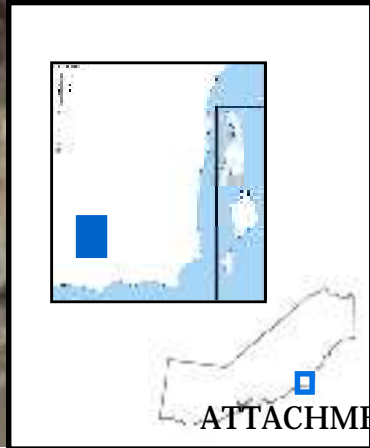


Location Map with Water Company Service Area Boundaries
Ray Water Company - Rayville Ln. Moragn Hill, CA

Figure 1
April 2021

Key

-  Connection Point
-  New Water Main
-  Rayville Lane Distribution

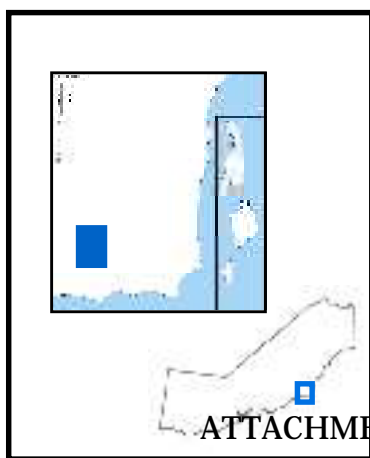
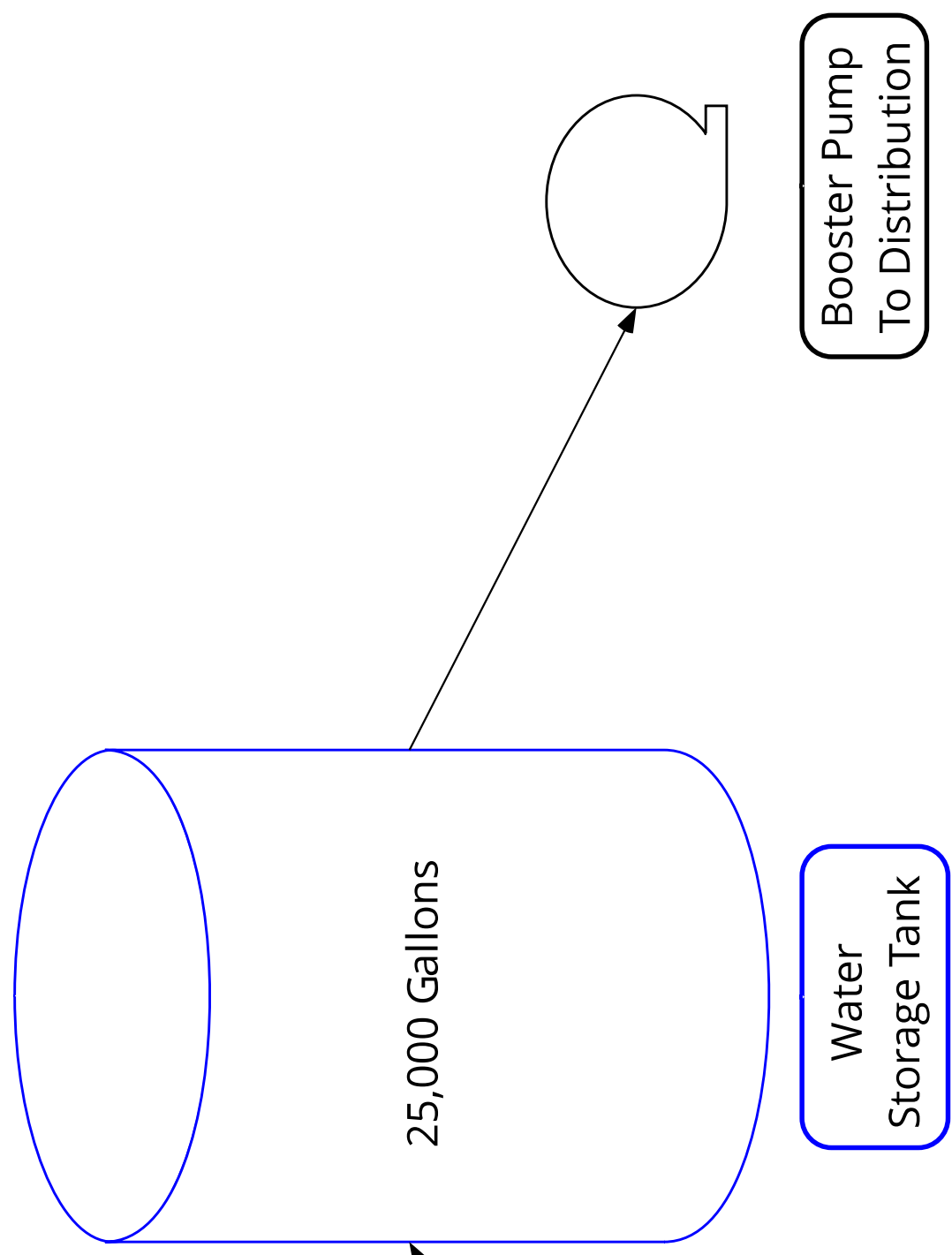


ATTACHMENT E



Proposed New Water Main Alignment
Ray Water Company - Santa Maria, CA

Figure 2
May 2021



ATTACHMENT E



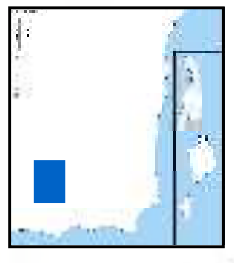
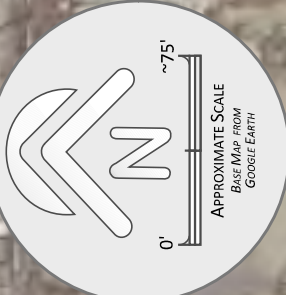
Schematic of Current Treatment Train
 Ray Water Company - Santa Maria, CA

Figure 3
 May 2021



Key

- Distribution Main
- Service Line
- Water Supply Well



ATTACHMENT E

Ray Water Company Distribution System Layout
 Ray Water Company - Santa Maria, CA



Figure 4
 May 2021

TABLES

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Table 1 - Ray Water Company - Water Quality Data

Analyte	Sample Date	Result	Unit	MCL
NITRATE (AS N)	2021-04-22	28	mg/L	10
NITRATE (AS N)	2021-03-25	29	mg/L	10
GROSS ALPHA	2021-03-02	0	pCi/L	15
RADIUM 228	2021-03-02	0	pCi/L	---
URANIUM (PCI/L)	2021-03-02	3.3	pCi/L	20
CARBON TETRACHLORIDE	2021-03-02	<0.5	µg/L	0.5
TOLUENE	2021-03-02	<0.5	µg/L	150
BENZENE	2021-03-02	<0.5	µg/L	1
MONOCHLOROBENZENE	2021-03-02	<0.5	µg/L	70
ETHYL BENZENE	2021-03-02	<0.5	µg/L	300
CHLOROMETHANE	2021-03-02	<0.5	µg/L	---
DICHLOROMETHANE	2021-03-02	<0.5	µg/L	5
TETRACHLOROETHYLENE	2021-03-02	<0.5	µg/L	5
TRICHLOROFLUOROMETHANE FREON 11	2021-03-02	<5	µg/L	150
1,1-DICHLOROETHANE	2021-03-02	<0.5	µg/L	5
1,1-DICHLOROETHYLENE	2021-03-02	<0.5	µg/L	6
1,1,1-TRICHLOROETHANE	2021-03-02	<0.5	µg/L	200
1,1,2-TRICHLOROETHANE	2021-03-02	<0.5	µg/L	5
1,1,2,2-TETRACHLOROETHANE	2021-03-02	<0.5	µg/L	1
1,2-DICHLOROETHANE	2021-03-02	<0.5	µg/L	0.5
1,2-DICHLOROBENZENE	2021-03-02	<0.5	µg/L	600
1,2-DICHLOROPROPANE	2021-03-02	<0.5	µg/L	5
TRANS-1,2-DICHLOROETHYLENE	2021-03-02	<0.5	µg/L	10
1,2,4-TRICHLOROBENZENE	2021-03-02	<0.5	µg/L	5
1,3-DICHLOROPROPENE (TOTAL)	2021-03-02	<0.5	µg/L	0.5
1,3-DICHLOROBENZENE	2021-03-02	<0.5	µg/L	---
1,4-DICHLOROBENZENE	2021-03-02	<0.5	µg/L	5
TRANS-1,3-DICHLOROPROPENE	2021-03-02	<0.5	µg/L	0.5
CIS-1,3-DICHLOROPROPENE	2021-03-02	<0.5	µg/L	0.5
VINYL CHLORIDE	2021-03-02	<0.5	µg/L	0.5
TRICHLOROETHYLENE	2021-03-02	<0.5	µg/L	5
METHYL-TERT-BUTYL-ETHER (MTBE)	2021-03-02	<3	µg/L	13
CIS-1,2-DICHLOROETHYLENE	2021-03-02	<0.5	µg/L	6
STYRENE	2021-03-02	<0.5	µg/L	100
O-XYLENE	2021-03-02	<0.5	µg/L	---
1,2,3-TRICHLOROPROPANE (1,2,3-TCP)	2021-03-02	<0.005	µg/L	0.005
XYLENES (TOTAL)	2021-03-02	<0.5	µg/L	1,750
TRICHLOROTRIFLUOROETHANE (FREON 113)	2021-03-02	<10	µg/L	1,200
M,P-XYLENE	2021-03-02	<0.5	µg/L	---
GROSS ALPHA MDA95	2021-03-02	1.63	pCi/L	3
RADIUM 228 MDA95	2021-03-02	0.624	pCi/L	1.001
NITRATE (AS N)	2021-02-19	31	mg/L	10
NITRATE (AS N)	2021-01-12	28	mg/L	10
NITRATE (AS N)	2020-12-22	30	mg/L	10
COLOR	2020-11-11	<3	units	15
ODOR THRESHOLD @ 60 C	2020-11-11	<1	t.o.n.	3
SPECIFIC CONDUCTANCE	2020-11-11	1400	US	1,600



Table 1 - Ray Water Company - Water Quality Data

Analyte	Sample Date	Result	Unit	MCL
PH, LABORATORY	2020-11-11	7.57	units	---
ALKALINITY (TOTAL) AS CaCO ₃	2020-11-11	400	mg/L	---
BICARBONATE ALKALINITY	2020-11-11	400	mg/L	---
CARBONATE ALKALINITY	2020-11-11	<10	mg/L	---
NITRATE (AS N)	2020-11-11	30	mg/L	10
NITRITE (AS N)	2020-11-11	<0.4	mg/L	1
CALCIUM	2020-11-11	170	mg/L	---
MAGNESIUM	2020-11-11	77	mg/L	---
SODIUM	2020-11-11	96	mg/L	---
POTASSIUM	2020-11-11	3.8	mg/L	---
CHLORIDE	2020-11-11	99	mg/L	500
SULFATE	2020-11-11	500	mg/L	500
FLUORIDE (F) (NATURAL-SOURCE)	2020-11-11	0.34	mg/L	2
ARSENIC	2020-11-11	9.6	µg/L	10
BARIUM	2020-11-11	15	µg/L	1,000
BERYLLIUM	2020-11-11	<1	µg/L	4
CADMIUM	2020-11-11	<1	µg/L	5
CHROMIUM (TOTAL)	2020-11-11	16	µg/L	50
COPPER	2020-11-11	<2	µg/L	1,000
IRON	2020-11-11	82	µg/L	300
LEAD	2020-11-11	<1	µg/L	0.000015
MANGANESE	2020-11-11	<10	µg/L	50
THALLIUM	2020-11-11	<1	µg/L	2
NICKEL	2020-11-11	5.8	µg/L	100
SILVER	2020-11-11	<1	µg/L	100
ZINC	2020-11-11	<5	µg/L	5,000
ANTIMONY	2020-11-11	<2	µg/L	6
ALUMINUM	2020-11-11	<50	µg/L	1,000
SELENIUM	2020-11-11	40	µg/L	50
CYANIDE	2020-11-11	<40	µg/L	150
GROSS ALPHA	2020-11-11	3.08	pCi/L	15
RADIUM 228	2020-11-11	0	pCi/L	---
URANIUM (PCI/L)	2020-11-11	3.6	pCi/L	20
BROMODICHLOROMETHANE (THM)	2020-11-11	<1	µg/L	---
CARBON TETRACHLORIDE	2020-11-11	<0.5	µg/L	0.5
BROMOFORM (THM)	2020-11-11	1.4	µg/L	---
DIBROMOCHLOROMETHANE (THM)	2020-11-11	<1	µg/L	---
CHLOROFORM (THM)	2020-11-11	<1	µg/L	---
TOLUENE	2020-11-11	<0.5	µg/L	150
BENZENE	2020-11-11	<0.5	µg/L	1
BENZO (A) PYRENE	2020-11-11	<0.1	µg/L	0.2
MONOCHLOROBENZENE	2020-11-11	<0.5	µg/L	70
CHLOROETHANE	2020-11-11	<0.5	µg/L	---
ETHYL BENZENE	2020-11-11	<0.5	µg/L	300
HEXACHLOROCYCLOPENTADIENE	2020-11-11	<1	µg/L	50
HEXACHLOROBUTADIENE	2020-11-11	<0.5	µg/L	---
BROMOMETHANE	2020-11-11	<0.5	µg/L	---



Table 1 - Ray Water Company - Water Quality Data

Analyte	Sample Date	Result	Unit	MCL
CHLOROMETHANE	2020-11-11	<0.5	µg/L	---
DICHLOROMETHANE	2020-11-11	<0.5	µg/L	5
TETRACHLOROETHYLENE	2020-11-11	<0.5	µg/L	5
TRICHLOROFLUOROMETHANE FREON 11	2020-11-11	<5	µg/L	150
1,1-DICHLOROETHANE	2020-11-11	<0.5	µg/L	5
1,1-DICHLOROETHYLENE	2020-11-11	<0.5	µg/L	6
1,1,1-TRICHLOROETHANE	2020-11-11	<0.5	µg/L	200
1,1,2-TRICHLOROETHANE	2020-11-11	<0.5	µg/L	5
1,1,2,2-TETRACHLOROETHANE	2020-11-11	<0.5	µg/L	1
1,2-DICHLOROETHANE	2020-11-11	<0.5	µg/L	0.5
1,2-DICHLOROBENZENE	2020-11-11	<0.5	µg/L	600
1,2-DICHLOROPROPANE	2020-11-11	<0.5	µg/L	5
TRANS-1,2-DICHLOROETHYLENE	2020-11-11	<0.5	µg/L	10
1,2,4-TRICHLOROBENZENE	2020-11-11	<0.5	µg/L	5
1,3-DICHLOROPROPENE (TOTAL)	2020-11-11	<0.5	µg/L	0.5
1,3-DICHLOROBENZENE	2020-11-11	<0.5	µg/L	---
1,4-DICHLOROBENZENE	2020-11-11	<0.5	µg/L	5
DICHLORODIFLUOROMETHANE (FREON 12)	2020-11-11	<0.5	µg/L	---
NAPHTHALENE	2020-11-11	<0.5	µg/L	---
TRANS-1,3-DICHLOROPROPENE	2020-11-11	<0.5	µg/L	0.5
CIS-1,3-DICHLOROPROPENE	2020-11-11	<0.5	µg/L	0.5
FOAMING AGENTS (MBAS)	2020-11-11	<0.05	mg/L	0.5
ATRAZINE	2020-11-11	<0.5	µg/L	1
SIMAZINE	2020-11-11	<1	µg/L	4
DI(2-ETHYLHEXYL)PHTHALATE	2020-11-11	<3	µg/L	4
VINYL CHLORIDE	2020-11-11	<0.5	µg/L	0.5
TRICHLOROETHYLENE	2020-11-11	<0.5	µg/L	5
HEXACHLOROBENZENE	2020-11-11	<0.5	µg/L	1
METHYL-TERT-BUTYL-ETHER (MTBE)	2020-11-11	<3	µg/L	13
TOTAL DISSOLVED SOLIDS	2020-11-11	1000	mg/L	1,000
HYDROXIDE ALKALINITY	2020-11-11	<10	mg/L	---
MERCURY	2020-11-11	<0.2	µg/L	2
CARBON DISULFIDE	2020-11-11	<0.5	µg/L	---
CIS-1,2-DICHLOROETHYLENE	2020-11-11	<0.5	µg/L	6
STYRENE	2020-11-11	<0.5	µg/L	100
O-XYLENE	2020-11-11	<0.5	µg/L	---
1,1-DICHLOROPROPENE	2020-11-11	<0.5	µg/L	---
2,2-DICHLOROPROPANE	2020-11-11	<0.5	µg/L	---
1,3-DICHLOROPROPANE	2020-11-11	<0.5	µg/L	---
1,2,4-TRIMETHYLBENZENE	2020-11-11	<0.5	µg/L	---
ISOPROPYLBENZENE	2020-11-11	<0.5	µg/L	---
N-PROPYLBENZENE	2020-11-11	<0.5	µg/L	---
1,3,5-TRIMETHYLBENZENE	2020-11-11	<0.5	µg/L	---
SEC-BUTYLBENZENE	2020-11-11	<0.5	µg/L	---
TERT-BUTYLBENZENE	2020-11-11	<0.5	µg/L	---
1,2,3-TRICHLOROPROPANE (1,2,3-TCP)	2020-11-11	<0.005	µg/L	0.005
1,1,1,2-TETRACHLOROETHANE	2020-11-11	<0.5	µg/L	---



Table 1 - Ray Water Company - Water Quality Data

Analyte	Sample Date	Result	Unit	MCL
DIBROMOMETHANE	2020-11-11	<0.5	µg/L	---
1,2,3-TRICHLOROBENZENE	2020-11-11	<0.5	µg/L	---
ALACHLOR	2020-11-11	<1	µg/L	2
XYLENES (TOTAL)	2020-11-11	<0.5	µg/L	1,750
BROMOBENZENE	2020-11-11	<0.5	µg/L	---
METHYL ETHYL KETONE	2020-11-11	<5	µg/L	---
METHYL ISOBUTYL KETONE	2020-11-11	<5	µg/L	---
TRICHLOROTRIFLUOROETHANE (FREON 113)	2020-11-11	<10	µg/L	1,200
TURBIDITY, LABORATORY	2020-11-11	11	NTU	5
TOTAL TRIHALOMETHANES	2020-11-11	1.4	µg/L	80
MOLINATE	2020-11-11	<2	µg/L	20
AGGRSSIVE INDEX (CORROSIVITY)	2020-11-11	12.8	---	---
THIOBENCARB	2020-11-11	<1	µg/L	70
2-CHLOROTOLUENE	2020-11-11	<0.5	µg/L	---
4-CHLOROTOLUENE	2020-11-11	<0.5	µg/L	---
N-BUTYLBENZENE	2020-11-11	<0.5	µg/L	---
P-ISOPROPYLTOLUENE	2020-11-11	<0.5	µg/L	---
BROMOCHLOROMETHANE	2020-11-11	<0.5	µg/L	---
M,P-XYLENE	2020-11-11	<0.5	µg/L	---
DI(2-ETHYLHEXYL)ADIPATE	2020-11-11	<5	µg/L	400
ETHYL-TERT-BUTYL ETHER	2020-11-11	<3	µg/L	---
TERT-AMYL-METHYL ETHER (TAME)	2020-11-11	<3	µg/L	---
DIISOPROPYL ETHER	2020-11-11	<3	µg/L	---
GROSS ALPHA MDA95	2020-11-11	0.841	pCi/L	3
RADIUM 228 MDA95	2020-11-11	0.773	pCi/L	1.001
COLIFORM, total	2019-10-25	absent	---	---
E. Coli	2019-10-25	absent	---	---

Notes:

MCL = Maximum Contaminant Level

Result exceeds MCL

Result just below
the MCL

mg/L = milligrams per Liter

pCi/L = picocuries per Liter

µg/L = micrograms per Liter

t.o.n. = threshold odor number

NTU = Nephelometric Turbidity Units



Table 2
Engineer's Opinion of Probable Costs for New Distribution System

DISTRIBUTION SYSTEM - ITEM	Quantity	Unit	Cost per Unit	COST (\$)
Distribution System 8-inch (see Figure 2 for alignment) C-900 DR18 PVC & Trenching	700	LF	116	81,480
13 service line laterals to residents (1-inch Type K soft copper lines, Meter stops (valves) are to be 1" size, lockable-style (equal to Ford KV43-444W) and adapted (bushed down) after the service valve to 3/4" size (meter size)	13	EA	4,200	54,600
Install Water Meter Box and Customer Service Valve	13	EA	840	10,920
Fire Hydrants WA-19D (every 350' max) - see Section F of City's Standard Specifications for details. Price does not include a concrete pad.	2	EA	11,640	23,280
Blow off at end of Rayville Lane - WA-24B	1	EA	2,760	2,760
8-inch valve at Betteravia and Rayville Lane	1	EA	2,040	2,040
Water sampling ports on distribution line	1	EA	2,500	2,500
Traffic control on Rayville Lane	1	LS	5,875	5,875
Encroachment permit	1	LS	2,000	2,000
Engineering field oversight of project	120	HR	150	18,000
Engineering & project administration (including as-built plans & completion report)	---	---	---	15,000
Distribution System Construction-Related Cost	---	---	---	218,455

Notes

This distribution system cost estimate table includes all distribution system upgrade items, except the items specific to Project Alternatives #2, #3, #4 - such as distribution system components associated with the treatment system (Alt #2); distribution system components associated with the new well (Alt #3); distribution system components associated with the connection to the new water main (Alt #4); and corresponding annual admin, operations / maintenance, and capital costs. These Alternative-specific items are presented on the corresponding Alternative cost estimate tables (Tables 3, 4, and 5).

- LS = Lump Sum
- LF = Lineal Feet
- EA = Each
- HR = Hour



Table 3

Engineer's Opinion of Probable Costs for Treatment System (Alternative #2)

TREATMENT SYSTEM - ITEM	COST (\$)
Distribution System Upgrade (see Table 2 for a detailed list of costs)	218,455
Engineering design of treatment system; as built plans	60,000
Installation of Reverse Osmosis System (to remove nitrate/arsenic concentrations) and calcite re-mineralization	125,000
New shed with concrete pad for treatment system	15,000
New piping from well to Reverse Osmosis (RO) system; new piping from RO System to distribution system	7,500
Install tank to hold brine stream prior to off-haul for disposal at a wastewater treatment plant	15,000
Removal and disposal of a 25,000-gallon water tank	10,000
Install new 50,000-gallon water storage tank, and new concrete pad	175,000
Engineering oversight during treatment system installation	10,000
Admin Costs - Coordination with RWC Residents	4,050
Subtotal of Treatment System Construction-Related Costs	421,550
Annual Operations and Maintenance - service visits	15,000
Annual Operations and Maintenance - brine stream waste disposal	200,750
Annual Operations and Maintenance - treatment chemicals & filter replacements	5,000
20-Year Operations and Maintenance Cost	4,415,000
20-year Capital Expenditures (expect pipe & appurtenances to last 50-years)	30,000
Project administration (20-years)	75,000
Subtotal of Operations & Maintenance, Capital Expenditure, and Administration Costs (20-years)	4,520,000
Project Lifecycle (20-years)	5,160,005
Additional Cost if a new well is needed in the next 20-years. Current well was constructed in 1978. Per current water system standards, each water system should have at least 2 wells.	1,032,000
Total Cost if a new well is needed in the next 20-years	6,192,005



Table 4

Engineer's Opinion of Probable Costs for New Well (Alternative #3)

NEW WELL - ITEM	COST (\$)
Distribution System Upgrade (see Table 2 for a detailed list of costs)	218,455
Hydro-geological analysis to determine ideal location and depth of new well	12,000
Engineering design (including as-built plans)	60,000
Engineering oversight during well drilling	45,000
Mobilization / Demobilization	10,000
Drill boring for new well (Assume 600 feet deep)	70,000
Two additional test wells to find viable water (3 test wells total to find one viable location to install well)	250,000
Install well casing, filter pack, and well seal	45,000
Well development and pump test	40,000
E-log & caliper logs	25,000
Site Clean Up	5,000
Well surface completion, well pad, and well shed. Well pump, controls, connection, and commissioning	100,000
Removal and disposal of a 25,000-gallon water tank	10,000
Install a new 50,000-gallon water storage tank	175,000
Admin Costs - Coordination with RWC Residents	4,000
Subtotal of New Well Construction-Related Costs	851,000
Annual Operations and Maintenance (including potential chlorine treatment)	12,000
20-Year Operations and Maintenance Cost	240,000
20-year Capital Expenditures (expect pipe & appurtenances to last 50-years)	25,000
Project administration (20-years)	60,000
Subtotal of Operations & Maintenance, Capital Expenditure, and Administration Costs (20-years)	325,000
Project Lifecycle (20-years)	1,394,455
Additional cost if clean water cannot be found and reverse osmosis treatment system is needed	4,941,550
Total project cost if reverse osmosis is needed in addition to the new well	6,336,005



Table 5

Engineer's Opinion of Probable Costs for Consolidation with City's Water System (Alternative #4)

CONSOLIDATION - ITEM	Quantity	Units	Cost per unit	COST (\$)
Distribution System Upgrade (see Table 2 for a detailed list of costs)	1	LS	218,455	218,455
New Water Main - 12-inch PVC (AWWA C900 Class 150, DR 18) - installed in asphalt	3,430	LF	158	543,312
Connection into City's existing 12-inch water main at intersection of Betteravia Road & A Street (with 2 valves)	1	LS	23,400	23,400
New Fire Hydrants WA-31 in dirt shoulder (every 350' max) - see Section F of City's Standard Specifications for details. Cost does not include a concrete pad.	8	EA	14,580	116,640
New Fire Hydrant WA-31 lateral across Betteravia	3	EA	20,280	60,840
2-inch Air Vac assembly WA-26A in dirt shoulder	1	EA	9,720	9,720
Final construction details	1	LS	---	60,000
Encroachment Permit	1	LS	6,000	6,000
Traffic Control along Betteravia new water main alignment	1	LS	17,200	17,200
Additional traffic control if 2 flaggers are also needed	240	HR	40	9,600
Easement on Mahoney Road for City of Santa Maria water main infrastructure (completed in design phase)	1	LS	0	0
Easement on Rayville Lane for City of Santa Maria water main infrastructure (completed in design phase)	1	LS	0	0
Easement south of Rayville Lane for City of Santa Maria water distribution pipe flushing (completed in design phase)	1	LS	0	0
City "Water Connection Fee & State Water Reimbursement Fee" - for 3/4-inch meters (residential)	11	EA	12,359	135,951
City "Water Connection Fee & State Water Reimbursement Fee" - for 3/4-inch meters (commercial)	2	EA	12,359	24,718
RWC existing well and well shed destruction	---	---	---	50,000
Removal and disposal of 25,000-gallon water storage tank	---	---	---	10,000
Engineering oversight during new water main construction	240	HR	150	36,000
Engineering (including as-built plans)	40	HR	150	6,000
Admin Costs - LAFCO	---	---	---	15,000
Admin Costs - Coordination with RWC Residents	27	HR	150	4,050
Subtotal of Consolidation Construction-Related Costs				1,346,886
Annual Operations and Maintenance (City of Santa Maria's responsibility)	--	--	--	0
20-Year Operations and Maintenance Cost (City of Santa Maria's responsibility)	--	--	--	0
20-year Capital Expenditures (City of Santa Maria's responsibility)	--	--	--	0
Subtotal of Operations & Maintenance, Capital Expenditure, and Administration Costs (20-years)				0
Project Lifecycle Costs (20-years)	--	--	--	1,346,886

Notes

LS = Lump Sum

LF = Lineal Feet

EA = Each

HR = Hour



Table 6
Alternative Comparison Summary

Consideration	Alt #1 No Action	Alt #2 Reverse Osmosis (R.O.) Treatment System	Alt #3 Install a New Well	Alt #4 Full Consolidation
Meets Regulatory Compliance	No	Maybe *	Maybe *	YES
Meets O&M Needs	No	YES	Uncertain if clean water could be found	YES
Financially Viable	No	Likely Not	Likely Not	YES
Long Term Sustainability	No	Likely Not	Likely Not	YES
Environmental Concerns	Minor; high nitrate concentrations into the septic systems	Minor to moderate; off-site disposal of brine stream; land disturbance to install new distribution system, treatment system, and water storage tank	Minor; land disturbance from new test well(s), distribution system, and water storage tank	Minor; land disturbance to install new water main and distribution system
Satisfy Public Concerns	No	Maybe *	Maybe *	YES
Water Rates	\$100 / month	~\$1,000+ / month	~ \$150+ / month	~ \$125 to \$200 / month ¹
Other considerations		The R.O. treatment system produces a brine + concentrated nitrate waste stream that would not be suitable to flow into septic systems. This waste stream is very expensive to dispose of.	The is no guarantee that we could find nitrate-free water via a new well. It's possible that even with a new well, an expensive treatment system would still be needed.	
Total Cost	0	5,160,005	1,394,455	1,346,886
Total Cost if new well is needed within 20-years for treatment Alt #2; and clean water cannot be found for new well Alt #3 requiring reverse osmosis treatment	0	6,192,005	6,336,005	1,346,886

Notes

Maybe* = This means the outcome is questionable. Primarily because Ray Water Company (RWC) would remain in business and be at least partially responsible for outcomes. Based on past experience and RWC's financial constraints, we were not able to confidently say "YES" for this items. As such, they are labeled "Maybe" and considered questionable.

1 = This estimate is based on the City of Santa Maria water rates effective 1/1/2022. \$125 per month water bill is for 4 people using 50-gallons each per day. \$200 per month water bill is for 4 people using 100-gallons each per day.

APPENDIX A

Environmental Analysis of Engineering Alternatives

Weber, Hayes & Associates

Environmental Analysis of Engineering Alternatives Ray Water Company

The project is needed because the Ray Water Company's (RWC) current water source is a well, which contains nitrate and arsenic concentrations above their respective drinking water Maximum Contaminant Levels. There is also an aging water storage tank, and aged components and appurtenances that are in poor condition and/or nearing the end of their useful life.

Three potential alternatives were considered to solve these problems:

- **Alternative 1** – No Action: Maintain existing system with no improvements. Water supply issues would not be addressed, and supply would still contain nitrates above the MCL
- **Alternative 2** – Treatment System for Nitrate & Arsenic: install a Reverse Osmosis (RO) treatment system to remove nitrate from the groundwater
- **Alternative 3** – Drilling a new well: drill deeper to find groundwater without significant nitrate or arsenic concentrations
- **Alternative 4** – Consolidation with an existing water system

Each of the project alternatives result in varying temporary and permanent environmental impacts, which are compared in the following table. When Alternatives have differing impacts on an environmental factor, the alternative with less impact is preferred and marked with a (+).

Environmental Alternatives Analysis – Ray Water Company				
Environmental Factor	Alternative 1: No Action	Alternative 2: Treatment System for Nitrate & Arsenic	Alternative 3: Drill a new well	Alternative 4: Preferred Project – Consolidation
Aesthetics	No Impact	No Impact	No Impact	No Impact
Agricultural and Forestry Resources	No Impact	No Impact	No Impact	No Impact
Air Quality	(+) No Impact	Construction-generated air pollutant emissions likely less-than-significant. Operational emissions for the proposed Project would be similar to existing.	Construction-generated air pollutant emissions likely less-than-significant. Operational emissions for the proposed Project would be similar to existing.	Construction-generated air pollutant emissions likely less-than-significant. Operational emissions for the proposed Project would be similar to existing.
Biological Resources	(+) No Impact	<i>In Process</i>	<i>In Process</i>	<i>In Process</i>

Environmental Alternatives Analysis – Ray Water Company				
Environmental Factor	Alternative 1: No Action	Alternative 2: Treatment System for Nitrate & Arsenic	Alternative 3: Drill a new well	Alternative 4: Preferred Project – Consolidation
Cultural and Tribal Resources	No Impact	<i>In Process</i>	<i>In Process</i>	<i>In Process</i>
Geology and Soils	No Impact	No Impact. No unique geologic features identified.	No Impact. No unique geologic features identified.	No Impact. No unique geologic features identified.
Greenhouse Gas Emissions	No Impact	Project construction and operations would adhere to statewide efforts to minimize GHG emissions. Short-term impacts of construction would likely have a less-than-significant impact.	Project construction and operations would adhere to statewide efforts to minimize GHG emissions. Short-term impacts of construction would likely have a less-than-significant impact.	(+) Project construction and operations would adhere to statewide efforts to minimize GHG emissions. Short-term impacts of construction would likely have a less-than-significant impact.
Hazards and Hazardous Materials	No Impact	No Impact	No Impact	No Impact.

Environmental Alternatives Analysis – Ray Water Company				
Environmental Factor	Alternative 1: No Action	Alternative 2: Treatment System for Nitrate & Arsenic	Alternative 3: Drill a new well	Alternative 4: Preferred Project – Consolidation
Hydrology and Water Quality	(+) No Impact	The project would involve ground disturbance such as trenching that could result in temporary impacts on surface water quality. Accidental spill controls and best stormwater construction management practices would be implemented to ensure impacts remain less than significant.	The project would involve ground disturbance such as trenching that could result in temporary impacts on surface water quality. Accidental spill controls and best stormwater construction management practices would be implemented to ensure impacts remain less than significant.	The project would involve ground disturbance such as trenching that could result in temporary impacts on surface water quality. Accidental spill controls and best stormwater construction management practices would be implemented to ensure impacts remain less than significant.
Land Use and Planning	No Impact	No Impact	No Impact	No Impact
Mineral Resources	No Impact	The project area is not in an area of known mineral resource potential and would not result in the loss of	The project area is not in an area of known mineral resource potential and would not result in the	The project area is not in an area of known mineral resource potential and would not result in the loss of availability of a

Environmental Alternatives Analysis – Ray Water Company				
Environmental Factor	Alternative 1: No Action	Alternative 2: Treatment System for Nitrate & Arsenic	Alternative 3: Drill a new well	Alternative 4: Preferred Project – Consolidation
		availability of a valuable mineral resource.	loss of availability of a valuable mineral resource.	valuable mineral resource.
Noise	No Impact	During construction, a minor increase in noise levels is anticipated. Construction-related noise and ground borne vibration during construction would be temporary and occur only during daylight hours and have a less than significant impact on the adjacent residences.	During construction, a minor increase in noise levels is anticipated. Construction-related noise and ground borne vibration during construction would be temporary and occur only during daylight hours and have a less than significant impact on the adjacent residences.	During construction, a minor increase in noise levels is anticipated. Construction-related noise and ground borne vibration during construction would be temporary and occur only during daylight hours and have a less than significant impact on the adjacent residences.
Population and Housing	No Impact	The project would neither induce growth nor displace existing housing. No replacement housing would be required.	The project would neither induce growth nor displace existing housing. No replacement housing would be required.	The project would neither induce growth nor displace existing housing. No replacement housing would be required.

Environmental Alternatives Analysis – Ray Water Company				
Environmental Factor	Alternative 1: No Action	Alternative 2: Treatment System for Nitrate & Arsenic	Alternative 3: Drill a new well	Alternative 4: Preferred Project – Consolidation
Public Services	No Impact –water supply does not meet Nitrate MCL	The project would not cause impacts on government facilities or negatively affect fire/police protection, schools, parks, or public facilities. The improvements to the water facilities would ensure that Ray WC had adequate drinking water supplies.	The project would not cause impacts on government facilities or negatively affect fire/police protection, schools, parks, or public facilities. The improvements to the water facilities would ensure that Ray WC had adequate drinking water supplies, assuming Nitrate-free water is found.	The project would not cause impacts on government facilities or negatively affect fire/police protection, schools, parks, or public facilities. The improvements to the water facilities would ensure that Ray WC had adequate drinking water supplies.
Recreation	No Impact	There are no recreational facilities in or adjacent to the project area.	There are no recreational facilities in or adjacent to the project area.	There are no recreational facilities in or adjacent to the project area.
Transportation and Traffic	(+) No Impact	No Impact	No Impact	Disruption to local traffic during pipeline installation`

Environmental Alternatives Analysis – Ray Water Company				
Environmental Factor	Alternative 1: No Action	Alternative 2: Treatment System for Nitrate & Arsenic	Alternative 3: Drill a new well	Alternative 4: Preferred Project – Consolidation
Utilities and Service Systems	No Impact	No Impact	No Impact	Consolidation with City of Santa Maria would have no significant impact.

APPENDIX B

Consolidation Alternative 90% Design Drawings

Weber, Hayes & Associates

Water System Consolidation

**Consolidation of Ray Water Company into the City of Santa Maria Water System
Rayville Lane and West Betteravia Road
Santa Barbara County, CA
30% Plans**

Project Team

Project Management & Coordination / Water System Design and Engineering

Craig Drizin

Weber, Hayes and Associates

(831) 722-3580

Environmental Consultants

Denise Duffy

Denise Duffy and Associates

(831) 373-3580

Survey

Kenny Fargen

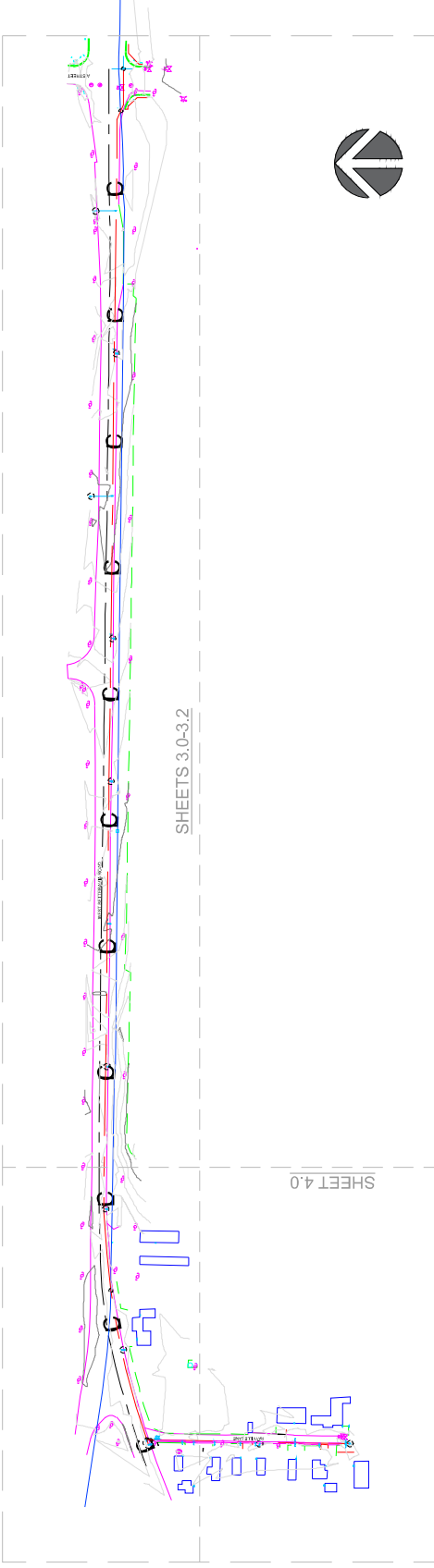
Fargen Surveys, Inc.

(805) 934-5727

SUMMARY OF WORK	
<u>INSTALL</u>	3392 LF 12" AWWA C900 PVC 495 LF 8" AWWA C900 PVC
<u>ABANDON</u>	APPROX. 500 LF OLD UNKNOWN WATER MAIN PIPE
<u>HYDRANT</u>	(12) 6-INCH FIRE HYDRANTS
<u>SERVICE</u>	(13) SERVICE CONNECTIONS
<u>TIE-IN</u>	



Location Map



- Sheet WA-1.0:
- Sheet WA-1.1:
- Sheet WA-2.0:
- Sheet WA-3.0:
- Sheet WA-3.1:
- Sheet WA-3.2:
- Sheet WA-4.0:
- Sheet WA-5.0:
- Sheet WA-6.0:

- Cover Sheet
- General Notes
- Site Layout Plan
- West Betteravia Rd Water Main Alignment
- West Betteravia Rd Water Main Alignment
- West Betteravia Rd Water Main Alignment
- Rayville Lane Water Distribution Plan & Profile
- Construction Details
- Fargen - Topographic Survey

LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE ONLY APPROXIMATE. THE EXISTING UTILITIES SHOWN WERE PLOTTED USING INCOMPLETE AND IMPRECISE RECORDS. IT SHOULD BE EXPRESSLY UNDERSTOOD THIS INFORMATION DOES NOT NECESSARILY REPRESENT ACTUAL OR COMPLETE SITE CONDITIONS OR SHOW DETAILS OF EXACT LOCATION, DEPTH OR OTHER CONSTRUCTION FEATURES OF THESE UTILITIES. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO THE COMPLETENESS OR ACCURACY OF THIS INFORMATION IS SET FORTH HEREIN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THIS INFORMATION PRIOR TO EXCAVATION. THE CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" AT 1-800-642-2444 OR 8-1-1 FOR THE MARKING OF UNDERGROUND FACILITIES AT LEAST 2 DAYS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL HAND DIG AND LOCATE ALL UTILITIES THAT MAY BE AFFECTED BY THE NEW FACILITIES IN THIS CONTRACT TO VERIFY ACTUAL DEPTH AND LOCATION OF UTILITIES AND REPORT POTENTIAL CONFLICTS TO THE OWNER'S REPRESENTATIVE. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES WHETHER SHOWN OR NOT AND IS RESPONSIBLE FOR ALL DAMAGES TO EXISTING UTILITIES.

REVISIONS		APPROVED	DATE	SCALE	DATE	APPROVED
REV. BY	ITEM	CD	06/21			
AR	30% DESIGN DEVELOPMENT	CD	10/21			
AR	90% REVIEW					

Ray Water Company Consolidation		CITY OF SANTA MARIA DEPARTMENT OF PUBLIC WORKS	
Rayville Lane, Santa Barbara County	Job # : 2T059	DRAWN BY: RP	CHECKED BY:
		DATE: 06/22/2021	SHEET 1 OF 9 SHEETS
			REFERENCES: WA-1.0



Water System Consolidation

Consolidation of Ray Water Company into the City of Santa Maria Water System Rayville Lane and West Betteravia Road Santa Barbara County, CA

GENERAL NOTES

- PLANS**
All plans must be signed by the City Engineer within the past year and all work must be performed to the satisfaction of the City Engineer. These plans shall include all as-built revisions prior to the acceptance of improvements by City.
- QUALIFICATIONS**
The Contractor shall possess a Class "A" General Engineering Contractor License under the provisions of the Business and Professions Code of the State of California to do the type of work contemplated and shall be skilled and regularly engaged in the general class or type of work called for under this contract.
- CODES**
Construction and materials shall be in accordance with the California Waterworks Standards, Title 17 and 22 of the California Code of Regulations, Title 24 California Code of Regulations, California Building Code (CBC), the California Plumbing Code (CPC), the California Standard Plans and Specifications, Division of the State Architect Requirements, State Fire Marshall Regulations, National Electrical Code, Americans with Disabilities Act, all other State and Federal laws, all locally enforced codes and authorities, and the County of Santa Barbara Design Criteria. Should the Contractor discover work within the Plans in non-conformance with these requirements, Contractor shall immediately submit a written Request for Information (RFI) to the Owner's Representative.
- STANDARD SPECIFICATIONS**
All wetted components must be NSF-61 certified. Construction must comply with the City of Santa Maria Standards.

Construction and materials shall be as specified and as required by the latest editions of the City of Santa Maria Standard Plans and City of Santa Maria Standard Specifications. Should the Contractor discover work within the Plans in non-conformance with these requirements, Contractor shall immediately submit a written Request for Information (RFI) to the Owner's Representative.

PERMITS
Contractor shall inform themselves of, and fully adhere to the rules, regulations and requirements of all governmental agencies having jurisdiction over the work, and all federal, state, and local laws, codes, and regulations regarding construction activity. Contractor shall investigate and procure any and all permits that may be required on the project.

Contractor to obtain a permit from Department of Industrial Relations, Division of Occupational Safety & Health. Call OSHA at (818) 901-5403 for further information. (Health & Safety Code 17922.5)

Contractor shall obtain an encroachment permit from the City of Santa Maria Department of Public Works - Engineering Division at 110 S. Pine Street, Suite Z21, prior to performing any work within public right-of-way or easement.

SITE SAFETY
The Contractor agrees that, in accordance with generally accepted construction practices, Contractor will be required to assume sole and complete responsibility for job site conditions, construction means, methods and techniques, and for safety measures, precautions, and programs at the project site during the course of the project, including safety of all persons and property; that this requirement shall be made to apply continuously and not be limited to normal work hours. It shall be the Contractor's sole responsibility to design and provide adequate trench and excavation shoring, bracing, and other safety systems to be used during construction, requiring the protection of life and property during construction.

Contractor to take necessary precautions against sewage, gases, solvents, compounds, acids, preservatives, fuels, and other hazardous materials. All construction shall be performed in conformance with Cal/OSHA requirements. The Contractor agrees to defend, indemnify, and hold the Design Engineer of Record harmless from any and all liability, real or alleged, in connection with the performance of work on this project, excepting liability arising from the sole negligence of the Design Engineer of Record.

PUBLIC SAFETY
The Contractor shall provide for the safety of traffic, and the public in accordance with the provisions of Section 7-1.09 of the Standard Specifications whenever the Contractor's operations create a hazardous condition including, but not limited to, fencing, railing, barricades, lights, signs, and other devices to prevent accidents, damage, or injury to the public.

All traffic control devices shall be installed and conform to State of California Manual on Uniform Traffic Control Devices (CA MUTCD).

performed, the quantities of materials to be furnished, and as to the requirements of the Plans and Specifications. The Contractor shall make a detailed and thorough study of these Plans and Specifications in their entirety prior to any work on the jobsite. The Contractor is to coordinate these drawings with all other trade disciplines for the completed work.

Contractor shall have copies of the approved plans and specifications for this project on the site at all times, and contractor shall be familiar with all applicable standards and specifications.

INTENT
It is the intent of these Plans and General Notes/Specifications that the work shall result in complete, finished, operating, satisfactory, and functional systems and no extra compensation will be allowed for anything omitted but fairly implied for systems' function. Where detail references in the Plans have been omitted, the Contractor is responsible for the construction to be fully shown or detailed on the Plans; their construction shall be as shown on the plans or details for similar best quality features. All typical details shall apply unless noted otherwise. The Owner's Representative best quality interpretation is deemed to control.

PRECEDENCE
All figured dimensions shall take precedence over scaled measurements. In the event of a discrepancy occurring or between the Plans and the Specifications, the Specifications shall control over the Plans.**

ADDENDA
If discrepancies, apparent errors, or omissions are found in the Plans and Specifications, or any differences are found between the Plans and conditions in the field, the Contractor shall submit a written Request For Information (RFI). If the Contractor proceeds with the work affected without instructions from the Owner's Representative, the Contractor shall take full responsibility for any damage or defect to the work. The Contractor shall be responsible for any alterations or substitutions must be presented directly to the Owner's Representative in writing, accompanied by a detailed sketch and/or photograph as required, for review, before any approval will be given and before proceeding with the work.

VERIFICATION
The Contractor shall be responsible for field-verifying all existing conditions, dimensions, levels, and materials for all layout and construction work and shall submit a Request for Information (RFI) to the Owner's Representative for any discrepancies identified or proceeding with the work. The Contractor shall identify, correct, and coordinate the work so that no discrepancies exist.

NOTICE TO PROCEED
No work shall commence without an official notice to proceed from the Owner.

EXISTING FACILITIES
Contractor shall protect all existing facilities and shall repair all damaged facilities. Contractor shall be responsible for all utility cutting, fitting, or patching of his work that may be required to make its several parts fit together properly and shall not endanger any other work by cutting, or otherwise altering the total work or any part of it. Contractor shall exercise care to protect any existing construction so that integrity and finish are not impaired. All patching, repairing, and replacing of materials and surfaces cut or damaged in execution of work shall be done with appropriate materials so the surfaces replaced will, upon completion, match surrounding similar surfaces.

Contractor is responsible for preservation and/or perpetuation of all existing monuments which control subdivisions, tracts, boundaries, streets, highways, or other rights-of-way, easements, or provide survey control which will be disturbed or removed due to contractor's work. Contractor shall provide a minimum of ten (10) working days notice to project engineer/surveyor prior to disturbance or removal of existing monuments. Project engineer/surveyor shall coordinate with contractor to reset monuments or provide permanent witness monuments and file the required documentation with the County Surveyor pursuant to Business and Professions Code section 8771.

HOUSEKEEPING
The job site shall be maintained daily in a neat, clean, orderly condition free of debris and litter, shall not be unreasonably encumbered with any materials or equipment. Materials stored on the site shall be properly stacked and protected to prevent damage and deterioration until use. Failure to protect materials may be cause for rejection of work. Dust shall be controlled and mud and debris shall be cleaned off public right of ways.

All streets, alleys, vehicular ways, sidewalks, and haul routes shall be kept clear of any debris or obstructions. Areas shall be cleaned at the end of each work day. Failure to do so will result in a "Stop Work" notice. Said notice will not be released until the area has been adequately cleaned.

WORKING HOURS
Normal working hours shall be limited to times as directed by City of Santa Maria and no work shall be done on Sundays or legal holidays unless written permission is given.

SUBMITTALS
Contractor shall provide a traffic control plan to the Department of Public Works at least two (2) weeks prior to commencement of work prior to issuance of encroachment permit (Permit work only)

No work shall commence with unapproved materials. Submittals and shop drawings shall be supplied to the Owner's Representative for review for the following:

- All material and equipment items
- Water Pollution Control Plan
- Utility Interruption Plan

The Contractor shall supply submittals sufficiently detailed to demonstrate compliance with the Plans and Specifications. Each submittal shall be sequentially numbered, dated, titled, and checked by the Contractor. The Owner's Representative will require 10 days for review. The Contractor's responsibility for errors, omissions, and deviations is not relieved by the submittal review.

All comparison test results within right-of-way and easements shall be submitted directly to the Public Works Design Engineering Division by approved testing company at time of first availability of results.

OBSERVATION
Contractor shall notify the Department of Public Works at least one (1) working day prior to beginning of construction at (804) 925-0951, ext. 2225.

Contractor shall notify the Owner's Representative 48 hours in advance for the following observations:

- Utility pipes prior to backfill
- Reinforcing steel prior to concrete placement
- Utility pipe pressure and leakage testing

UNDERGROUND UTILITIES
Contractor shall contact "Underground Service Alert" (USA) at least two (2) working days prior to beginning of construction at 811. (Government Code Section 4216)

It shall be the responsibility of the contractor to verify exact location of all underground utilities and to coordinate with local utility agencies with California OSHA regulations. Contractor shall coordinate new underground piping, connections to existing piping and electrical/internet conduits with civil earthwork.

PRODUCTS
All components touching wetted surfaces must be NSF/ANSI 61 Certified. Engineer must approve any component substitutions

20.1. PVC Pipe
20.1.1. Domestic pipe shall be Schedule 80 PVC or AWWA C900 Class 150.
20.1.2. Fire service pipe shall be AWWA C900 Class 200, UL/FM.
20.1.3. Fittings: AWWA C111, cast iron.
20.1.4. Joints: ASTM D3139 compression gasket ring.
20.1.5. Joint restraint: ASTM F1674 EBBA Iron Megalug Series 1100, 1100SD or 1500 as required or approved equal

20.2. Gate Valves
20.2.1. 20" and Smaller: Brass or Bronze body non-rising stem, inside screw, single wedge or disc compression ends, with control rod, and extension box and in accordance with AWWA Standard C800.
20.3. Valve Boxes
20.3.1. Valve Boxes shall be a G-5 box as manufactured by Christy Concrete Products, Inc. or equal and shall be rated for H-20 traffic loading.
20.3.2. Standard gate valve box lids shall be marked "W" or "WATER", with an arrow and an "O.L." to indicate the direction in which the valve opens.

20.4. Underground Pipe Markers
20.4.1. Metallic Pipe: Plastic Ribbon Tape: Bright colored, continuously printed, minimum 6 inches wide by 4 mil thick, manufactured for direct burial service.
20.4.2. Non-Metallic Pipe: Trace Wire: Magnetic detectable conductor, brightly colored plastic covering. Imprinted with "Water Service" in large letters.

20.5. Bedding and Cover Materials
20.5.1. Bedding and Cover: Clean sand or Controlled Low Strength Material, per Geotechnical Investigation.
20.5.2. Soil Backfill from Above Pipe to Finish Grade: Imported engineered fill or select native fill with no rocks over 2 inches in diameter

20.6. Traffic

CULTURAL
If previously unidentified cultural materials are unearthed during construction, it is CEQA policy that work be halted in that area until a qualified archaeologist can evaluate the nature and significance of the find

BIOLOGICAL

20.6.1. Pavement delineation material, manufacturing, packaging, labeling, and application shall conform to State of California Standard Specifications latest edition. All traffic stripes and pavement markings shall be installed per current approved standards.

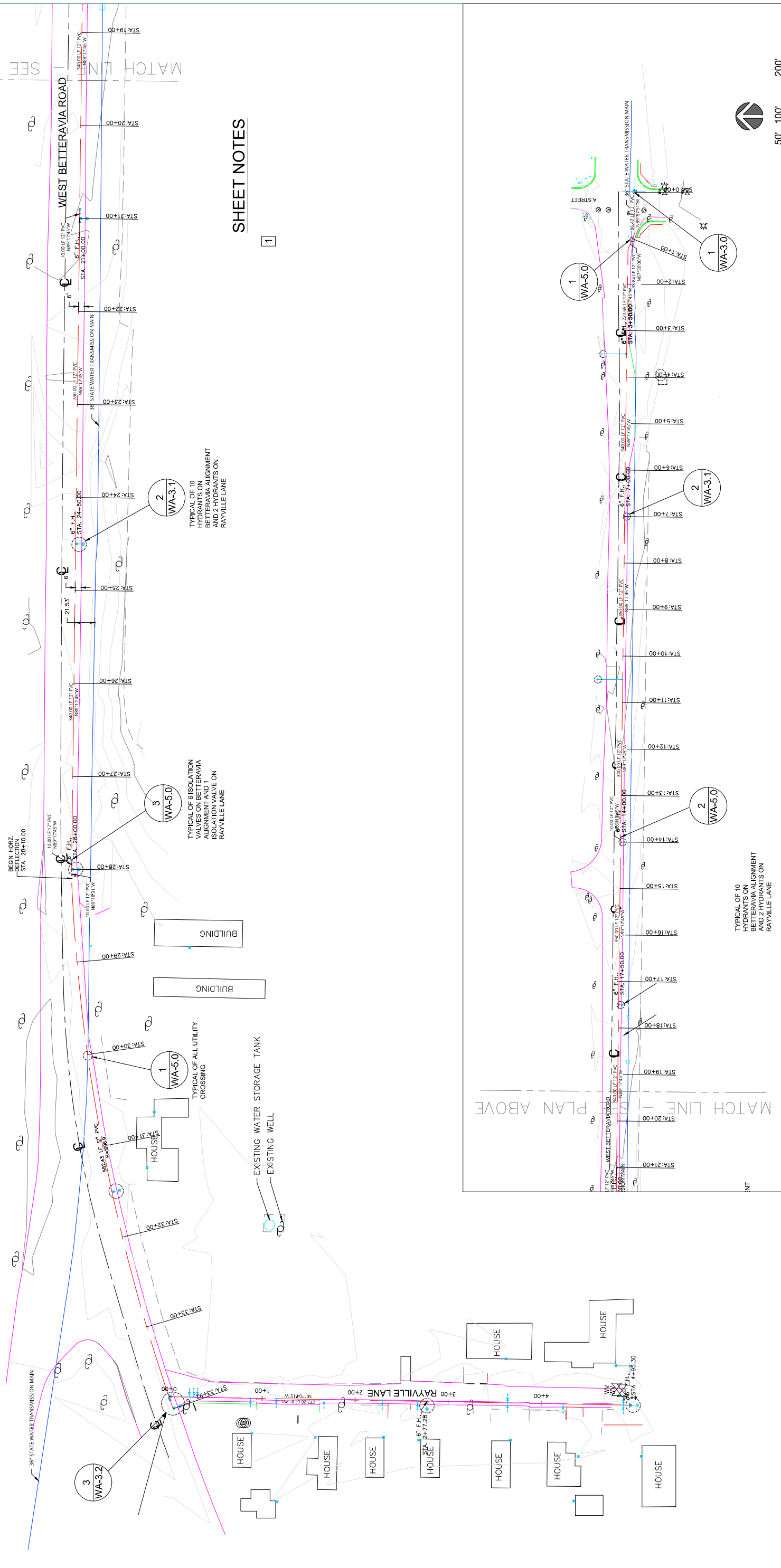
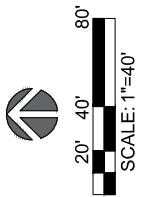
20.7. Accessories
20.7.1. Concrete for Thrust Blocks: Concrete type specified in Santa Barbara County Design Criteria.

DISINFECTON OF WATER PIPING SYSTEM
21.1. All water piping shall be chlorinated and disinfected per AWWA C651: Disinfecting Water Main.
21.2. Where determined by the Engineer, the Contractor shall provide taps and shall install corporation stops in the pipelines for the introduction of the chlorine solution and for sampling purposes at no cost to the owner. 48 hours, and no connections to existing lines of services shall be made until the pipeline has passed the laboratory tests.
21.4. Samples shall be gathered and tests conducted by WHA. Required by the Engineer.
21.5. The new facilities shall remain isolated and out of service until satisfactory test results have been obtained which meet the requirement of the Division of Drinking Water and the Engineer has accepted the results as indicative of the bacteriological condition of the facilities. From the initial sampling, the disinfection process shall be repeated until acceptable test results are reported. The follow-up sampling costs shall be borne by the Contractor.

SYMBOLS

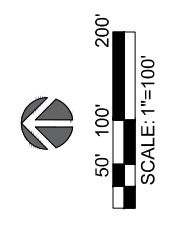
- W WATER VALVE
- X FIRE HYDRANT
- GAS VALVE OR METER
- SEWER MANHOLE OR CLEANOUT
- STORM DRAIN MANHOLE
- TRAFFIC FLOW
- DRAINAGE FLOW
- HANDICAP SPACE
- AREA LIGHT
- SIGN POST
- UTILITY POLE
- WELL
- MONUMENT
- STREET LIGHT
- WATER METER
- CATCH BASIN OR OTHER STRUCTURE AS NOTED

REVISIONS <table border="1"> <thead> <tr> <th>REV. BY</th> <th>DATE</th> <th>APPROVED</th> <th>DATE</th> <th>ITEM</th> </tr> </thead> <tbody> <tr> <td>RP</td> <td>06/21</td> <td>CD</td> <td>06/21</td> <td>30% DESIGN DEVELOPMENT</td> </tr> <tr> <td>RP</td> <td>10/21</td> <td>CD</td> <td>10/21</td> <td>90% REVIEW</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		REV. BY	DATE	APPROVED	DATE	ITEM	RP	06/21	CD	06/21	30% DESIGN DEVELOPMENT	RP	10/21	CD	10/21	90% REVIEW											CITY OF SANTA MARIA DEPARTMENT OF PUBLIC WORKS APPROVED: _____ DATE: 6/23/2021 SHEET: 2 OF 9 SHEETS REFERENCES: _____ FILE NO.: WA-1.1	
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 Weber, Hayes & Associates Hydrogeology and Environmental Engineering 130 Westgate Drive, Watsonville, CA 95076 (831) 772-3586 / www.weber-hayes.com		Ray Water Company Consolidation Job #: 2T059 Rayville Lane, Santa Barbara County																										



SHEET NOTES

1



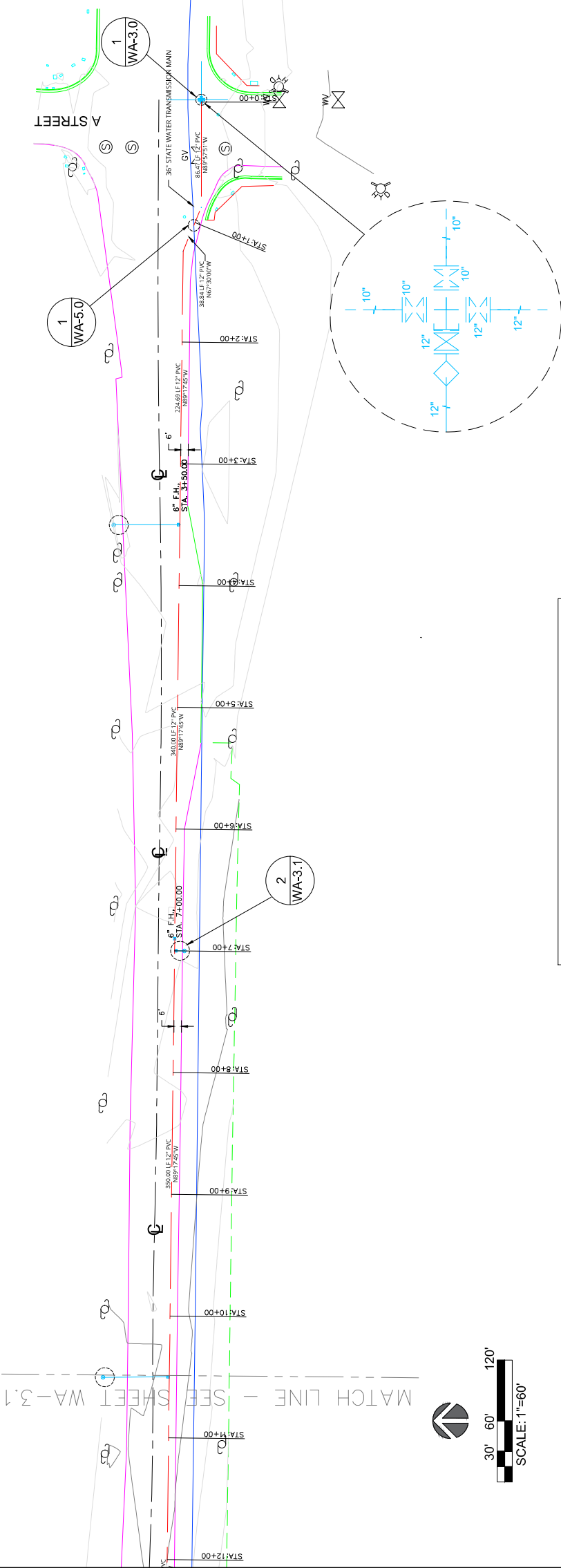
MATCH LINE - SEE PLAN ABOVE

Ray Water Company Consolidation		CITY OF SANTA MARIA DEPARTMENT OF PUBLIC WORKS		DRAWN BY: RP
Rayville Lane, Santa Barbara County		Job #: 2T059		CHECKED BY:
Job #: 2T059		Job #: 2T059		DATE: 6/22/2021
Job #: 2T059		Job #: 2T059		SHEET: 3 OF 9 SHEETS
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Job #: 2T059		Job #: 2T059		FILE NO. WA-2.0

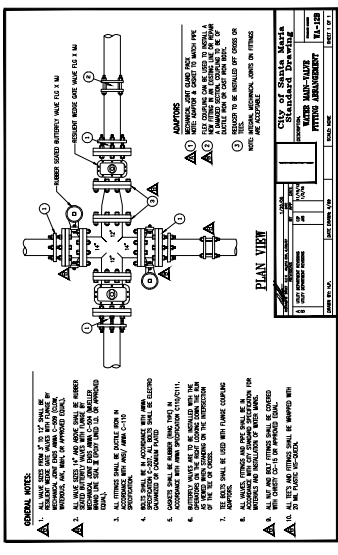
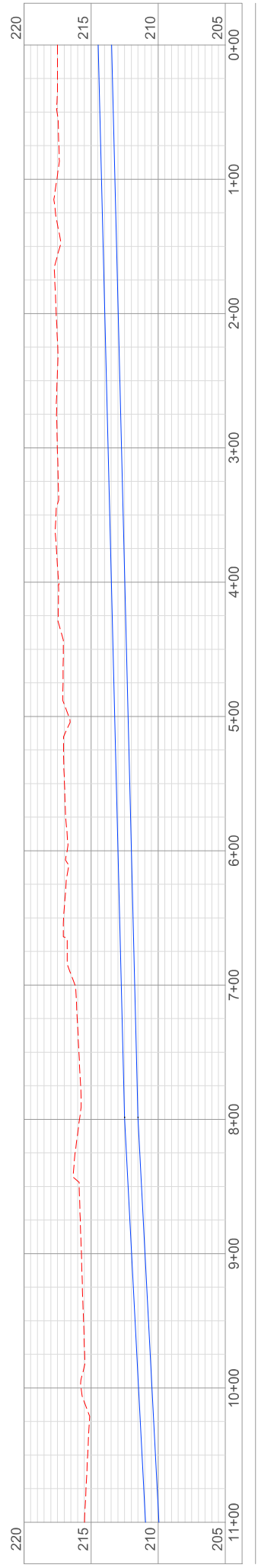
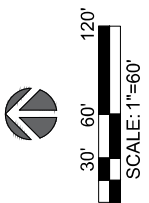
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 Weber, Hayes & Associates Hydrogeology and Environmental Engineering 1000 West Santa Barbara Street, Suite 200 Santa Barbara, CA 93101 (805) 964-3880 / www.weber-hayes.com	
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MATCH LINE - SEE SHEET WA-3.1



12" WATER LINE - WEST BETTERAVIA ROAD



WATER MAIN- VALVE
FITTING ARRANGEMENT

1

NOTES

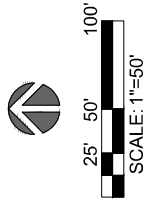
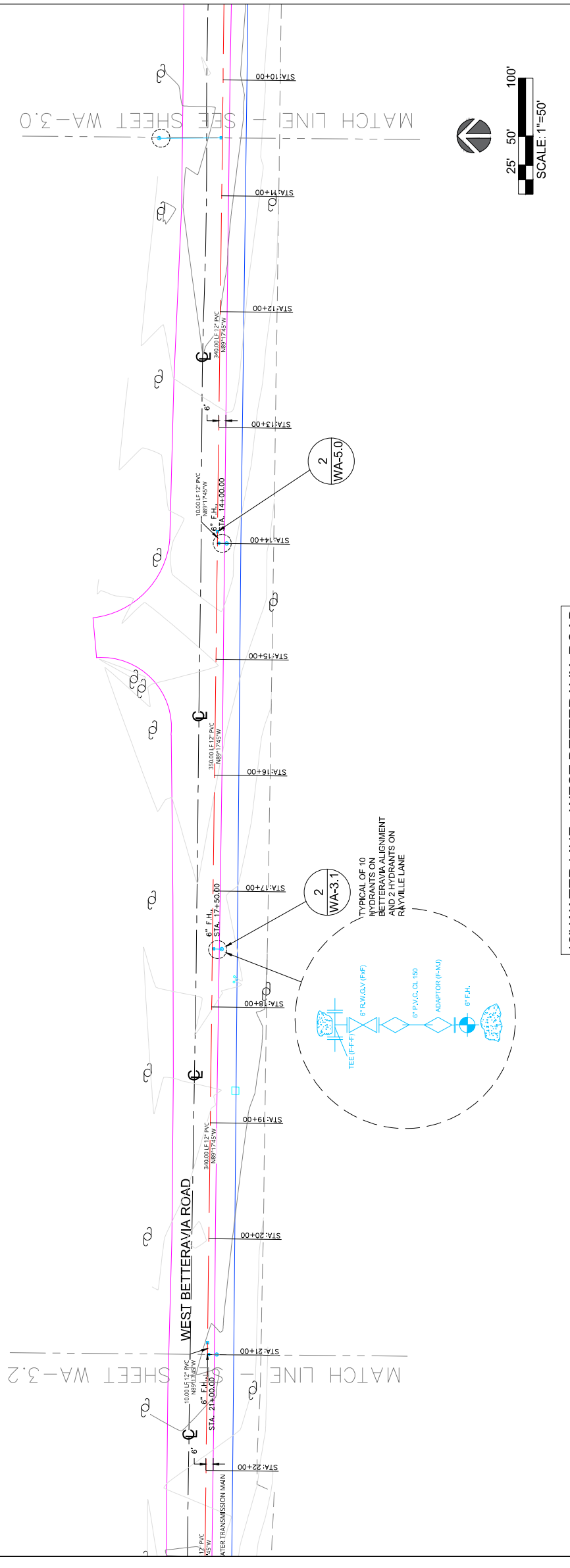
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2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY FIELD LOCATES AND POT-HOLING OF SUBSURFACE UTILITIES. ENGINEER AND CITY SHALL BE NOTIFIED OF ANY POTENTIAL CONFLICTS.
3. CONTRACTOR SHALL LOCATE THE 36" STATE WATER TRANSMISSION MAIN
4. PIPE LENGTH LABELS SHOWN IN PLAN VIEW DENOTE THE HORIZONTAL DISTANCE BETWEEN HORIZONTAL FITTINGS, AND DO NOT ACCOUNT FOR VERTICAL BENS OR DEFLECTIONS.
5. NEW 12" WATER MAIN SHALL BE 6' FROM THE SOUTH EDGE OF PAVEMENT ON BETTERAVIA RD, AS ACCEPTED BY THE CITY OF SANTA MARIA
6. NEW 12" WATER MAIN SHALL BE A MINIMUM OF 10- FEET HORIZONTALLY FROM THE STATE WATER TRANSMISSION MAIN
7. ALL WATER MAINS SHALL BE AWWA C900 PVC

Ray Water Company Consolidation		CITY OF SANTA MARIA DEPARTMENT OF PUBLIC WORKS		DRAWN BY: RP
Revisions		APPROVED:	DATE:	CHECKED BY:
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Job #: 2T059		REFERENCES: 4 OF 9 SHEETS		
Rayville Lane, Santa Barbara County		FILE NO. WA-3.0		

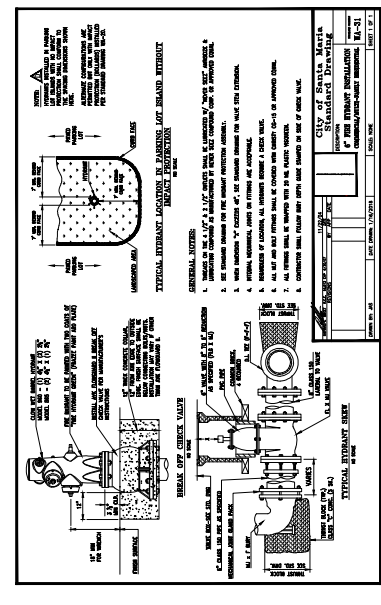
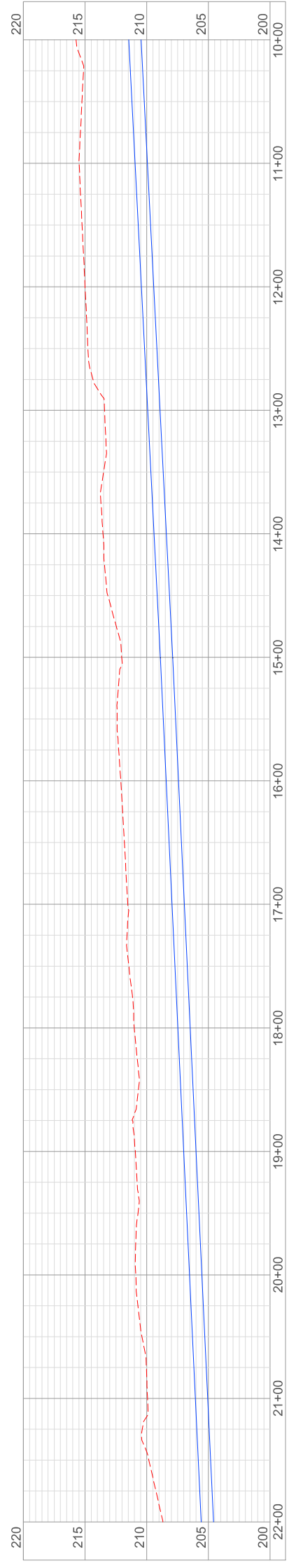


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12" WATER LINE - WEST BETTERAVIA ROAD



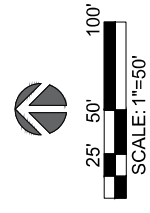
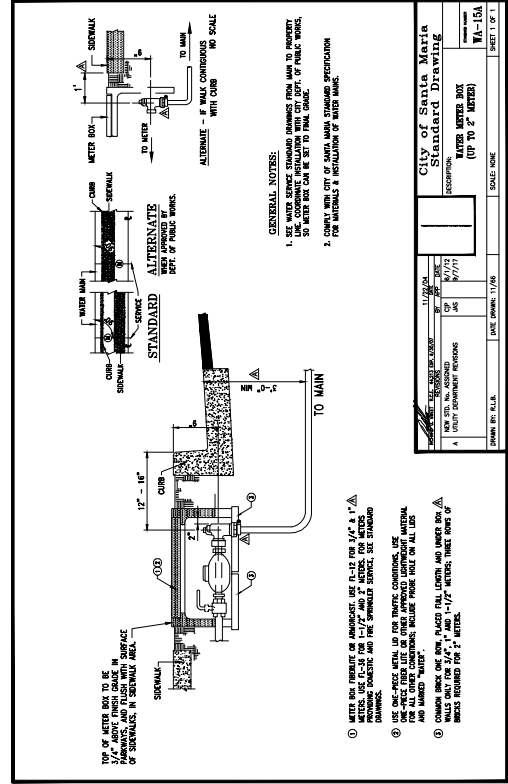
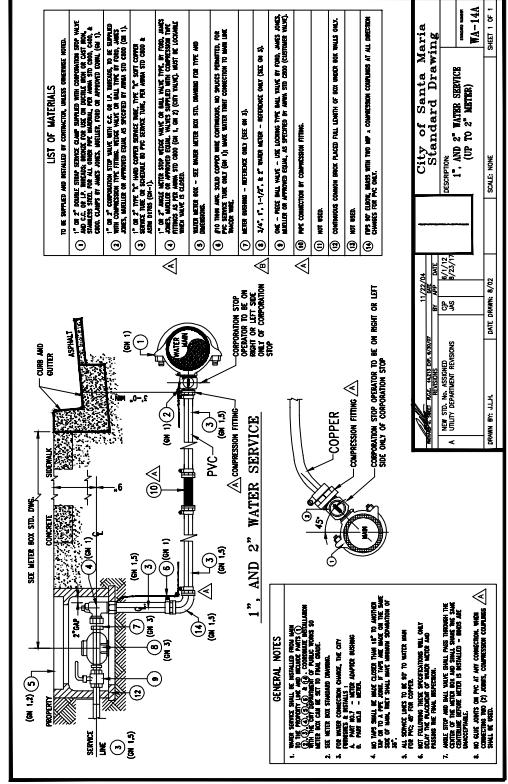
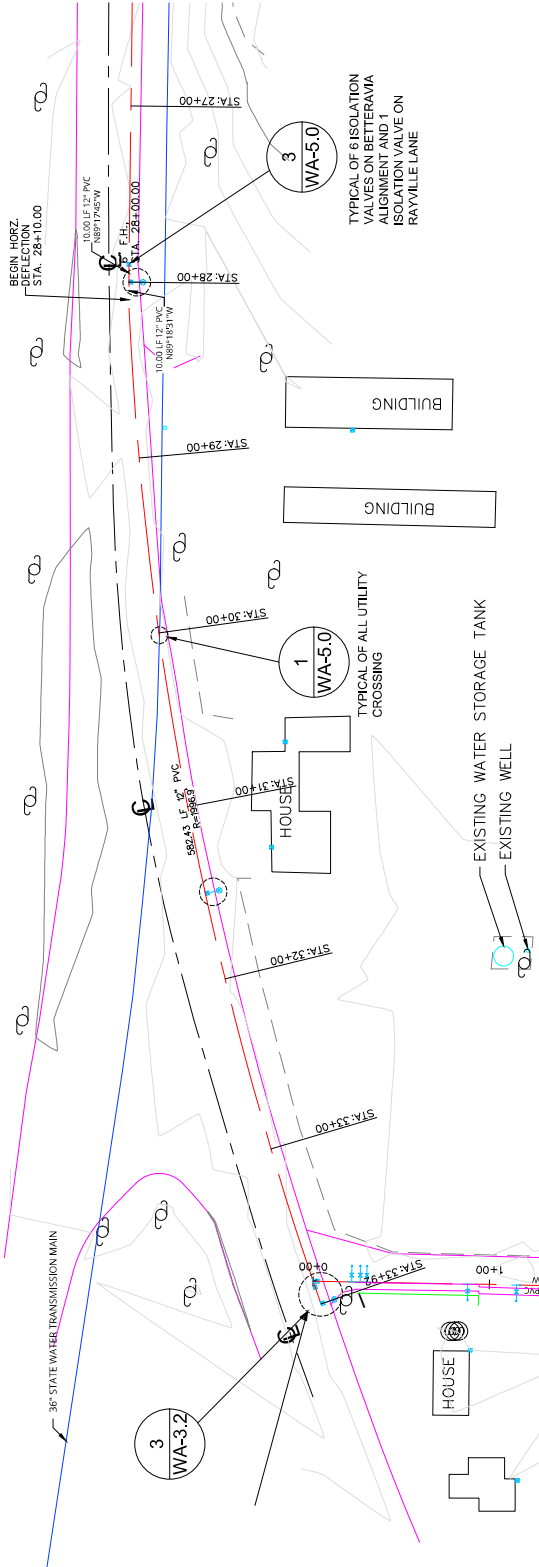
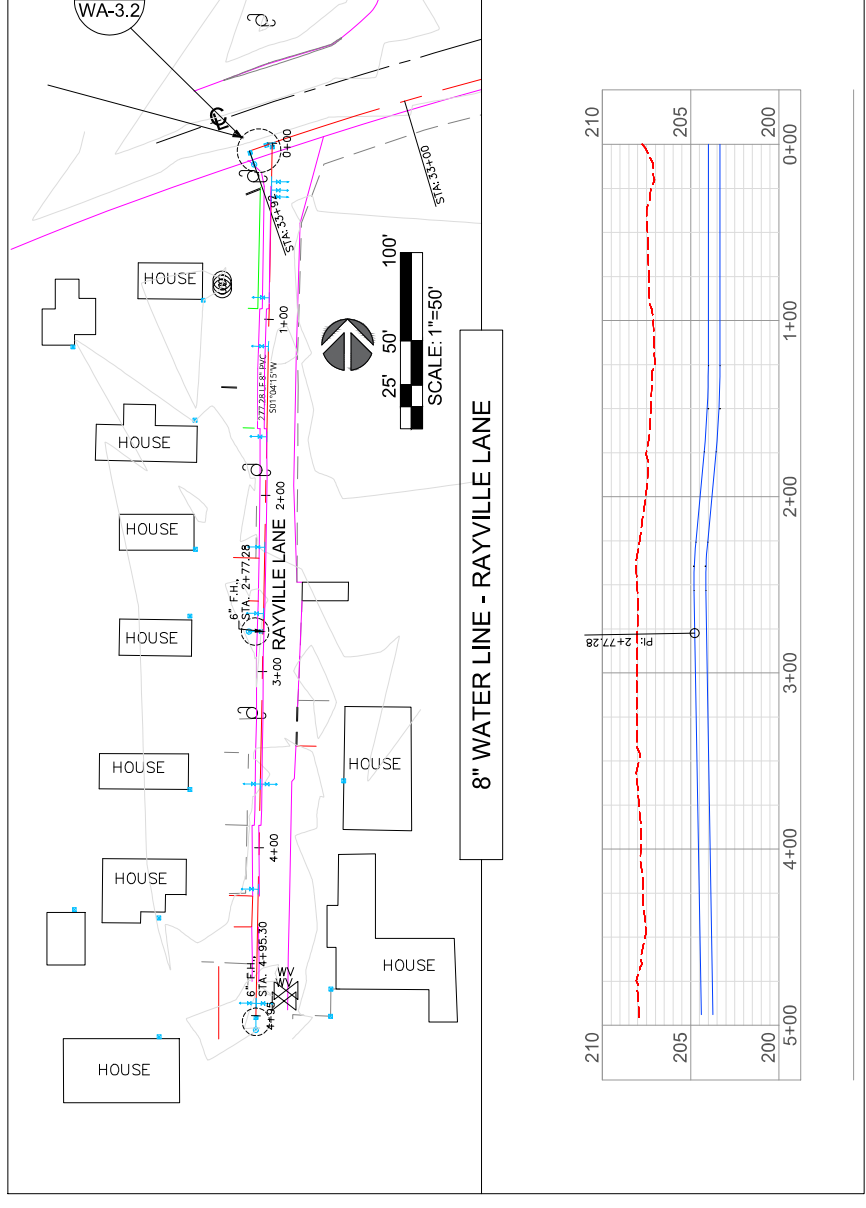
6" FIRE HYDRANT DETAIL

2

<p>Ray Water Company Consolidation</p>		<p>CITY OF SANTA MARIA DEPARTMENT OF PUBLIC WORKS</p>												
<p>Rayville Lane, Santa Barbara County</p>	<p>Job #: 2T059</p>	<p>APPROVED: _____ DATE: 06/21</p>	<p>CHECKED BY: RP</p>											
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<p>WEST BETTERAVIA ROAD ALIGNMENT</p>		<p>SHEET 5 OF 9 SHEETS</p>	<p>REFERENCES:</p>											
<p>WA-3.1</p>		<p>FILE NO.</p>	<p>WA-3.1</p>											

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Ray Water Company Consolidation Rayville Lane, Santa Barbara County		Job #: 2T059		DRAWN BY: RP CHECKED BY: DATE: 6/22/2021 SHEET: 7 OF 9 SHEETS REFERENCES: FILE NO. WA-4.0	
CITY OF SANTA MARIA DEPARTMENT OF PUBLIC WORKS		APPROVED: [Signature] DATE: 10/21		APPROVED DATE: 06/21 CD: 30% DESIGN DEVELOPMENT CD: 30% REVIEW	
REVISIONS ITEM DATE		REVISIONS ITEM DATE		CITY OF SANTA MARIA STANDARD DRAWING (SEE TITLE SHEET) WA-1(A)	



APPENDIX C

Fire Prevention Flow Calculations

Weber, Hayes & Associates

Fire Prevention Flow Calculations

We used Bernoulli’s Equation for water flow in pipes to demonstrate that our water main and distribution pipe design meets California fire prevention flow (fire flow) requirements. Our fire flow calculation methodology is summarized in the sections below. Detailed fire flow calculations are attached at the end of this document.

Step 1: Determine the minimum fire flow requirement based on California Fire Code Table B105.1

- The largest structure associated with Ray Water Company is approximately 3,900-square-feet and is located at the south end of Rayville Lane, on the east side of the street. The largest structure square footage is used to determine the required fire flow (per Table B105.1 below).
- We assumed this structure to be the most conservative construction Type V-B^b (per Table B105.1 below). This construction type is associated with the highest required fire prevention flow.
- Table B105.1 specifies a required fire flow of 1,750 gallons per minute (gpm) for a 3,900-square-foot structure of construction type Type V-B^b. See table below.

TABLE B105.1
MINIMUM REQUIRED FIRE-FLOW AND FLOW DURATION FOR BUILDINGS

FIRE-FLOW CALCULATION AREA (square feet)					FIRE-FLOW (gallons per minute) ^c	FLOW DURATION (hours)
Type IA and IB ^b	Type IIA and IIIA ^b	Type IV and V-A ^b	Type IIB and IIIB ^b	Type V-B ^b		
0-22,700	0-12,700	0-8,200	0-5,900	0-3,600	1,500	2
22,701-30,200	12,701-17,000	8,201-10,900	5,901-7,900	3,601-4,800	1,750	
30,201-38,700	17,001-21,800	10,901-12,900	7,901-9,800	4,801-6,200	2,000	
38,701-48,300	21,801-24,200	12,901-17,400	9,801-12,600	6,201-7,700	2,250	
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7,701-9,400	2,500	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9,401-11,300	2,750	

- The fire hydrant nearest this largest structure is at the south end of Rayville Lane. This fire hydrant must be able to provide 1,750-gpm fire flow at 20-pounds per square inch (PSI) for 2-hours. Table B105.1 is found in Appendix B of the California Fire Code, *Fire Flow Requirements for Buildings*.

- We anticipate the lowest pressure along our proposed new water main and distribution pipe to be at this fire hydrant location (south end of Rayville Lane).

Step 2: At the required 1,750-gpm fire flow – determine the corresponding pressure at the fire hydrant inlet located at the south end of Rayville Lane

Our proposed design consists of 12-inch diameter water main flowing west along Betteravia Road from A Street to Rayville Lane. At that intersection, the water pipe transitions to 8-inch diameter and flows south along Rayville Lane. At the south end of Rayville Lane, the 8-inch distribution pipe terminates and is directed into a 6-inch pipe that feeds the fire hydrant. See Figure 2 for the alignment in plan view.

We used Bernoulli's Equation for water flow in pipes to determine the pressure at this fire hydrant inlet (associated with the required 1,750-GPM fire flow). Bernoulli's Equation is presented below:

$$P_1 + \frac{1}{2} \cdot \rho \cdot V_1^2 + \rho \cdot g \cdot h_1 = P_2 + \frac{1}{2} \cdot \rho \cdot V_2^2 + \rho \cdot g \cdot h_2 + \mathcal{P}_p$$

$$\mathcal{P}_p = \mathcal{P}_h \cdot \rho \cdot g$$

$$\mathcal{P}_h = (\mathcal{P} \cdot L \cdot V^2) / 2 \cdot d \cdot g$$

P_1 & P_2 = pressures within water system

ρ = density of water

V_1 & V_2 = velocities of water

g = acceleration of gravity

h_1 & h_2 = heights (elevation) of the water pipes

\mathcal{P}_p = frictional pressure loss

\mathcal{P}_h = frictional pressure loss expressed as an equivalent height

d = inner diameter of water pipe

- The required fire flow (1,750-gpm) was used to determine a corresponding water velocity in the 6-inch inlet pipe at the fire hydrant location. The velocity in the 6-inch hydrant inlet pipe was used to calculate the corresponding velocities of the 8-inch distribution pipe and the 12-inch water main.
- These velocities were primarily used to determine the frictional losses associated with: (1) PVC pipe lengths, (2) isolation gate valves, (3) "T" connections at the various fire hydrant locations, (4) fire hydrant gate valve, and (5) bends in the pipes.
- The detailed calculations are presented in the three calculation tables below. Fire Flow Calculation 1 determines the pressure at the 12-inch water main / 8-inch distribution pipe connection. Fire Flow Calculation 2 determines the 8-inch distribution pipe pressure at the south end of Rayville Lane. Fire Flow Calculation 3 determines the 6-inch fire hydrant inlet pipe pressure.
- City of Santa Maria staff indicated that the average pressure for their entire water system is approximately 81 PSI, while the average pressure measured from sample stations closest to the point of connection is 87.5 with a range from 81 to 94 PSI. To be conservative, we assumed that pressure at the proposed 12-inch water main connection to the City of Santa Maria water system (intersection of Betteravia Road and A Street) is 80 PSI.
- Our calculations demonstrate that the fire hydrant inlet pressure is 71 PSI, at the required fire flow of 1,750-gpm.
- The City of Santa Maria specifies Clow Valve Company fire hydrant models #865 and #960.
- The Clow Valve Company provided frictional flow loss tests for hydrant models #860 (considered similar to #865) and #960. The flow loss tests indicate a maximum loss of 6.4 psig for #860 and 9.5 psig for #960. The flow associated with these values was 1,500-gpm. The flow loss tests did not provide values for higher flow rates, such as 1,750-gpm. We conservatively estimate that the maximum pressure loss associated with 1,750-gpm is 18 PSI. Therefore, the corresponding pressure at the fire hydrant outlet would be: 71 PSI – 15 PSI = **53 PSI**; which is well above the California Fire Code requirement of 20 PSI. Fire flow at 20 PSI would be considerably higher than 1,750-gpm.

- The Clow Valve Company frictional flow loss tests are presented after the calculation tables below

Attachments:

Calculation 1

Calculation 2

Calculation 3

Clow Valve Company – Frictional Flow Loss Test for hydrant model #860

Clow Valve Company – Frictional Flow Loss Test for hydrant model #960

Fire Flow Calculations 1 - Determine Pressure at Water Main / Distribution Line Connection

1 Determine velocity in distribution line associated with given minimum fire flow requirement

Required Flow Rate end of 8" distribution pipe	1,750	GPM	Flow Rate = Area * Velocity		
Required Flow Rate at end of 8" distribution pipe	3.9	ft ³ / sec	$Q = A \cdot V$	$A = \pi \cdot r^2$	
Distribution Line (inner diameter)	7.98	inch		A =	0.347 ft ²
Distribution Line (inner diameter)	0.665	feet	$V = Q / A$		
			V =	11.23	ft / sec

2 Determine velocity in water main associated with given velocity in distribution line (calculated above)

$A_1 \cdot V_1 = A_2 \cdot V_2$ "Equation of Continuity": Flow rate remains constant through the different diameter pipes. Water velocity is slower in the larger diameter pipe → [LINK](#)

Water Main (inner diameter)	11.64	inch		
Water Main (inner diameter)	0.97	feet		
$V_2 =$	11.23	ft / sec		
$A_2 =$	0.347	ft ²		
$A_1 =$	0.739	ft ²		
$V_1 = (A_2 \cdot V_2) / A_1$	5.28	ft / sec		

3 Determine pressure at water main / distribution line connection (using Bernoulli's Equation)

$$P_1 + \frac{1}{2} \cdot \rho \cdot V_1^2 + \rho \cdot g \cdot h_1 = P_2 + \frac{1}{2} \cdot \rho \cdot V_2^2 + \rho \cdot g \cdot h_2 + P_p$$

Pressure at Betteravia & A Street (P ₁)	80	PSI →	Value provided by City of Santa Maria
Height (h ₁)	217.5	ft	
Height (h ₂)	207.7	ft	
Height (h ₁) - adjusted	2.99	m	
Height (h ₂) - adjusted	0	m	
Length	3,400	ft	
Length + friction loss in terms of equivalent length	3,707	ft	Calculation in section below
Total Length	1,130	m	

Velocity (V1 & V2) are the same, so they cancel out (i.e. "0"); h₂ = 0, so that equation term equals 0

$$P_1 + 0 + \rho \cdot g \cdot h_1 = P_2 + 0 + 0 + P_p$$

$$P_2 = P_1 + \rho \cdot g \cdot h_1 - P_p$$

P ₁ =	551,581	Pascals (N/m ²)
ρ =	1,000	kg/m ³
g =	9.81	m/sec ²
h ₁ =	2.99	m
P _p =	41,956	Pascals (N/m ²)
P ₂ =	538,927	Pascals (N/m ²)
P ₂ =	78.2	PSI

P₂ = Pressure at water main & distribution main connection (Betteravia Rd & Rayville Ln)

Calculate friction pressure loss element P_p

$$P_p = P_n \cdot \rho \cdot g$$

$$P_n = (P \cdot L \cdot V^2) / 2 \cdot d \cdot g$$

Determine Friction Factor (P) from equation above using items below (RPR, Re, Moody Diagram)

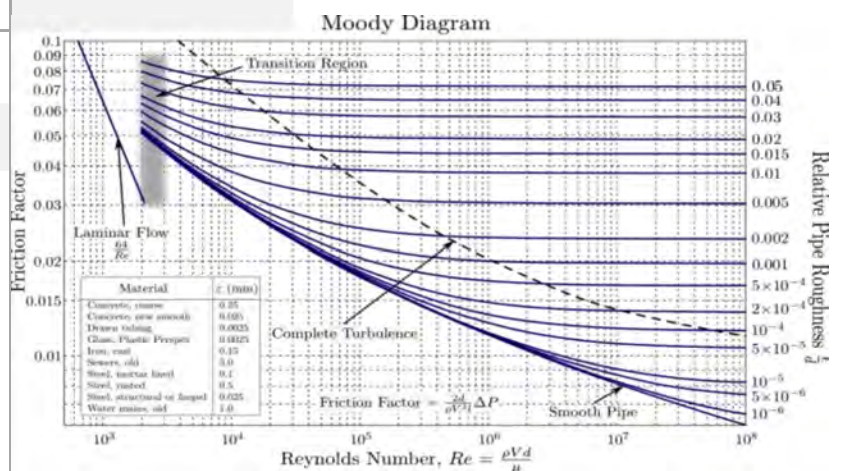
Relative Pipe Roughness (RPR) =	ε / D		
ε (plastic pipe) =	0.000084	in	LINK
D =	11.64	in	
RPR = ε / D =	0.0000072	in / in	
RPR =	7.2E-06	in / in	

Reynold's Number (Re)

$$Re = (\rho \cdot V \cdot D_n) / \mu$$

ρ =	62.4	lb / ft ³
V =	5.28	ft / sec
Hydraulic Diameter (D _n)	0.97	ft
(dynamic viscosity) μ =	2.73E-05	lb _m · s / ft ² LINK at 10° C 50° F
Re = (ρ · V · D _n) / μ =	1.17E+07	

Use RPR, Reynold's Number input into Moody Diagram to determine the Friction Factor (P)



Moody Diagram to determine P
Friction Factor (P) = 0.008488 [online calculator](#)

Friction loss in terms of equivalent length (L) of straight pipe

Item	Feet*	Items	Total Feet *
Gate Valve (full open)	7.96	6	47.76
12-inch "T" connections at hydrant locations Standard Tee "T" with thru flow	19.9	10	199
90° elbow into 8-inch distribution line (assume more conservative 12-inch "standard" 90° elbow). Less loss if "long radius" elbow is used.	29.8	1	29.8
Reducer bushing from 12-inch to 8-inch diameter at end of 12-inch water main	30	1	30
Total			306.6

Inserted into Bernoulli's Equation Above

* = Friction loss in terms of equivalent length (L) of straight pipe

Reference source is Handbook of PVC Pipe Design & Construction (Fifth Edition) → [LINK](#)



Fire Flow Calculations 1 - Determine Pressure at Water Main / Distribution Line Connection

$$P_h = (P \cdot L \cdot V^2) / 2 \cdot d \cdot g$$

P =	0.008488	
L =	3.707	ft
V =	5.28	ft / sec
d =	0.97	ft
g =	32.174	ft / sec ²

$$P_h = (P \cdot L \cdot V^2) / 2 \cdot d \cdot g = 14.03 \text{ ft} \quad 6.07 \text{ PSI}$$

Convert to SI Units so that units work out considering the acceleration of gravity

$$P_p = P_h \cdot \rho \cdot g$$

P _h =	4.28	m
ρ =	1,000	kg/m ³
g =	9.81	m/sec ²

$$P_p = P_h \cdot \rho \cdot g = 41,956 \text{ kg / m} \cdot \text{sec}^2 = \text{Pascals} = \text{N / m}^2$$

P _p =	6.09	PSI	Value Inserted into Bernoulli's equation above
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Definition [\[edit \]](#)

The pascal can be expressed using SI derived units, or alternatively solely SI base units, as:

$$1 \text{ Pa} = 1 \frac{\text{N}}{\text{m}^2} = 1 \frac{\text{kg}}{\text{m} \cdot \text{s}^2} = 1 \frac{\text{J}}{\text{m}^3}$$

where N is the newton, m is the metre, kg is the kilogram, s is the second, and J is the joule.^[9]

One pascal is the pressure exerted by a force of magnitude one newton perpendicularly upon an area of one square metre.

Fire Flow Calculations 2 - Determine pressure at south end of 8-inch distribution pipe

1 Determine velocity in distribution line associated with given minimum fire flow requirement

Required Flow Rate at end of 8" distribution pipe	1,750	GPM	Flow Rate = Area * Velocity		
Required Flow Rate at end of 8" distribution pipe	3.9	ft ³ / sec	$Q = A * V$	$A = \pi * r^2$	
Distribution Line (inner diameter)	7.98	inch		A =	0.347 ft ²
Distribution Line (inner diameter)	0.665	feet	$V = Q / A$		
			V =	11.23	ft / sec

2 Determine velocity in water main associated with given velocity in distribution line (calculated above)

$A_1 \cdot V_1 = A_2 \cdot V_2$ "Equation of Continuity": Flow rate remains constant through the different diameter pipes. Water velocity is slower in the larger diameter pipe → [LINK](#)

Water Main (inner diameter)	11.64	inch
Water Main (inner diameter)	0.97	feet
$V_2 =$	11.23	ft / sec
$A_2 =$	0.347	ft ²
$A_1 =$	0.739	ft ²
$V_1 = (A_2 \cdot V_2) / A_1$	5.28	ft / sec

3 Determine pressure at south end of 8-inch distribution pipe (using Bernoulli's Equation)

$$P_1 + (\frac{1}{2} \cdot \rho \cdot V_1^2) + \rho \cdot g \cdot h_1 = P_2 + (\frac{1}{2} \cdot \rho \cdot V_2^2) + \rho \cdot g \cdot h_2 + P_p$$

Pressure at 12" water main & 8" distribution pipe connection	78.2	PSI
Height (h ₁)	207.7	ft
Height (h ₂)	208	ft
Height (h ₁) - adjusted	0	ft
Height (h ₂) - adjusted	0.091	m
Length (to south end of Rayville Lane)	500	ft
Length + friction loss in terms of equivalent length	533	ft
Total Length	163	m

Velocity (V₁ & V₂) are the same, so they cancel out (i.e. "0"); h₁ = 0, so that equation term equals 0

$$P_1 + 0 + 0 = P_2 + 0 + \rho \cdot g \cdot h_2 + P_p$$

$$P_2 = P_1 - \rho \cdot g \cdot h_2 - P_p$$

P ₁ =	538,929	Pascals (N/m ²)
ρ =	1,000	kg/m ³
g =	9.81	m/sec ²
h ₂ =	0.09	m
P _p =	39,676	Pascals (N/m ²)

$$P_2 = 498,355 \text{ Pascals (N/m}^2\text{)}$$

$$P_2 = 72.3 \text{ PSI}$$

P₂ = Pressure at south end of 8-inch distribution pipe

Calculate friction pressure loss element P_p

$$P_p = P_h \cdot \rho \cdot g$$

$$P_h = (P \cdot L \cdot V^2) / 2 \cdot d \cdot g$$

Determine Friction Factor (P) from equation above using items below (RPR, Re, Moody Diagram)

Relative Pipe Roughness (RPR) =	ε / D	
ε (plastic pipe) =	0.000084	in LINK
D =	7.98	in
RPR = ε / D =	1.05263E-05	in / in
RPR =	1.1E-05	in / in

Reynold's Number (Re)

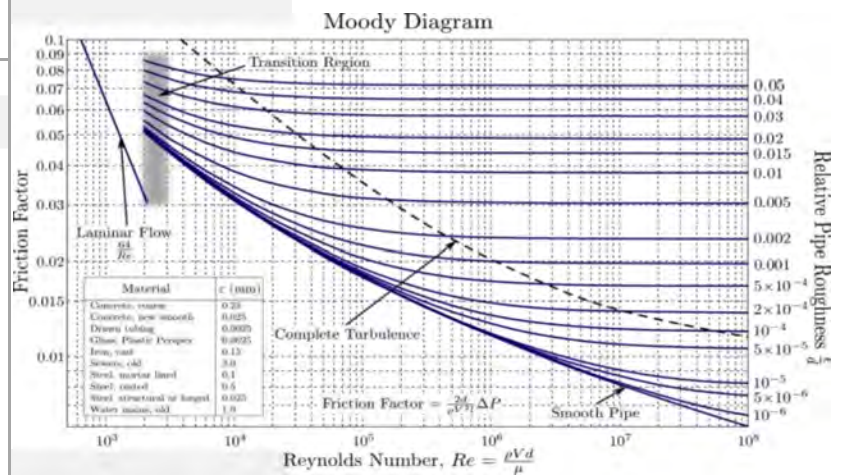
$$Re = (\rho \cdot V \cdot D_h) / \mu$$

ρ =	62.4	lb / ft ³
V =	11.23	ft / sec

Hydraulic Diameter (D_h) = 0.665 ft
(dynamic viscosity) μ = 2.73E-05 lb_m · s / ft² [LINK](#) at 10° C | 50° F

$$Re = (\rho \cdot V \cdot D_h) / \mu = 1.71E+07$$

Use RPR, Reynold's Number input into Moody Diagram to determine the Friction Factor (P)



Moody Diagram to determine P

Friction Factor (P) = 0.0084487

[online calculator](#)

Friction loss in terms of equivalent length (L) of straight pipe

Item	Feet*	Items	Total Feet *
12-inch "T" connections at hydrant locations Standard Tee "T" with thru flow	13.3	1	13.3
Reducer bushing from 8-inch to 6-inch diameter at end of 8-inch distribution pipe (into the 6-inch fire hydrant line)	20	1	20
Total			33.3

Value inserted into Bernoulli's Equation above

* = Friction loss in terms of equivalent length (L) of straight pipe

Reference source is Handbook of PVC Pipe Design & Construction (Fifth Edition) →

[LINK](#)

Fire Flow Calculations 2 - Determine pressure at south end of 8-inch distribution pipe

$$P_h = (P \cdot L \cdot V^2) / 2 \cdot d \cdot g$$

P =	0.0084487	
L =	533	ft
V =	11.23	ft / sec
d =	0.665	ft
g =	32.174	ft / sec ²

$$P_h = (P \cdot L \cdot V^2) / 2 \cdot d \cdot g = 13.27 \quad \text{ft} \quad 5.74 \quad \text{PSI}$$

Convert to SI Units so that units work out considering the acceleration of gravity

$P_p = P_h \cdot \rho \cdot g$			
$P_h =$	4.04	m	
$\rho =$	1,000	kg/m ³	
$g =$	9.81	m/sec ²	
$P_p = P_h \cdot \rho \cdot g =$	39,676	kg / m · sec ² =	Pascals = N / m ²

$P_p =$	5.75	PSI	Value Inserted into Bernoulli's equation above
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Definition [edit]

The pascal can be expressed using SI derived units, or alternatively solely SI base units, as:

$$1 \text{ Pa} = 1 \frac{\text{N}}{\text{m}^2} = 1 \frac{\text{kg}}{\text{m} \cdot \text{s}^2} = 1 \frac{\text{J}}{\text{m}^3}$$

where N is the newton, m is the metre, kg is the kilogram, s is the second, and J is the joule.^[9]

One pascal is the pressure exerted by a force of magnitude one newton perpendicularly upon an area of one square metre.



Fire Flow Calculations 3 - Determine pressure at fire hydrant 6-inch inlet pipe, nearest the largest structure

1 Determine velocity in distribution pipe associated with given minimum fire flow requirement

Required Flow Rate at hydrant	1,750	GPM	Flow Rate = Area * Velocity		
Required Flow Rate at hydrant	3.9	ft ³ / sec	$Q = A * V$	$A = \pi * r^2$	
Distribution Line (inner diameter)	7.98	inch		A =	0.347 ft ²
Distribution Line (inner diameter)	0.665	feet	$V = Q / A$		
			V =	11.23	ft / sec

2 Determine velocity in 6-inch fire hydrant pipe associated with given velocity in distribution pipe (calculated above)

$A_1 \cdot V_1 = A_2 \cdot V_2$ "Equation of Continuity": Flow rate remains constant through the different diameter pipes. Water velocity is faster in the smaller diameter pipe → [LINK](#)

Fire Hydrant pipe (inner diameter)	6.08	inch
Fire Hydrant pipe (inner diameter)	0.51	feet
$V_2 =$	11.23	ft / sec
$A_2 =$	0.347	ft ²
$A_1 =$	0.202	ft ²
$V_1 = (A_2 \cdot V_2) / A_1$	19.34	ft / sec

3 Determine pressure at fire hydrant inlet (6-inch hydrant pipe) nearest the largest structure - hydrant at south end of Rayville Lane (using Bernoulli's Equation)

$$P_1 + (\frac{1}{2} \cdot \rho \cdot V_1^2) + \rho \cdot g \cdot h_1 = P_2 + (\frac{1}{2} \cdot \rho \cdot V_2^2) + \rho \cdot g \cdot h_2 + \mathcal{P}_p$$

Pressure at end of 8" distribution pipe	72.3	PSI
Height (h ₁)	208	ft
Height (h ₂)	207.7	ft
Height (h ₁) - adjusted	0.30	ft
Height (h ₂) - adjusted	0	m
Length of 6" fire hydrant pipe	10	ft
Length + friction loss in terms of equivalent length	44.4	ft
Length (if hydrant at south end of Rayville Lane)	14	m

Velocity (V₁ & V₂) are the same, so they cancel out (i.e. "0"); h₂ = 0, so that equation term equals "0"

$$P_1 + 0 + \rho \cdot g \cdot h_1 = P_2 + 0 + 0 + \mathcal{P}_p$$

$$P_2 = P_1 + \rho \cdot g \cdot h_1 - \mathcal{P}_p$$

P ₁ =	498,356	Pascals (N/m ²)
ρ =	1,000	kg/m ³
g =	9.81	m/sec ²
h ₁ =	0.30	m
℘ _p =	13,547	Pascals (N/m ²)

P ₂ =	487,752	Pascals (N/m ²)
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P ₂ =	70.7	PSI
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P₂ = Pressure at fire hydrant inlet at south end of Rayville Lane

Calculate friction pressure loss element ℘_p

$$\mathcal{P}_p = \mathcal{P}_h \cdot \rho \cdot g$$

$$\mathcal{P}_h = (\mathcal{P} \cdot L \cdot V^2) / 2 \cdot d \cdot g$$

Determine Friction Factor (℘) from equation above using items below (RPR, Re, Moody Diagram)

$$\text{Relative Pipe Roughness (RPR)} = \epsilon / D$$

$$\epsilon (\text{plastic pipe}) = 0.000084 \text{ in} \quad \text{LINK}$$

$$D = 6.08 \text{ in}$$

$$\text{RPR} = \epsilon / D = 0.000014 \text{ in / in}$$

$$\text{RPR} = 1.4\text{E-}05 \text{ in / in}$$

Reynold's Number (Re)

$$\text{Re} = (\rho \cdot V \cdot D_h) / \mu$$

$$\rho = 62.4 \text{ lb / ft}^3$$

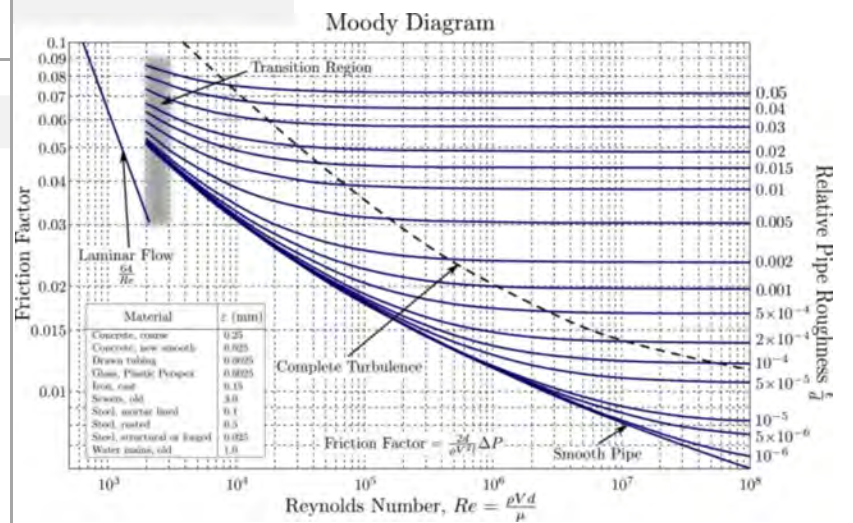
$$V = 19.34 \text{ ft / sec}$$

$$\text{Hydraulic Diameter (D}_h) = 0.507 \text{ ft}$$

$$(\text{dynamic viscosity } \mu) = 2.73\text{E-}05 \text{ lb}_m \cdot \text{s / ft}^2 \quad \text{LINK} \quad \text{at } 10^\circ \text{ C} \mid 50^\circ \text{ F}$$

$$\text{Re} = (\rho \cdot V \cdot D_h) / \mu = 2.24\text{E+}07$$

Use RPR, Reynold's Number input into Moody Diagram to determine the Friction Factor (℘)



Moody Diagram to determine ℘

$$\text{Friction Factor } (\mathcal{P}) = 0.008888$$

[online calculator](#)

Friction loss in terms of equivalent length (L) of straight pipe

Item	Feet*	Items	Total Feet *
Gate Valve (full open)	4.04	1	4.04
90° elbow from 8-inch distribution line into 6-inch hydrant line (assume more conservative 6-inch "standard" 90° elbow). Less loss if "long radius" elbow is used.	15.2	1	15.2
90° elbow from 6-inch hydrant line vertically up toward hydrant (assume more conservative 6-inch "standard" 90° elbow). Less loss if "long radius" elbow is used.	15.2	1	15.2
Total			34.4

Value inserted into Bernoulli's Equation above

* = Friction loss in terms of equivalent length (L) of straight pipe

Reference source is Handbook of PVC Pipe Design & Construction (Fifth Edition) →

[LINK](#)



Fire Flow Calculations 3 - Determine pressure at fire hydrant 6-inch inlet pipe, nearest the largest structure

$$P_h = (P \cdot L \cdot V^2) / 2 \cdot d \cdot g$$

P =	0.008888	
L =	44.4	ft
V =	19.34	ft / sec
d =	0.507	ft
g =	32.174	ft / sec ²

$P_h = (P \cdot L \cdot V^2) / 2 \cdot d \cdot g =$	4.53	ft	1.96	PSI
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Convert to SI Units so that units work out considering the acceleration of gravity

$$P_p = P_h \cdot \rho \cdot g$$

$P_h =$	1.38	m
$\rho =$	1,000	kg/m ³
$g =$	9.81	m/sec ²

$P_p = P_h \cdot \rho \cdot g =$	13,547	kg / m · sec ² =	Pascals = N / m ²
----------------------------------	--------	-----------------------------	------------------------------

$P_p =$	1.96	PSI	Value Inserted into Bernoulli's equation above
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Definition [\[edit\]](#)

The pascal can be expressed using SI derived units, or alternatively solely SI base units, as:

$$1 \text{ Pa} = 1 \frac{\text{N}}{\text{m}^2} = 1 \frac{\text{kg}}{\text{m} \cdot \text{s}^2} = 1 \frac{\text{J}}{\text{m}^3}$$

where N is the newton, m is the metre, kg is the kilogram, s is the second, and J is the joule.^[9]

One pascal is the pressure exerted by a force of magnitude one newton perpendicularly upon an area of one square metre.

Clow Valve Company

A Division of McWane Corporation

902 South Second Street
Oskaloosa, Iowa 52577

City specifies model #865. Per Michael Moore at Clow email on 9/1/21, the #860 would have similar flow numbers to #860

MODEL #860

WET BARREL FIRE HYDRANT
FRICTIONAL FLOW LOSS TEST

By

Chris Cook

Project Number 2545-14

Engineering

Approved

 10/23/03

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PURPOSE

The purpose of this test was to determine the frictional head loss through the 860 wet barrel fire hydrant at various flow rates. The maximum permissible frictional flow losses as specified in AWWA C503, Standard for Wet-Barrel Fire Hydrants are listed below.

No. of Outlet Nozzles	Nominal Dia. of Outlet Nozzle	Total Fluid Flow	Max. Allowable Head Loss
1	2 ½"	250 GPM	1.0 PSI
2	2 ½"	500 GPM	2.0 PSI
1	4 ½"	1000 GPM	5.0 PSI
1	4"	1500 GPM	11.0 PSI*
1	4 ½"	1500 GPM	9.0 PSI†

* At time of printing a revised draft of AWWA C503 increased this value to 14.0 PSI

† At time of printing a revised draft of AWWA C503 increased this value to 12.0 PSI

PROCEDURE

The test specimen was the 860 wet-barrel fire hydrant. This hydrant has one 4" pumper nozzle and two 2-1/2" hose nozzles. The hydrant has a trench depth of 56 inches. The hydrant was later refitted with a 4-1/2" pumper nozzle and tested again.

The fire hydrant was installed in a flow test circuit located at the Clow manufacturing facility at Oskaloosa, Iowa. Included in this report is a schematic illustration of the flow test circuit. See page five. Every effort was made to align the inlet and outlet piping of the test circuit with the hydrant inlet and nozzle outlets.

The following equipment was used in the flow test circuit:

- A. BIF 4" Venturi, Serial No. 216579
- B. BIF 6" Venturi, Serial No. 188761
- C. Venturi digital differential pressure transducer Serial No. 1205592
- D. Test digital differential pressure transducer Serial No. 1281287
- E. Piping and valves to control and regulate flow.

Water was introduced into the flow circuit and directed through the venturi and test hydrant as shown in the schematic illustration. Control valves installed in the pipelines exiting the hydrant nozzles were used to vary the rate of fluid flow and to adjust system pressure during the test.

A differential pressure transducer was connected to pressure taps at the throat and outlet of the venturi flow meter. The pressure differential across the venturi was used in conjunction with a calibration curve to determine actual flow rate through the circuit. The calibration curve was supplied by the venturi manufacturer.

A piezometer was installed in the inlet and outlet pipelines connected to the inlet and nozzle outlets of the hydrant. The differential pressure transducer connected to these piezometers was used to determine the static pressure differential between the two piezometers. At the start of the test, this transducer was zeroed to correct for the difference in elevation between the hydrant inlet and the nozzle outlets.

Pressure differential readings for the venturi and the hydrant were taken at various flow rates through the hydrant. Having determined the static pressure differential across the hydrant at various fluid flow rates, the frictional flow loss of the hydrant was calculated using Bernoulli's equation, the continuity equation, and Poiseuille's equation for friction resistance to fluid flow in horizontal pipes.

The total hydrant friction loss is determined by subtracting the frictional flow loss of the inlet and outlet pipelines connected to the hydrant.

The following tests were run to determine the frictional flow loss. In some cases it was necessary to extrapolate the data, due to the limitations of the test equipment and test facilities.

- A. 4" pumper nozzle test at 1000 gpm extrapolated to 1500 gpm
- B. 4-1/2" pumper nozzle test at 1000 gpm and extrapolated to 1500 gpm
- C. 2-1/2" middle hose nozzle test at 250 gpm
- D. 2-1/2" top hose nozzle test at 250 gpm

ACCURACY

The differential pressure transducers used to determine flow and friction loss display pressure differentials in pounds per square inch (psi). When the system is in operation, it is not unusual to have a rapid, uniform fluctuation on the LCD display due to vibration and pump surge. By mentally calculating an average reading under these conditions, errors can usually be held to within plus or minus .5 psi. However, the percentage error is inversely proportional to the magnitude of the display reading. At a reading of 25 psi, an error of .5 psi is practically negligible, while at a very low reading, this same error will result in a very large variance in calculated friction loss. Therefore, it is reasonable to conclude that higher flow rates produce more accurate data for any given test.

CONCLUSION

Upon completion of all the flow tests and subsequent engineering calculations, the frictional flow loss of the 860 hydrant was determined at various rates of fluid flow. The resulting flow loss calculations were plotted on graphs included in this report.

The following tests were found to meet the criteria for maximum permissible frictional flow losses as specified in AWWA C503, Standard for Wet-Barrel Fire Hydrants.

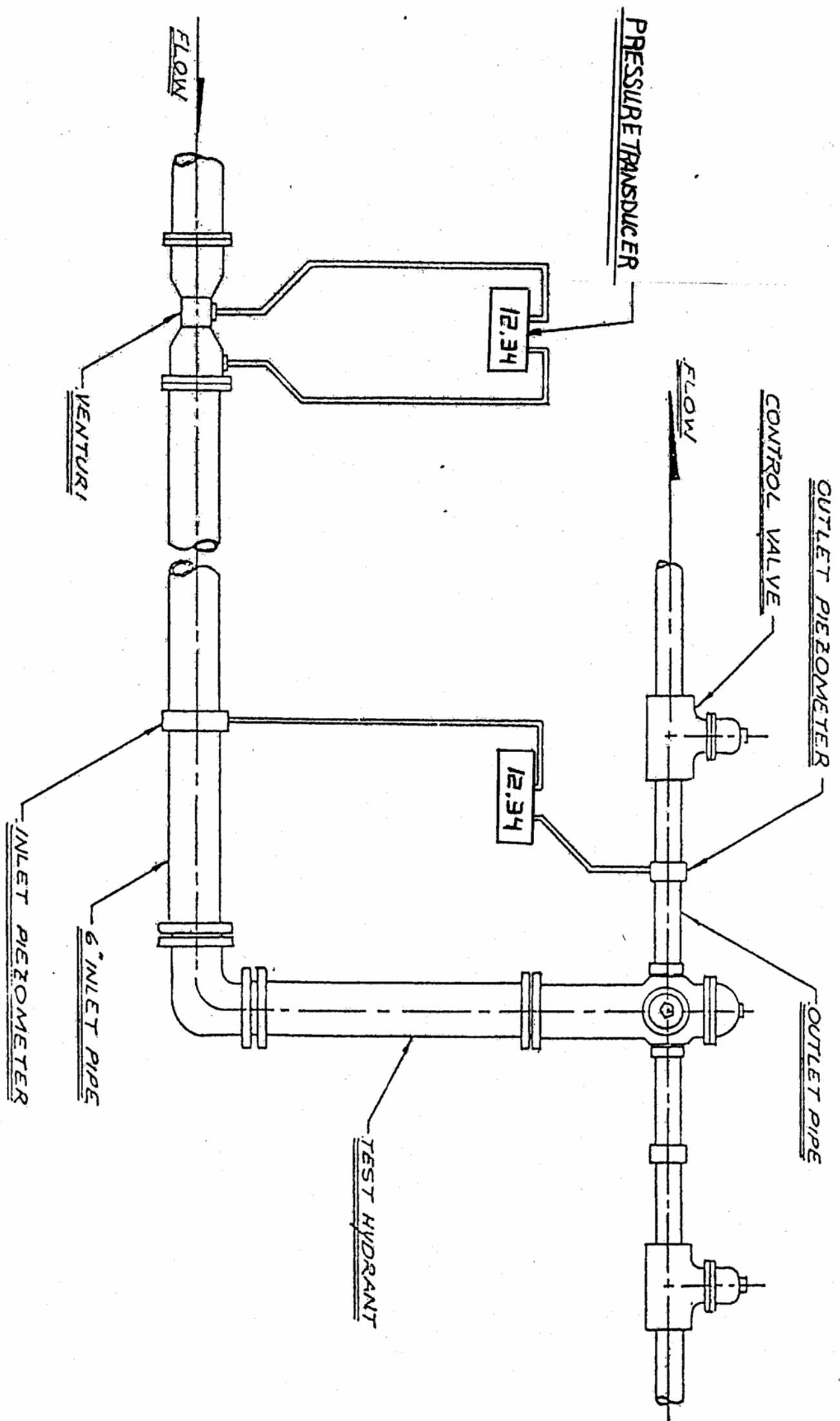
2-1/2" top hose nozzle test at 250 gpm, pressure loss is 0.90 psig where 1.0 psig is allowed

2-1/2" middle hose nozzle test at 250 gpm, pressure loss is 0.65 psig where 1.0 psig is allowed

4" pumper nozzle test at 1000 gpm extrapolated to 1500 gpm, pressure loss is 4.8 psig where 11.0 psig is allowed

4-1/2" pumper nozzle test at 1000 gpm, pressure loss is 3.2 psig where 5.0 psig is allowed. Extrapolated to 1500 gpm, pressure loss is 6.4 psig where 9.0 psig is allowed





Clow Valve Venturi Testing

Product Name: 860
Test Conducted: 2 1/2" Middle Port
Date of Test: 7/10/2003
Test Personnel: ALL
Venturi Size: 4"

Inlet Pipe Diameter: 6
Outlet Pipe Diameter: 2.5

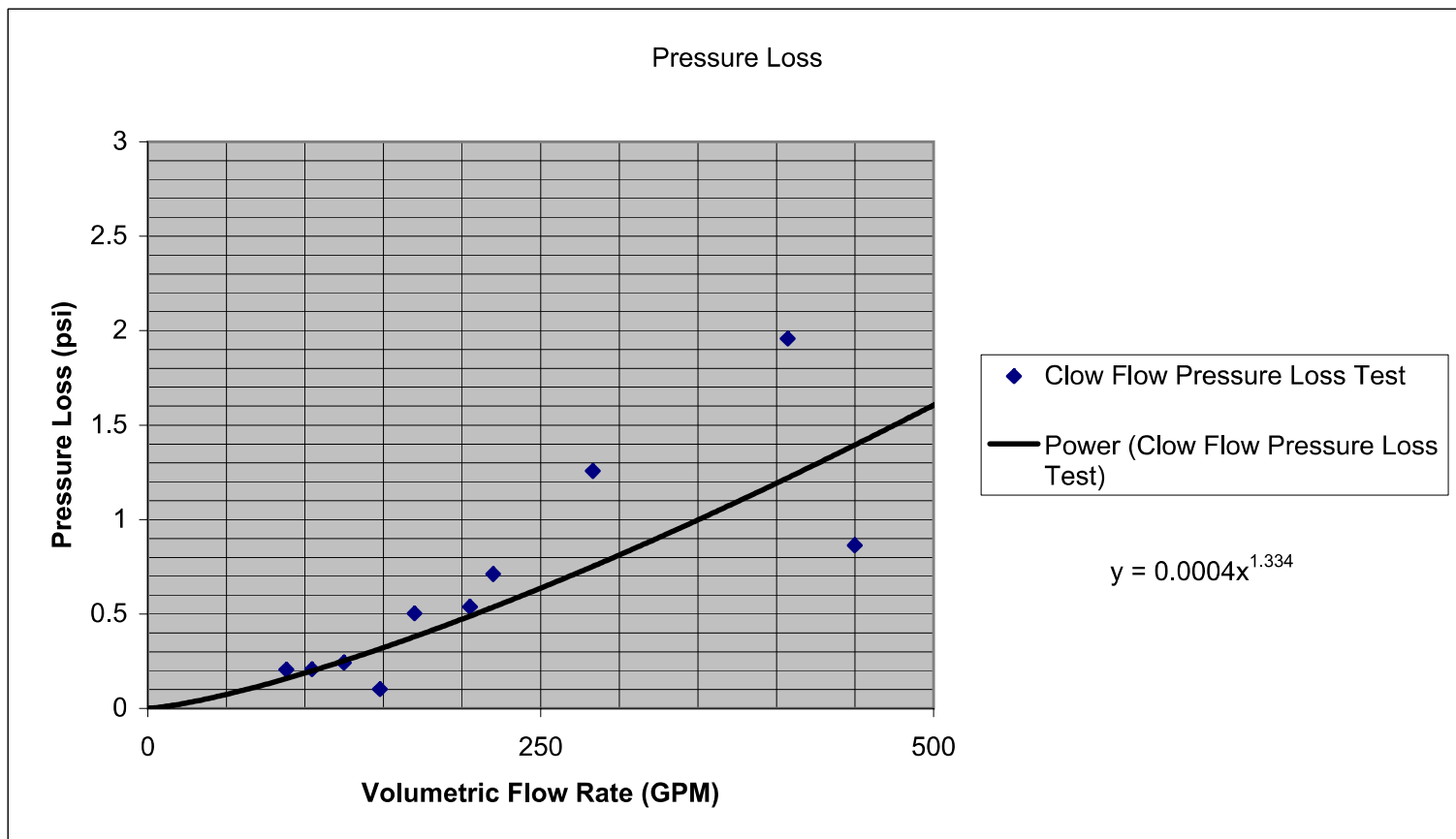
Pipe Length: 9.75
Pipe Length: 55.75

Pipe Material: PVC
Pipe Material: PVC

Trench Depth: 56
System Pressure: 150
Centerline Height of Inlet Pump: 0
Centerline Height of Outlet Pump: 0

Run #	Venturi Manometer (in H2O)	Venturi Digital Pressure (psi)	Test Pressure (psi)	Volumetric Flow Rate Q (GPM)	Total Head Loss (in)	Total head Loss (psi)
1	137.282	4.96	16.5	621.3741	75.93536	2.733673
2	28.50816	1.03	4.21	283.1593	34.90248	1.256489
3	17.16025	0.62	2.51	219.6889	19.75724	0.71126
4	14.94603	0.54	2.11	205.0261	14.95211	0.538276
5	10.2408	0.37	1.59	169.7122	13.96558	0.502761
6	7.749792	0.28	0.93	147.6357	2.825456	0.101716
7	5.535566	0.2	0.84	124.7749	6.743752	0.242775
8	3.874896	0.14	0.63	104.3942	5.769758	0.207711
9	2.767783	0.1	0.51	88.22919	5.703191	0.205315
10	58.95378	2.13	7.97	407.1947	54.38612	1.9579
11	71.96236	2.6	8.17	449.8824	23.98148	0.863333
12	91.61362	3.31	10.21	507.6055	26.46849	0.952866

Max = 1500



Clow Valve Venturi Testing

Product Name: 860
Test Conducted: 2 1/2" Top Port
Date of Test: 7/10/2003
Test Personnel: ALL
Venturi Size: 4"

Inlet Pipe Diameter: 6
Outlet Pipe Diameter: 2.5

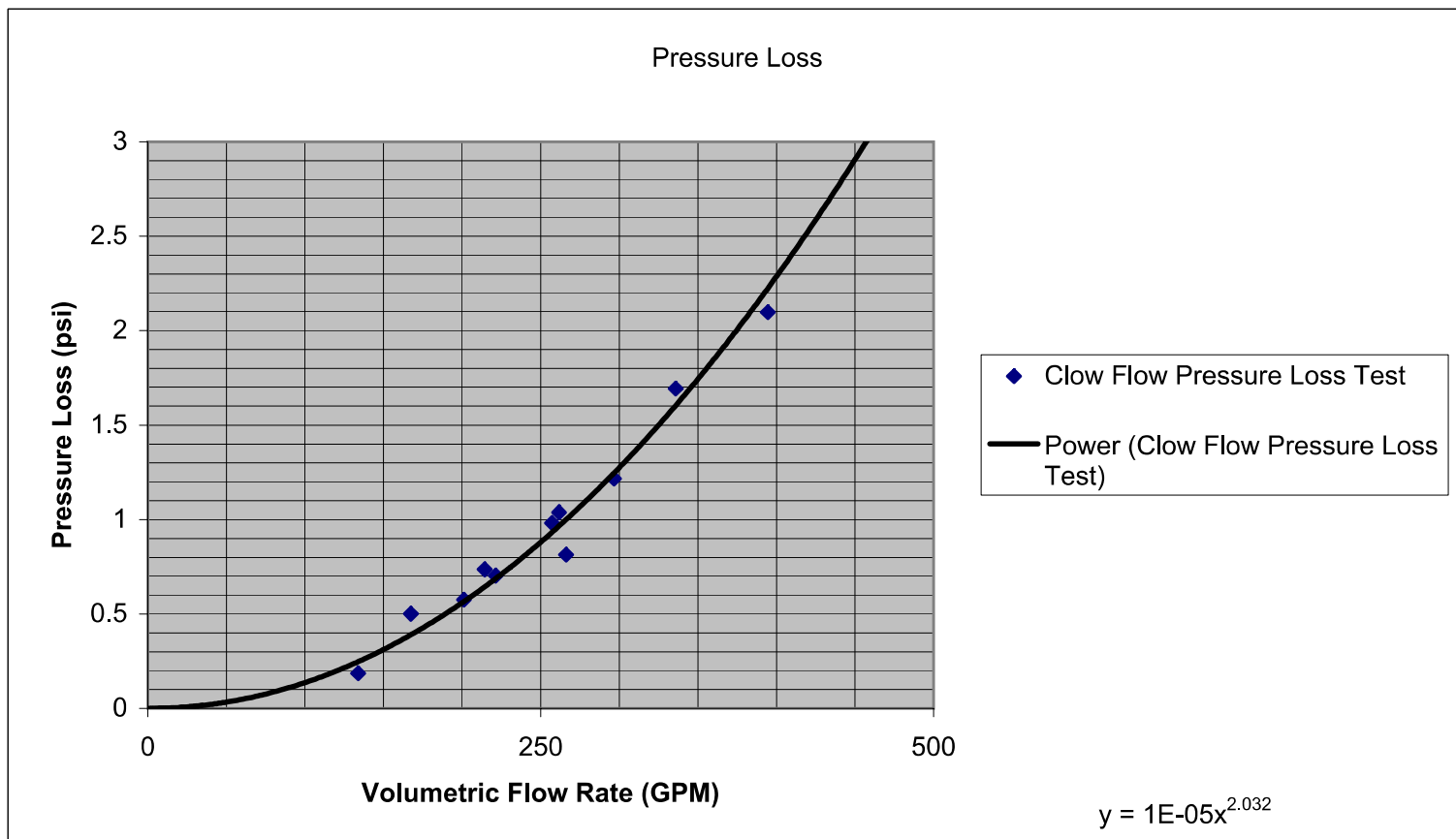
Pipe Length: 9.75
Pipe Length: 55.75

Pipe Material: PVC
Pipe Material: PVC

Trench Depth: 56
System Pressure: 150
Centerline Height of Inlet Pump: 0
Centerline Height of Outlet Pump: 0

Run #	Venturi Manometer (in H2O)	Venturi Digital Pressure (psi)	Test Pressure (psi)	Volumetric Flow Rate Q (GPM)	Total Head Loss (in)	Total head Loss (psi)
1	116.8004	4.22	16.35	573.1503	127.7294	4.598259
2	31.27595	1.13	4.45	296.5866	33.79634	1.216668
3	23.52616	0.85	3.43	257.2301	27.28003	0.982081
4	17.43703	0.63	2.53	221.4535	19.52702	0.702973
5	9.964019	0.36	1.56	167.4031	13.92759	0.501393
6	6.365901	0.23	0.87	133.8062	5.164403	0.185918
7	14.39247	0.52	2.09	201.1935	15.97275	0.575019
8	25.18683	0.91	3.43	266.154	22.60325	0.813717
9	40.13285	1.45	5.82	335.9667	47.03882	1.693397
10	24.35649	0.88	3.57	261.7301	28.82399	1.037664
11	16.32992	0.59	2.45	214.308	20.44949	0.736182
12	55.35566	2	7.75	394.5729	58.25245	2.097088

Max = 1500



Clow Valve Venturi Testing

Product Name: 860 Hydrant
Test Conducted: 4" Nozzle
Date of Test: 7/9/2003
Test Personnel: ALL
Venturi Size: 6"

Inlet Pipe Diameter: 6
Outlet Pipe Diameter: 4

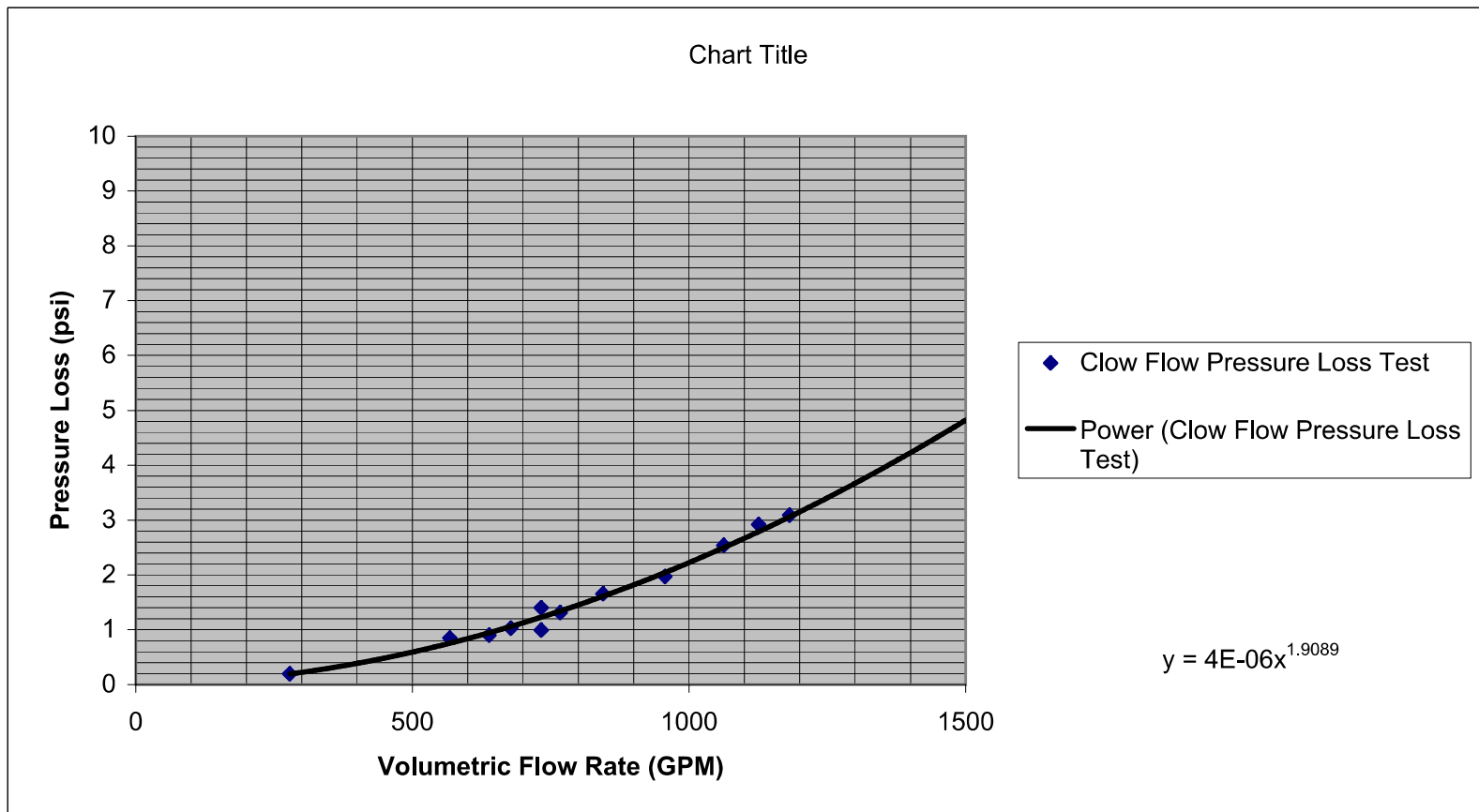
Pipe Length: 9.75
Pipe Length: 55.75

Pipe Material: PVC
Pipe Material: PVC

Trench Depth: 57
System Pressure: 150
Centerline Height of Inlet Pump: 0
Centerline Height of Outlet Pump: 74

Run #	Venturi Manometer (in H2O)	Venturi Digital Pressure (psi)	Test Pressure (psi)	Volumetric Flow Rate, Q (GPM)	Total Head Loss (in)	Total head Loss (psi)
1	0	1.25	3.31	732.64767	27.52461	0.990886
2	0	2.13	5.89	956.37886	54.75294	1.971106
3	0	1.66	4.72	844.29499	45.93758	1.653753
4	0	1.37	3.85	767.00899	36.43633	1.311708
5	0	1.07	3.02	677.84759	28.59626	1.029465
6	0	0.75	2.25	567.50645	23.50329	0.846118
7	0	0.18	0.54	278.02024	5.384521	0.193843
8	0	0.95	2.67	638.70743	24.97759	0.899193
9	0	1.25	3.72	732.64767	38.89668	1.40028
10	0	2.63	7.36	1062.718	70.45885	2.536519
11	0	3.25	9.03	1181.3589	85.78324	3.088197
12	0	2.95	8.32	1125.5147	81.07747	2.918789

Max = 1500



Clow Valve Venturi Testing

Product Name: 860 Hydrant
Test Conducted: 4 1/2" Nozzle
Date of Test: 6/4/2003
Test Personnel: ALL
Venturi Size: 6"

Inlet Pipe Diameter: 6
Outlet Pipe Diameter: 4

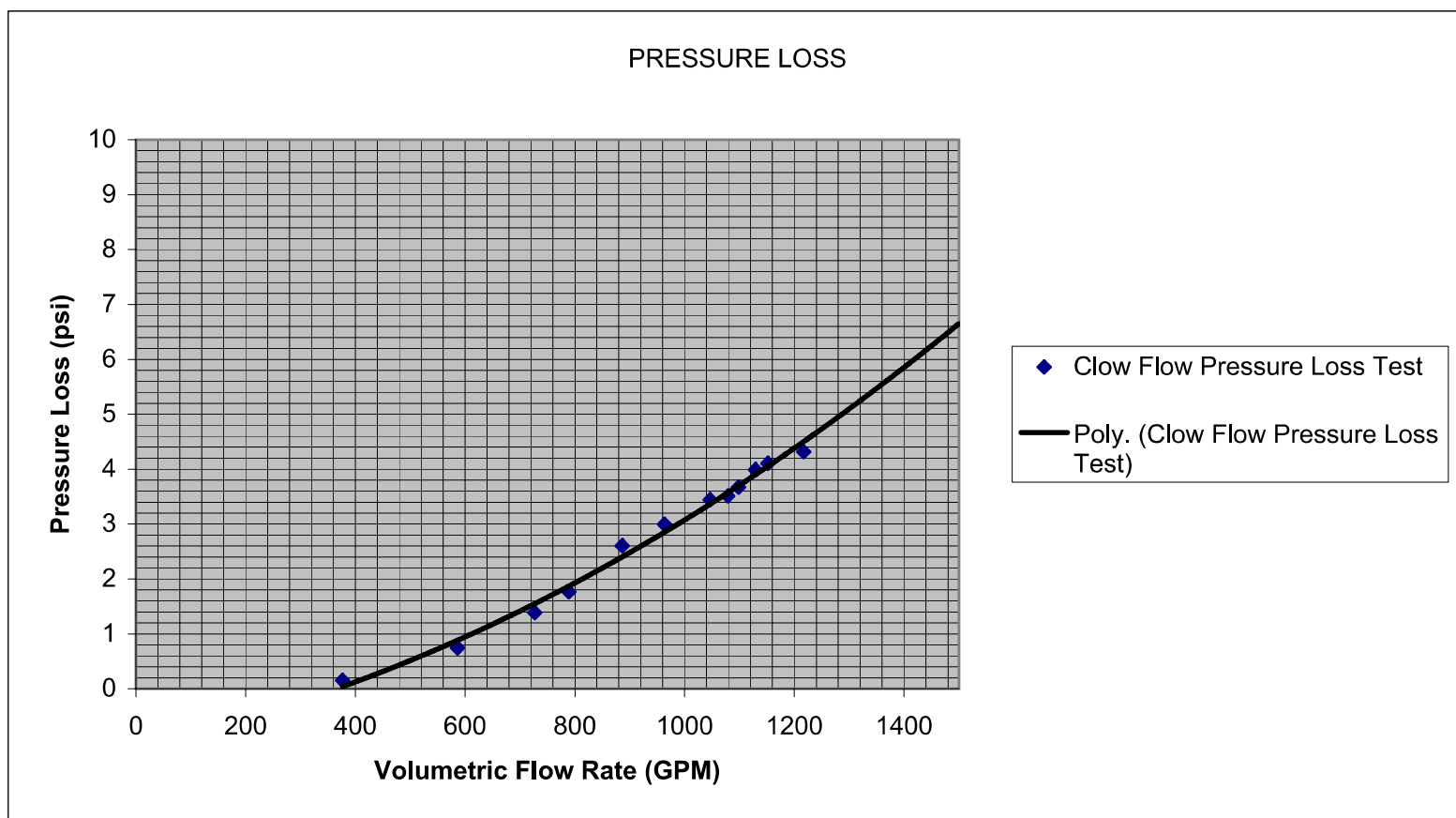
Pipe Length: 9.75
Pipe Length: 55.75

Pipe Material: PVC
Pipe Material: PVC

Trench Depth: 64"
System Pressure: 150
Centerline Height of Inlet Pump: 0
Centerline Height of Outlet Pump: 79 1/2"

Run #	Venturi Manometer (in H2O)	Venturi Digital Pressure (psi)	Test Pressure (psi)	Volumetric Flow Rate, Q (GPM)	Total Head Loss (in)	Total head Loss (psi)
1	0	2.81	8.82	1098.483	101.9467	3.67008
2	0	2.55	8.12	1046.4302	95.54488	3.439616
3	0	2.16	6.97	963.09038	83.20254	2.995291
4	0	1.83	5.98	886.47341	72.32698	2.603771
5	0	1.45	4.45	789.08569	49.03857	1.765389
6	0	1.23	3.67	726.76286	38.52166	1.38678
7	0	0.8	2.24	586.11814	20.67866	0.744432
8	0	0.33	0.78	376.44119	4.25801	0.153288
9	0	3.45	10.62	1217.1657	119.9033	4.316517
10	0	3.09	9.76	1151.9123	114.022	4.10479
11	0	2.97	9.43	1129.3236	110.8655	3.991158
12	0	2.71	8.48	1078.7599	97.51955	3.510704

Max = 1500



Clow Valve Venturi Testing

Product Name: 860
Test Conducted: 2 1/2" Top Port
Date of Test: 7/10/2003
Test Personnel: ALL
Venturi Size: 4"

Inlet Pipe Diameter: 6
Outlet Pipe Diameter: 2.5

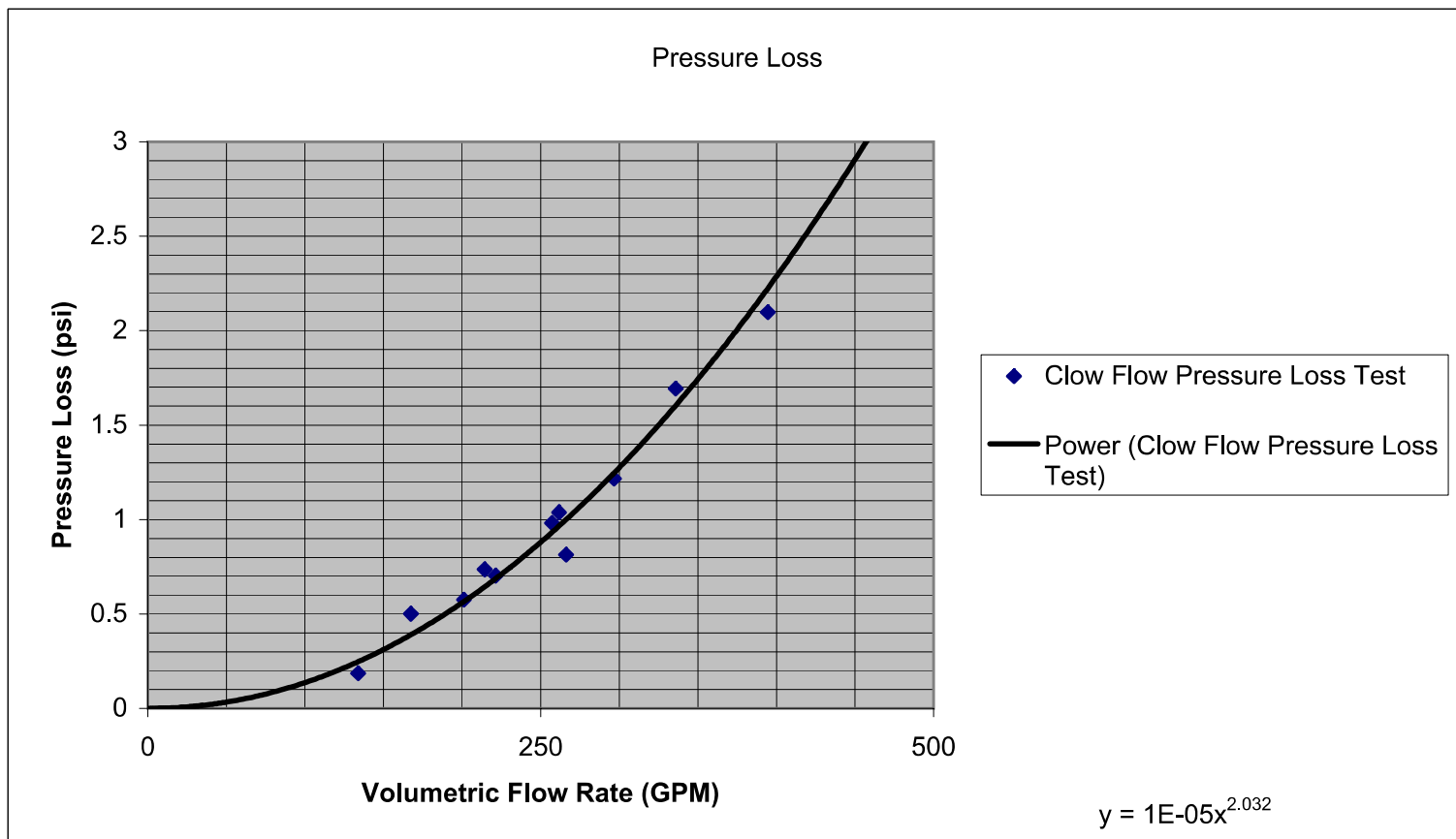
Pipe Length: 9.75
Pipe Length: 55.75

Pipe Material: PVC
Pipe Material: PVC

Trench Depth: 56
System Pressure: 150
Centerline Height of Inlet Pump: 0
Centerline Height of Outlet Pump: 0

Run #	Venturi Manometer (in H2O)	Venturi Digital Pressure (psi)	Test Pressure (psi)	Volumetric Flow Rate Q (GPM)	Total Head Loss (in)	Total head Loss (psi)
1	116.8004	4.22	16.35	573.1503	127.7294	4.598259
2	31.27595	1.13	4.45	296.5866	33.79634	1.216668
3	23.52616	0.85	3.43	257.2301	27.28003	0.982081
4	17.43703	0.63	2.53	221.4535	19.52702	0.702973
5	9.964019	0.36	1.56	167.4031	13.92759	0.501393
6	6.365901	0.23	0.87	133.8062	5.164403	0.185918
7	14.39247	0.52	2.09	201.1935	15.97275	0.575019
8	25.18683	0.91	3.43	266.154	22.60325	0.813717
9	40.13285	1.45	5.82	335.9667	47.03882	1.693397
10	24.35649	0.88	3.57	261.7301	28.82399	1.037664
11	16.32992	0.59	2.45	214.308	20.44949	0.736182
12	55.35566	2	7.75	394.5729	58.25245	2.097088

Max = 1500



Clow Valve Venturi Testing

Product Name: 860 Hydrant
Test Conducted: 4" Nozzle
Date of Test: 7/9/2003
Test Personnel: ALL
Venturi Size: 6"

Inlet Pipe Diameter: 6
Outlet Pipe Diameter: 4

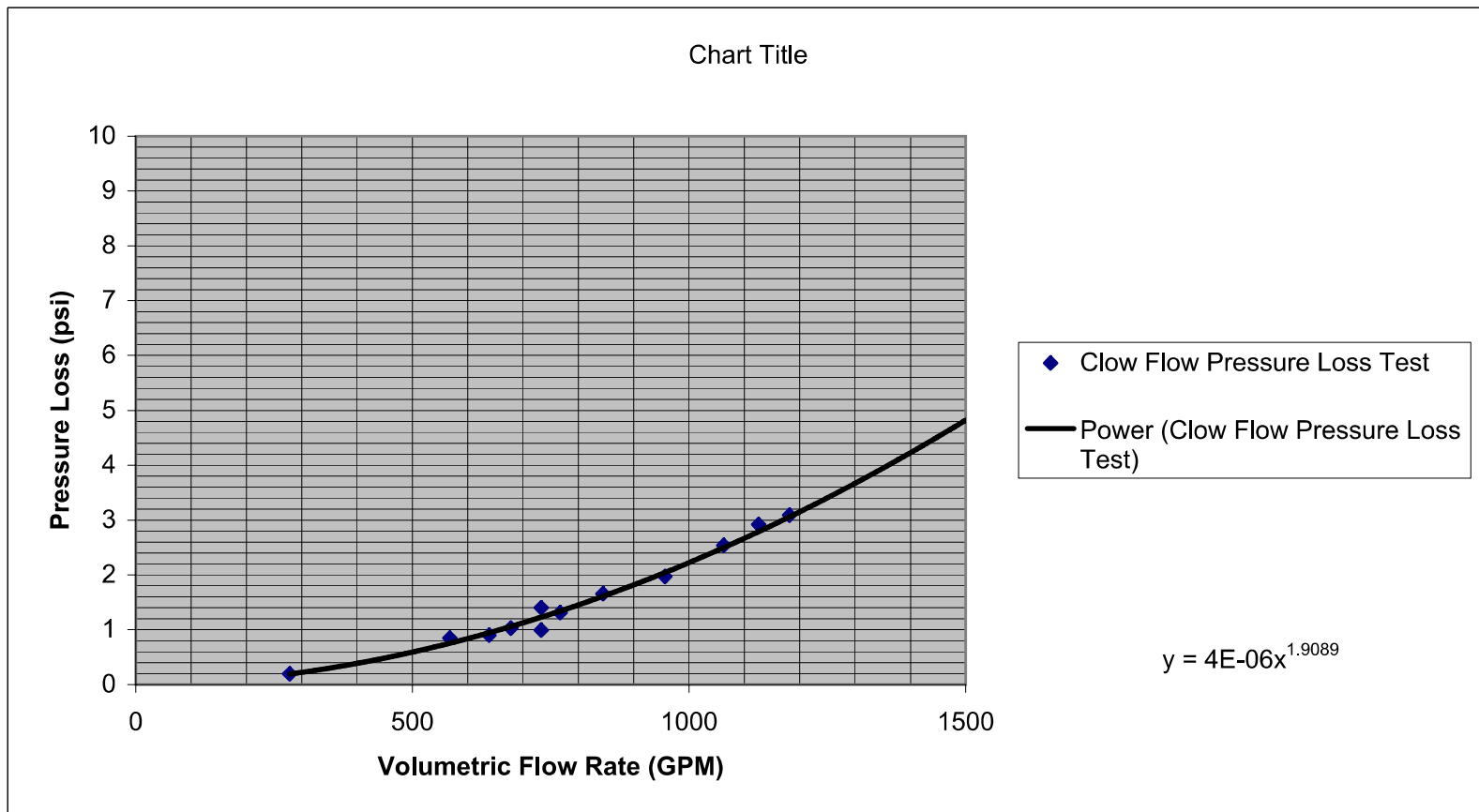
Pipe Length: 9.75
Pipe Length: 55.75

Pipe Material: PVC
Pipe Material: PVC

Trench Depth: 57
System Pressure: 150
Centerline Height of Inlet Pump: 0
Centerline Height of Outlet Pump: 74

Run #	Venturi Manometer (in H2O)	Venturi Digital Pressure (psi)	Test Pressure (psi)	Volumetric Flow Rate, Q (GPM)	Total Head Loss (in)	Total head Loss (psi)
1	0	1.25	3.31	732.64767	27.52461	0.990886
2	0	2.13	5.89	956.37886	54.75294	1.971106
3	0	1.66	4.72	844.29499	45.93758	1.653753
4	0	1.37	3.85	767.00899	36.43633	1.311708
5	0	1.07	3.02	677.84759	28.59626	1.029465
6	0	0.75	2.25	567.50645	23.50329	0.846118
7	0	0.18	0.54	278.02024	5.384521	0.193843
8	0	0.95	2.67	638.70743	24.97759	0.899193
9	0	1.25	3.72	732.64767	38.89668	1.40028
10	0	2.63	7.36	1062.718	70.45885	2.536519
11	0	3.25	9.03	1181.3589	85.78324	3.088197
12	0	2.95	8.32	1125.5147	81.07747	2.918789

Max = 1500



Clow Valve Venturi Testing

Product Name: 860
Test Conducted: 2 1/2" Middle Port
Date of Test: 7/10/2003
Test Personnel: ALL
Venturi Size: 4"

Inlet Pipe Diameter: 6
Outlet Pipe Diameter: 2.5

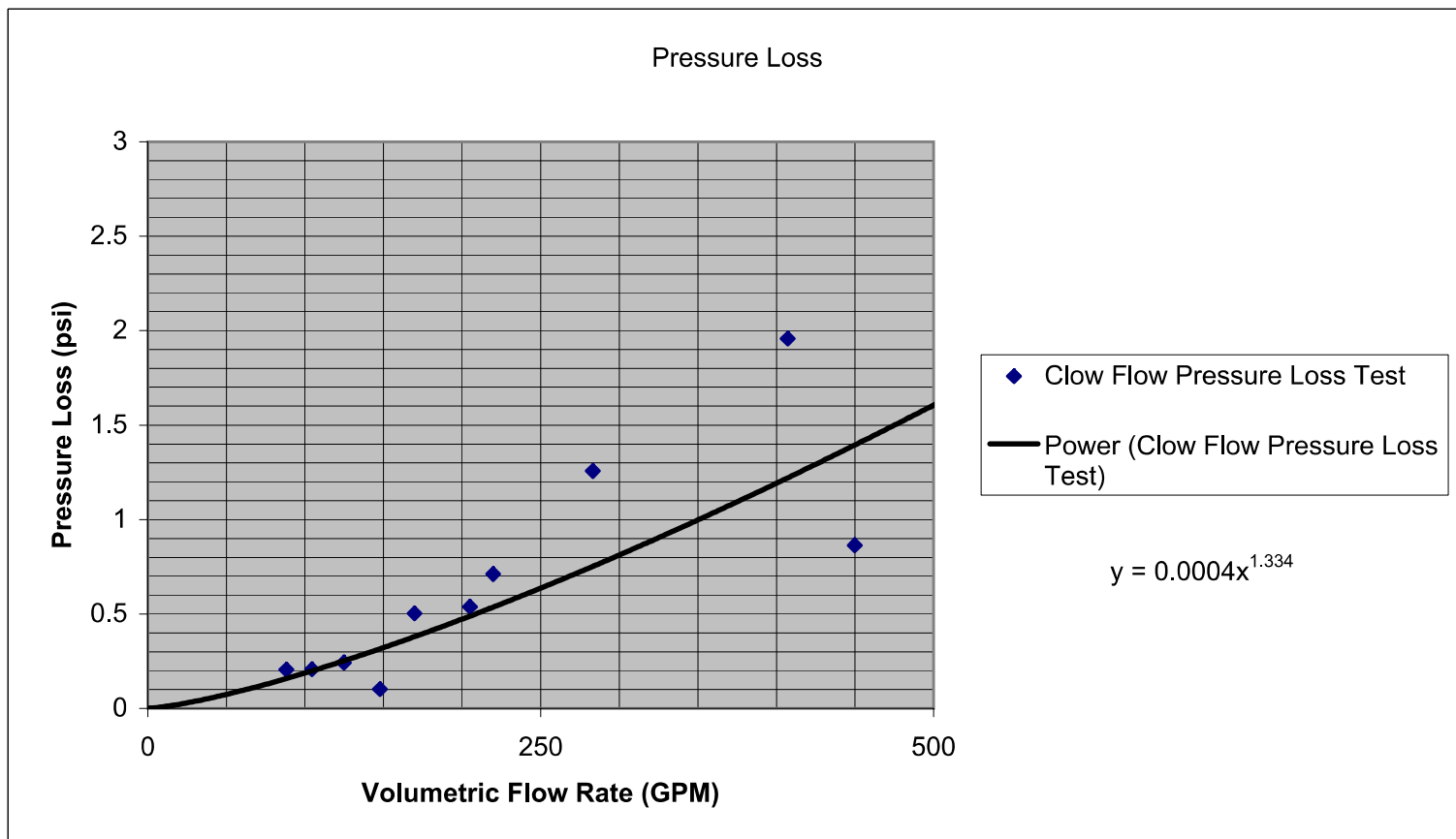
Pipe Length: 9.75
Pipe Length: 55.75

Pipe Material: PVC
Pipe Material: PVC

Trench Depth: 56
System Pressure: 150
Centerline Height of Inlet Pump: 0
Centerline Height of Outlet Pump: 0

Run #	Venturi Manometer (in H2O)	Venturi Digital Pressure (psi)	Test Pressure (psi)	Volumetric Flow Rate Q (GPM)	Total Head Loss (in)	Total head Loss (psi)
1	137.282	4.96	16.5	621.3741	75.93536	2.733673
2	28.50816	1.03	4.21	283.1593	34.90248	1.256489
3	17.16025	0.62	2.51	219.6889	19.75724	0.71126
4	14.94603	0.54	2.11	205.0261	14.95211	0.538276
5	10.2408	0.37	1.59	169.7122	13.96558	0.502761
6	7.749792	0.28	0.93	147.6357	2.825456	0.101716
7	5.535566	0.2	0.84	124.7749	6.743752	0.242775
8	3.874896	0.14	0.63	104.3942	5.769758	0.207711
9	2.767783	0.1	0.51	88.22919	5.703191	0.205315
10	58.95378	2.13	7.97	407.1947	54.38612	1.9579
11	71.96236	2.6	8.17	449.8824	23.98148	0.863333
12	91.61362	3.31	10.21	507.6055	26.46849	0.952866

Max = 1500



Clow Valve Company

A Division of McWane Corporation

902 South Second Street
Oskaloosa, Iowa 52577

Specified by the
City



MODEL #950 and #960
WET BARREL FIRE HYDRANT
FRICTIONAL FLOW LOSS TEST

By

Chris Cook

Project Number 2545-14

Engineering

Approved _____,

This report and all information contained therein is the property of the Clow Valve Company and shall not be used, copied or reproduced without written consent.

PURPOSE

The purpose of this test was to determine the frictional head loss through the 950 and 960 wet barrel fire hydrants at various flow rates. The maximum permissible frictional flow losses as specified in AWWA C503, Standard for Wet-Barrel Fire Hydrants are listed below.

No. of Outlet Nozzles	Nominal Dia. of Outlet Nozzle	Total Fluid Flow	Max. Allowable Head Loss
1	2 ½"	250 GPM	1.0 PSI
2	2 ½"	500 GPM	2.0 PSI
1	4 ½"	1000 GPM	5.0 PSI
1	4"	1500 GPM	11.0 PSI*
1	4 ½"	1500 GPM	9.0 PSI†

* At time of printing a revised draft of AWWA C503 increased this value to 14.0 PSI

† At time of printing a revised draft of AWWA C503 increased this value to 12.0 PSI

PROCEDURE

The first test specimen is the 950 wet-barrel fire hydrant. This hydrant has one 4" pumper nozzle and one 2-1/2" hose nozzle. The hydrant has a trench depth of 65 inches. The hydrant was later refitted with a 4-1/2" pumper nozzle and tested again

The first test specimen was the 960 wet-barrel fire hydrant. This hydrant has one 4" pumper nozzle and two 2-1/2" hose nozzles. The hydrant has a trench depth of 65 inches. The hydrant was later refitted with a 4-1/2" pumper nozzle and tested again.

The fire hydrant was installed in a flow test circuit located at the Clow manufacturing facility at Oskaloosa, Iowa. Included in this report is a schematic illustration of the flow test circuit. See page five. Every effort was made to align the inlet and outlet piping of the test circuit with the hydrant inlet and nozzle outlets.

The following equipment was used in the flow test circuit:

- A. BIF 4" Venturi, Serial No. 216579
- B. BIF 6" Venturi, Serial No. 188761
- C. Venturi digital differential pressure transducer Serial No. 1205592
- D. Test digital differential pressure transducer Serial No. 1281287
- E. Piping and valves to control and regulate flow.

Water was introduced into the flow circuit and directed through the venturi and test hydrant as shown in the schematic illustration. Control valves installed in the pipelines exiting the hydrant nozzles were used to vary the rate of fluid flow and to adjust system pressure during the test.

A differential pressure transducer was connected to pressure taps at the throat and outlet of the venturi flow meter. The pressure differential across the venturi was used in conjunction with a calibration curve to determine actual flow rate through the circuit. The calibration curve was supplied by the venturi manufacturer.

A piezometer was installed in the inlet and outlet pipelines connected to the inlet and nozzle outlets of the hydrant. The differential pressure transducer connected to these piezometers was used to determine the static pressure differential between the two piezometers. At the start of the test, this transducer was zeroed to correct for the difference in elevation between the hydrant inlet and the nozzle outlets.

Pressure differential readings for the venturi and the hydrant were taken at various flow rates through the hydrant. Having determined the static pressure

differential across the hydrant at various fluid flow rates, the frictional flow loss of the hydrant was calculated using Bernoulli's equation, the continuity equation, and Poiseuille's equation for friction resistance to fluid flow in horizontal pipes. The total hydrant friction loss is determined by subtracting the frictional flow loss of the inlet and outlet pipelines connected to the hydrant.

The following tests were run to determine the frictional flow loss. In some cases it was necessary to extrapolate the data, due to the limitations of the test equipment and test facilities.

- A. 4" pumper nozzle test at 1000 gpm extrapolated to 1500 gpm
- B. 4-1/2" pumper nozzle test at 1000 gpm and extrapolated to 1500 gpm
- C. 2-1/2" middle hose nozzle test at 250 gpm (960 only)
- D. 2-1/2" top hose nozzle test at 250 gpm

ACCURACY

The differential pressure transducers used to determine flow and friction loss display pressure differentials in pounds per square inch (psi). When the system is in operation, it is not unusual to have a rapid, uniform fluctuation on the LCD display due to vibration and pump surge. By mentally calculating an average reading under these conditions, errors can usually be held to within plus or minus .5 psi. However, the percentage error is inversely proportional to the magnitude of the display reading. At a reading of 25 psi, an error of .5 psi is practically negligible, while at a very low reading, this same error will result in a very large variance in calculated friction loss. Therefore, it is reasonable to conclude that higher flow rates produce more accurate data for any given test.

CONCLUSION

Upon completion of all the flow tests and subsequent engineering calculations, the frictional flow loss of the 950 and 960 hydrant was determined at various rates of fluid flow. The resulting flow loss calculations were plotted on graphs included in this report.

The following tests were found to meet the criteria for maximum permissible frictional flow losses as specified in AWWA C503, Standard for Wet-Barrel Fire Hydrants.

950 2-1/2" top hose nozzle test at 250 gpm, pressure loss is 0.95 psig where 1.0 psig is allowed

950 4" pumper nozzle test at 1000 gpm extrapolated to 1500 gpm, pressure loss is 8.2 psig where 11.0 psig is allowed

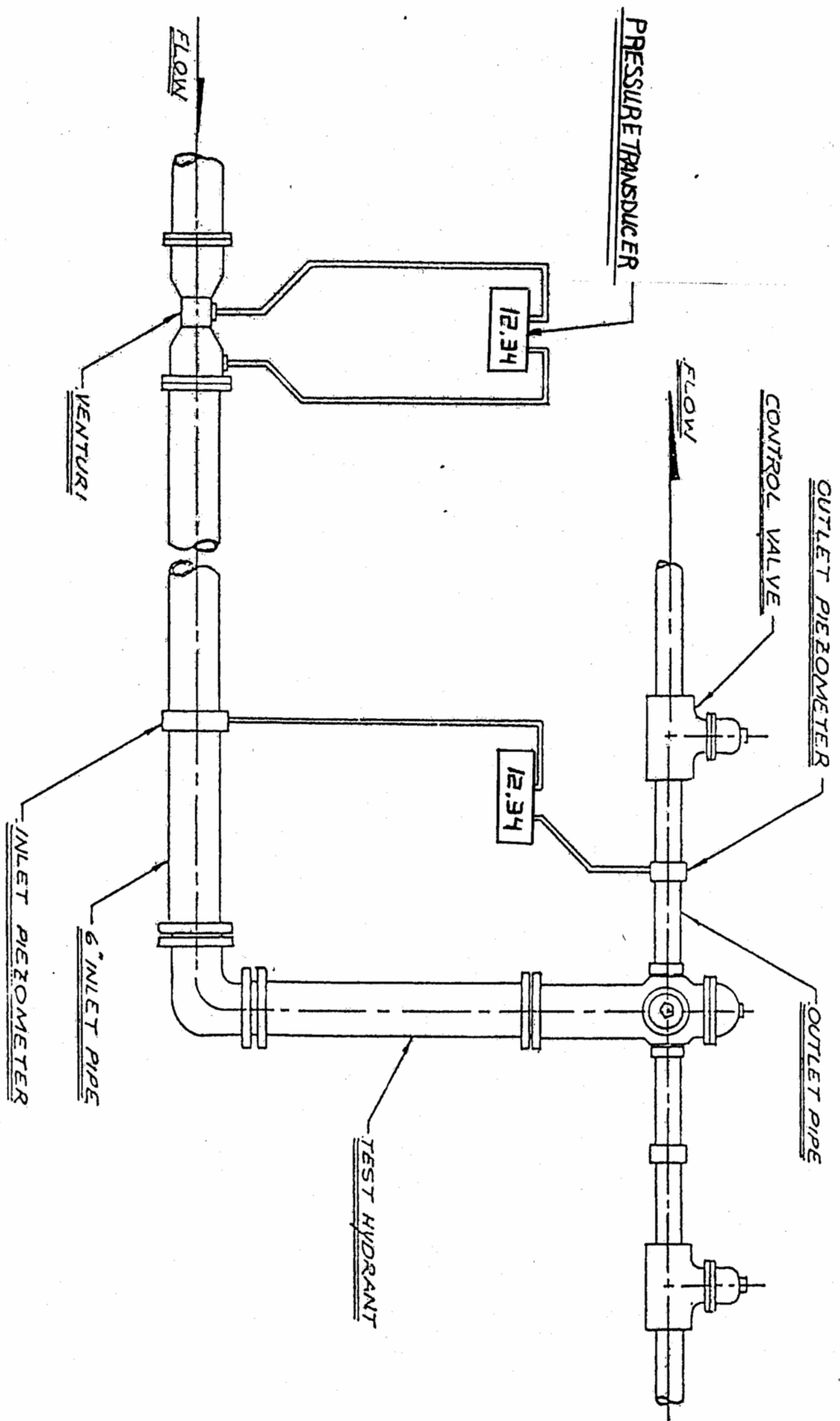
950 4-1/2" pumper nozzle test at 1000 gpm, pressure loss is 2.9 psig where 5.0 psig is allowed. Extrapolated to 1500 gpm, pressure loss is 5.9 psig where 9.0 psig is allowed

960 2-1/2" top hose nozzle test at 250 gpm, pressure loss is 0.80 psig where 1.0 psig is allowed

960 2-1/2" middle hose nozzle test at 250 gpm, pressure loss is 0.8 psig where 1.0 psig is allowed

960 4" pumper nozzle test at 1000 gpm extrapolated to 1500 gpm, pressure loss is 9.5 psig where 11.0 psig is allowed

960 4-1/2" pumper nozzle test at 1000 gpm, pressure loss is 3 psig where 5.0 psig is allowed. Extrapolated to 1500 gpm, pressure loss is 6.2 psig where 9.0 psig is allowed



Clow Valve Venturi Testing

Product Name: 960
Test Conducted: 2 1/2" Top
Date of Test: 10/14/2003
Test Personnel: ALL
Venturi Size: 4"

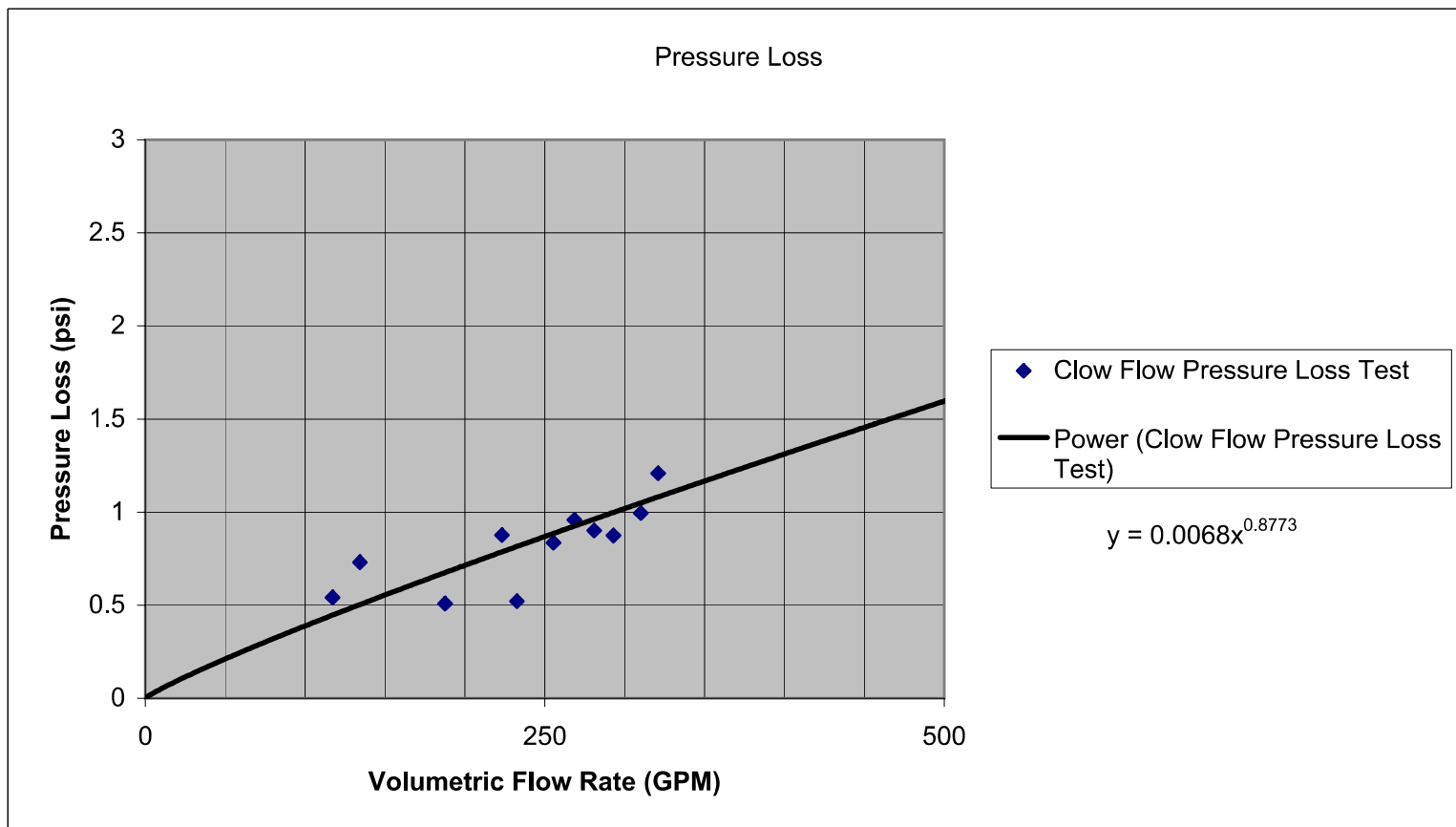
Inlet Pipe Diameter: 6
Outlet Pipe Diameter: 2.5

Pipe Length: 9.75
Pipe Length: 55.75

Pipe Material: PVC
Pipe Material: PVC

Trench Depth: 65
System Pressure: 150
Centerline Height of Inlet Pump: 0
Centerline Height of Outlet Pump: 0

Run #	Venturi Manometer (in H2O)	Venturi Digital Pressure (psi)	Test Pressure (psi)	Volumetric Flow Rate, Q (GPM)	Total Head Loss (in)	Total head Loss (psi)
1	264.0465	9.54	32.15	904.8483	93.1786251	3.354431
2	4.428453	0.16	1.07	117.1822	15.0262344	0.540944
3	16.05314	0.58	2.73	223.1082	24.3328336	0.875982
4	11.34791	0.41	1.83	187.583	14.1255344	0.508519
5	17.43703	0.63	2.53	232.5262	14.464279	0.520714
6	21.03515	0.76	3.25	255.3926	23.2313574	0.836329
7	23.24938	0.84	3.62	268.4981	26.6193727	0.958297
8	25.4636	0.92	3.81	280.993	25.0278815	0.901004
9	27.67783	1	4.03	292.9555	24.2803171	0.874091
10	30.99917	1.12	4.52	310.0349	27.6167358	0.994202
11	33.2134	1.2	4.98	320.9166	33.5512454	1.207845
12	5.812344	0.21	1.42	134.2491	20.2972438	0.730701
Max =				1500		



Clow Valve Venturi Testing

Product Name: 960
Test Conducted: 2 1/2" Middle
Date of Test: 10/14/2003
Test Personnel: ALL
Venturi Size: 4"

Inlet Pipe Diameter: 6
Outlet Pipe Diameter: 2.5

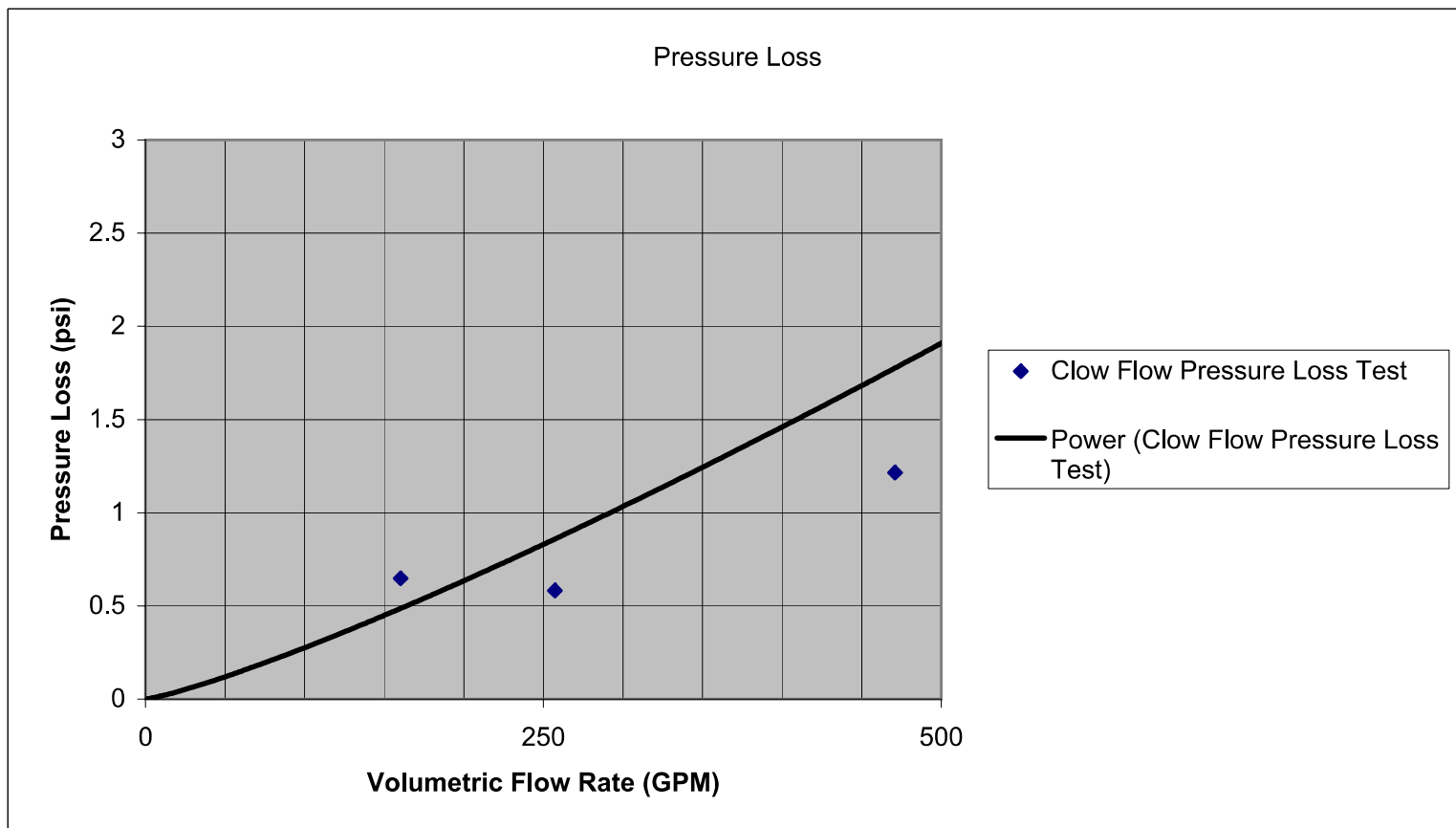
Pipe Length: 9.75
Pipe Length: 55.75

Pipe Material: PVC
Pipe Material: PVC

Trench Depth: 65
System Pressure: 150
Centerline Height of Inlet Pump: 0
Centerline Height of Outlet Pump: 0

Run #	Venturi Manometer (in H2O)	Venturi Digital Pressure (psi)	Test Pressure (psi)	Volumetric Flow Rate, Q (GPM)	Total Head Loss (in)	Total head Loss (psi)
1	309.9917	11.2	32.45	933.73	50.6289567	1.822642
2	260.4484	9.41	31	855.8686	144.008407	5.184303
3	229.726	8.3	27.43	803.8062	128.028579	4.609029
4	171.8793	6.21	21.02	695.2774	107.09389	3.85538
5	124.5502	4.5	14.97	591.8594	68.2626991	2.457457
6	78.88182	2.85	9.21	471.015	33.7532811	1.215118
7	23.52616	0.85	3.03	257.2301	16.1853284	0.582672
8	9.133684	0.33	1.62	160.2763	17.9771243	0.647176
9	178.522	6.45	21.34	708.5853	97.9187004	3.525073
10	172.9864	6.25	20.42	697.513	87.4425675	3.147932
11	144.7551	5.23	17.04	638.0624	70.5333132	2.539199
12	136.1749	4.92	16.05	618.8635	66.4746087	2.393086

Max = 1500



Clow Valve Venturi Testing

Product Name: 960
Test Conducted: 4" Nozzle
Date of Test: 10/17/2003
Test Personnel: ALL
Venturi Size: 6"

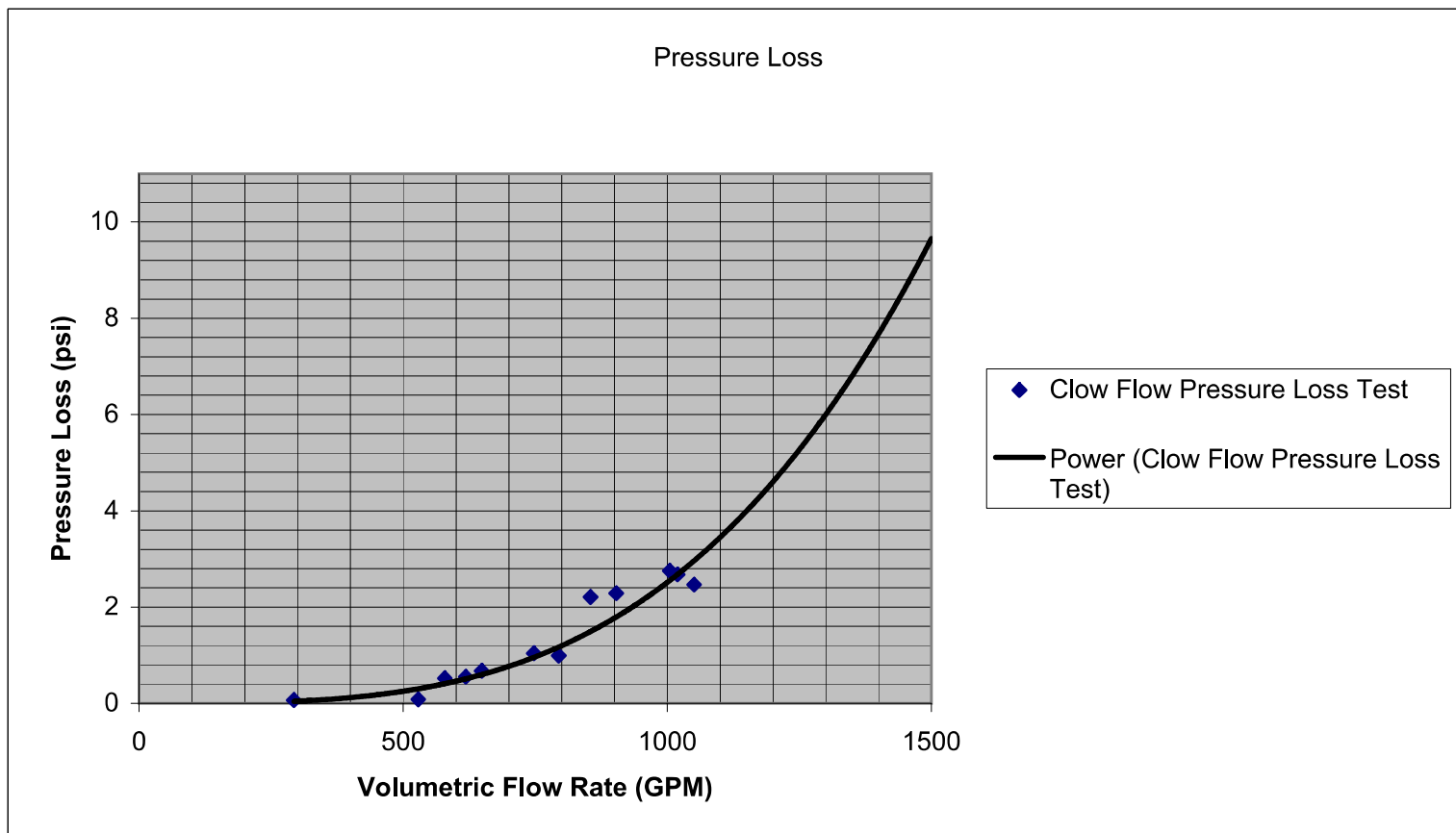
Inlet Pipe Diameter: 6
Outlet Pipe Diameter: 4

Pipe Length: 9.75
Pipe Length: 55.75

Pipe Material: PVC
Pipe Material: PVC

Trench Depth: 52
System Pressure: 150
Centerline Height of Inlet Pump: 0
Centerline Height of Outlet Pump: 79 1/2"

Run #	Venturi Manometer (in H2O)	Venturi Digital Pressure (psi)	Test Pressure (psi)	Volumetric Flow Rate, Q (GPM)	Total Head Loss (in)	Total head Loss (psi)
1	0	2.57	7.18	1050.526	68.470649	2.464943
2	0	2.42	7.12	1019.408	74.321629	2.675579
3	0	2.35	7.07	1004.556	76.443994	2.751984
4	0	1.9	5.79	903.2687	63.536011	2.287296
5	0	1.7	5.35	854.4067	61.396819	2.210285
6	0	1.47	3.71	794.509	27.503919	0.990141
7	0	1.3	3.45	747.157	28.879229	1.039652
8	0	0.98	2.5	648.7139	18.739026	0.674605
9	0	0.89	2.21	618.2088	15.267485	0.549629
10	0	0.78	1.98	578.7453	14.485708	0.521485
11	0	0.65	1.3	528.3198	2.2558928	0.081212
12	0	0.2	0.45	293.0591	1.8453333	0.066432
Max =				1500		



Clow Valve Venturi Testing

Product Name: 960
Test Conducted: 4 1/2" Nozzle
Date of Test: 10/14/2003
Test Personnel: ALL
Venturi Size: 6"

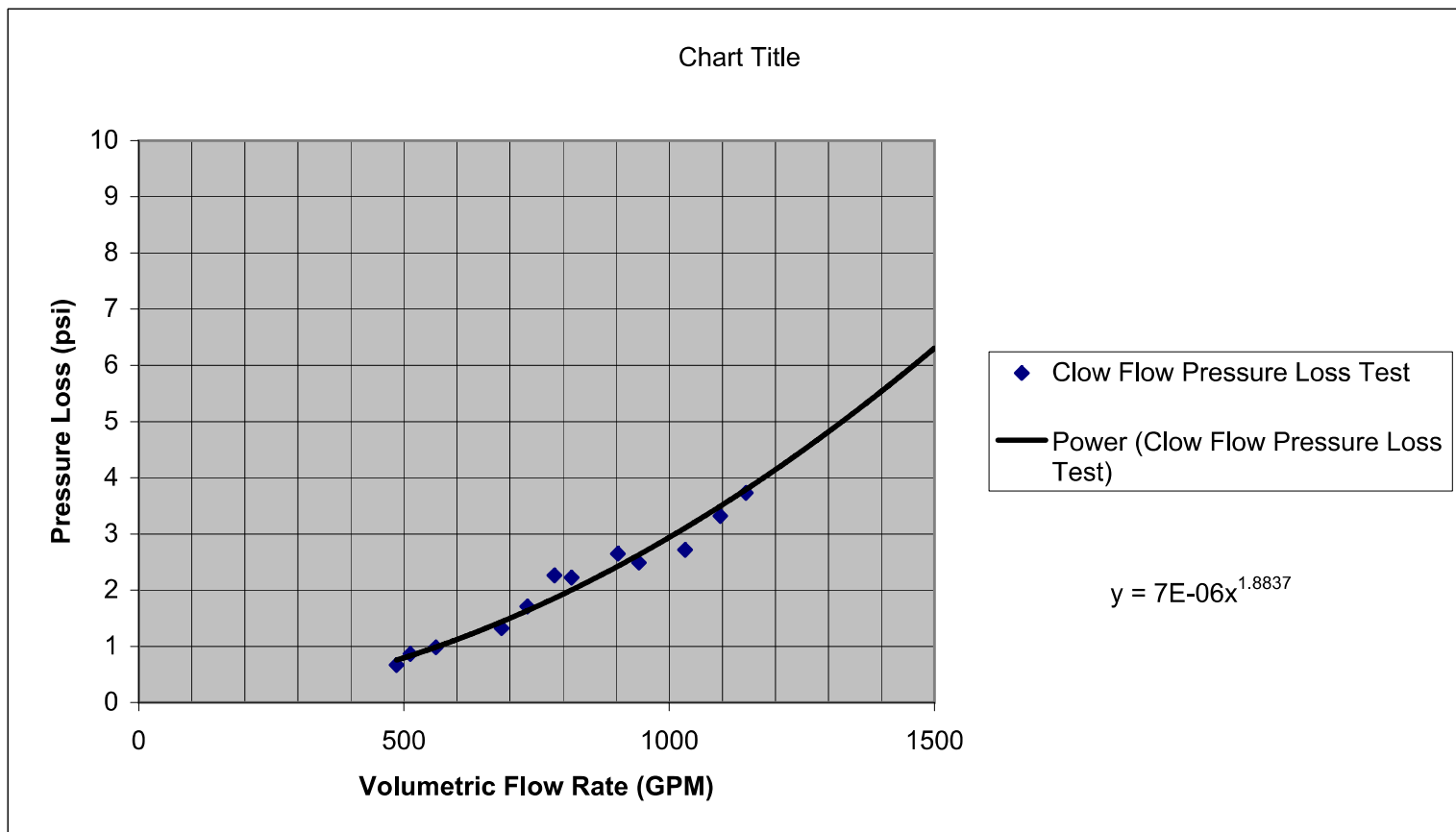
Inlet Pipe Diameter: 6
Outlet Pipe Diameter: 4

Pipe Length: 9.75
Pipe Length: 55.75

Pipe Material: PVC
Pipe Material: PVC

Trench Depth: 52
System Pressure: 150
Centerline Height of Inlet Pump: 0
Centerline Height of Outlet Pump: 79 1/2"

Run #	Venturi Manometer (in H2O)	Venturi Digital Pressure (psi)	Test Pressure (psi)	Volumetric Flow Rate, Q (GPM)	Total Head Loss (in)	Total head Loss (psi)
1	0	3.05	9.31	1144.432	103.53896	3.727403
2	0	2.8	8.45	1096.527	92.18429	3.318634
3	0	2.47	7.25	1029.885	75.421671	2.71518
4	0	2.07	6.3	942.8125	69.138091	2.488971
5	0	1.9	6.15	903.2687	73.521244	2.646765
6	0	1.55	5.09	815.8419	61.744758	2.222811
7	0	1.43	4.91	783.6248	62.807129	2.261057
8	0	1.25	4.03	732.6477	47.495075	1.709823
9	0	1.09	3.35	684.1533	36.735534	1.322479
10	0	0.73	2.35	559.8886	27.296581	0.982677
11	0	0.61	2.01	511.8057	23.993315	0.863759
12	0	0.55	1.7	485.9835	18.465399	0.664754
Max =				1500		



PUBLIC REVIEW DRAFT

Appendix B

CalEEMod Report

Ray Water Project
SP2021-0008

June 2022
Appendices

ATTACHMENT E

PUBLIC REVIEW DRAFT

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Denise Duffy & Associates, Inc.

PLANNING AND ENVIRONMENTAL CONSULTING

SUMMARY OF AIR QUALITY MODELING FOR RAY WATER COMPANY

Date: September 20, 2021

The purpose of this memorandum is to document and summarize the results of the air quality modeling that has been completed on behalf of the Ray Water Company (Project) by Denise Duffy and Associates.

1. AIR QUALITY MODELING METHODOLOGY

This memorandum provides an estimate of the Project's criteria air pollutant and greenhouse gas emissions using the California Emissions Estimator Model (CalEEMod) Version 2016.3.1 software, a modeling platform recommended by the California Air Resources Board and accepted by the Santa Barbara County Air Pollution Control District (SBAPCD). Model outputs are included as **Attachment 1** to this memorandum.

The following sources were utilized to inform the model:

- The Initial Study Project Description prepared by DD&A;
- Email correspondence with Shawn Mixan of Weber, Hayes & Associates on August 4, 2021;
- Draft Engineering Report prepared by Weber, Hayes & Associates, dated July 2, 2021
- 30% Design Plans for Ray Water Company Water System Consolidation prepared by Weber, Hayes & Associates, dated June 22, 2021; and
- CalEEMod User's Guide Version 2020.4.0 prepared by BREEZE Software, dated May 2021.

Diana Staines, Deputy Project Manager at DD&A, ran the air quality model for the Project on August 11, 2021. When project-specific details were not available to input into the model, default values were used. An Annual Report was generated for the Project. For a detailed description of what information was entered into the model, see **Section 3. Model Inputs**, below.

2. PROJECT INFORMATION

The proposed project consists of consolidating RWC with the City of Santa Maria's water system. The proposed project consists of a water main, a distribution line, and 13 service connections. In total, these components include 4,860 linear feet (0.92 miles) of new pipelines.

3. MODEL INPUTS

The following information was input into the air quality model.

Construction

Table 1. Project Characteristics	
Project Location	Santa Barbara County - North of Santa Ynez
Windspeed (meters per second)	3.13 m/s
Precipitation Frequency (days per year)	37
CEC Forecasting Climate Zone	4
Land Use Setting	Rural
Start Date of Construction	February 17, 2023
Operational Year	2023
Utility Company	Pacific Gas & Electric
Intensity Factors ¹	CO ₂ – 203.983 pounds/megawatt hour CH ₄ – 0.033 pounds/megawatt hour N ₂ O – 0.004 pounds/megawatt hour

Table 1. Project Characteristics, shows the basic project information that was input into CalEEMod. The *State Date of Construction* provided is an estimate and is dependent on a variety of factors. The Draft Engineering Report included a Preliminary Schedule for the proposed project. Given the approximate date that the Construction Application is November 17, 2021, the expected start date for Project Construction ranges from August 17, 2022 to February 17, 2023. Taking into account project delays, a construction start date of February 17, 2023 was selected for this model.

The model includes an option to apply an EMFAC Adjustment Factor to account for the SAFE Vehicle Rule. In order to ensure that the model provided a conservative estimate and accounted for the worst-case-scenario, this box remained unchecked in the model.

Table 2. Land Use		
Proposed Land Use	CalEEMod Land Use	Area (square feet)
Underground pipelines	General Light Industry	13,100

Table 2. Land Use includes the Land Use category for the proposed project. The information was obtained from email correspondence with WHA on August 4, 2021 and from the 30% Design Plans for this project. The land use types and areas input into the model provide the basis for much of the calculations.

Table 3. Construction Phasing			
Construction Phase	Start Date	End Date	Days/Week
Site Preparation (10 days)	2-20-2023	3-3-2023	5
Trenching (60 days)	2-27-2023	5-19-2023	5
Paving (60 days)	3-6-2023	5-26-2023	5

Table 3. Construction Phasing shows the schedule provided by WHA via email correspondence on August 4, 2021 and reflected in the Preliminary Schedule included in the Draft Engineering Report for the proposed project, dated July 2, 2021.

Table 4. Construction Equipment

¹ Energy Intensity is measured by the quantity of energy required per unit output or activity, so that using less energy to produce a product reduces the intensity.

Type of Equipment	Quantity	Hours/Day
Site Preparation Phase		
Graders	1	8
Tractors/Loaders/Backhoes	1	8
Trenching		
Graders	1	6
Rubber Tired Dozers	1	6
Tractors/Loaders/Backhoe	1	7
Paving		
Cement and Mortar Mixers	4	6
Pavers	1	7
Rollers	1	7
Tractors/Loaders/Backhoes	1	7

Table 4. Construction Equipment is a list of equipment that DD&A assumes will be used during construction. The default list of equipment provided by CalEEMod was utilized for this model. In addition, the horsepower and load factor default values provided by CalEEMod (not shown in the table above) were used.

Table 5. Grading	
Imported Material	0
Exported Material	0
Total Graded Acres	0.3

Table 5. Grading shows the grading details that were input into the model. The values above were obtained from email correspondence with WHA on August 4, 2021. Default values provided by CalEEMod (not shown in the table above) were used for speed of vehicles onsite, material moisture content percentage, and material silt content percentage.

Operation

Table 6. Vehicle Trips			
Phase Name	Number of Worker Trips/Day	Number of Vendor Trips/Day	Number of Hauling Trips/Day
Site Preparation	5	0	0
Trenching	8	0	0
Paving	18	0	0

Table 6. Vehicle Trips shows the estimated vehicle trips that were generated by CalEEMod based on the land use and duration of construction.

Mitigation

This model was run without mitigation incorporated. DD&A assumes that standard Best Management Practices (BMPs), will be incorporated into the Project.

4. MODEL OUTPUTS

Table 7. Criteria Pollutant and Greenhouse Gas Emissions Model Results						
Criteria Pollutant Emissions (tons/year)						
	ROG	NOX	CO	SO2	Total PM10	Total PM2.5
Construction	1.9200e-003	0.0169	0.0204	4.0000e-005	1.2300e-003	8.2000e-004
Operation	0.0530	0.0168	0.0142	1.0000e-004	1.2800e-003	1.2800e-003
Greenhouse Gas Emissions (metric tons/year)						
	Total CO2	CH4	N2O	CO2e		
Construction	3.0007	8.3000e-004	1.0000e-005	3.0238		
Operation	28.1195	1.9400e-003	5.3000e-004	28.3253		

Table 7. Criteria Pollutant and Greenhouse Gas Emissions Model Results shows the model results that are to be used to determine if the Project as a significant impact on Air Quality and Greenhouse Gas Emissions.

5. CONCLUSIONS

Air Quality

The Environmental Review Guidelines (Guidelines) for the Santa Barbara County Air Pollution Control District (APCD) contain definitions of common terms, procedures for environmental review, adopted thresholds of significance, time limits, fees, forms, and APCD-approved exemptions to CEQA review. The Guidelines state that a proposed project will not have a significant air quality effect on the environment, if operation of the project will:

- emit (from all project sources, mobile and stationary) less than the daily trigger for offsets set in the APCD New Source Review Rule for any pollutant and
- emit less than 25 pounds per day of oxides of nitrogen (NO_x) or reactive organic compounds (ROC) from motor vehicle trips only; and
- not cause or contribute to a violation of any California or National Ambient Air Quality Standard (except ozone); and
- not exceed the APCD health risk public notification thresholds adopted by the APCD Board; and
- be consistent with the adopted federal and state Air Quality Plans.

For the purposes of comparison to the APCD Standards, the values in **Table 7** above have been converted from tons/year to pounds/day in the table below. These values have been rounded to the nearest tenth of a pound per day.

Table 8. Comparison to APCD Thresholds			
Criteria Pollutant	Construction (pounds/day)	Operation (pounds/day)	Exceed APCD Threshold?
NOX	0	0	No
ROG	0	0	No
PM10	0	0	No
PM2.5	0	0	No
CO	0	0	No

Table 8. Comparison to MBARD Thresholds shows that emissions of NOX, ROG, PM10, PM2.5, and CO during construction and operation of the Project would not exceed MBARD thresholds. All of the values in this table round down to zero. *Based on the above results, the Project would have a less than significant impact resulting from 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.* This conclusion is intended to inform the discussion of CEQA Air Quality threshold (b) in the Project Initial Study.

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Ray Water Company

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	13.10	1000sqft	0.30	13,100.00	0

1.2 Other Project Characteristics

Urbanization Rural Wind Speed (m/s) 3.1 Precipitation Freq (Days) 37

Climate Zone 4 Operational Year 2023

Utility Company Pacific Gas and Electric Company

CO2 Intensity (lb/MW/hr) 203.98 CH4 Intensity (lb/MW/hr) 0.033 N2O Intensity (lb/MW/hr) 0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Construction phasing/schedule provided by WHA via email correspondence on 8-4-2021.

Off-road Equipment -

Off-road Equipment - General equipment list provided by WHA via email correspondence on 8-4-21.

Off-road Equipment - General equipment list provided by WHA via email correspondence on 8-4-21.

Grading - Total area of ground disturbance is 0.3 acres, email correspondence from WHA on 8-4-21.

Vehicle Trips - The project will not vehical require trips once operational.

Consumer Products -

Area Coating - The project will not require architectural coatings.

Water And Wastewater - The project will supply potable water to residents on Betteravia and Rayville, it will not require addition water to operate.

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Solid Waste - The project will not generate soil waste during operation.

Area Mitigation - The project will not use architectural coatings.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	0
tblAreaCoating	Area_EF_Nonresidential_Interior	250	0
tblAreaCoating	Area_EF_Parking	250	0
tblAreaCoating	Area_EF_Residential_Exterior	100	0
tblAreaCoating	Area_EF_Residential_Interior	50	0
tblAreaCoating	Area_Nonresidential_Exterior	6550	0
tblAreaCoating	Area_Nonresidential_Interior	19650	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblGrading	AcresOfGrading	0.50	0.30
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	16.24	0.00
tblVehicleTrips	ST_TR	1.99	0.00
tblVehicleTrips	SU_TR	5.00	0.00
tblVehicleTrips	WD_TR	4.96	0.00
tblWater	IndoorWaterUseRate	3,029,375.00	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

Year	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
2023	1.9200e-003	0.0169	0.0204	4.0000e-005	4.5000e-004	7.8000e-004	1.2300e-003	1.0000e-004	7.2000e-004	8.2000e-004	0.0000	3.0007	3.0007	8.3000e-004	1.0000e-005	3.0238
Maximum	1.9200e-003	0.0169	0.0204	4.0000e-005	4.5000e-004	7.8000e-004	1.2300e-003	1.0000e-004	7.2000e-004	8.2000e-004	0.0000	3.0007	3.0007	8.3000e-004	1.0000e-005	3.0238

Mitigated Construction

Year	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
2023	1.9200e-003	0.0169	0.0204	4.0000e-005	4.5000e-004	7.8000e-004	1.2300e-003	1.0000e-004	7.2000e-004	8.2000e-004	0.0000	3.0007	3.0007	8.3000e-004	1.0000e-005	3.0238
Maximum	1.9200e-003	0.0169	0.0204	4.0000e-005	4.5000e-004	7.8000e-004	1.2300e-003	1.0000e-004	7.2000e-004	8.2000e-004	0.0000	3.0007	3.0007	8.3000e-004	1.0000e-005	3.0238

Percent Reduction	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
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	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-17-2023	5-16-2023	0.0179	0.0179
		Highest	0.0179	0.0179

2.2 Overall Operational

Unmitigated Operational

Category	tons/yr											MT/yr				
	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
Area	0.0512	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.3000e-004	2.3000e-004	0.0000	0.0000	2.5000e-004
Energy	1.8500e-003	0.0168	0.0141	1.0000e-004	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	0.0000	28.1192	28.1192	1.9400e-003	5.3000e-004	28.3251
Mobile	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
Waste					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0530	0.0168	0.0142	1.0000e-004	0.0000	1.2800e-003	1.2800e-003	0.0000	1.2800e-003	1.2800e-003	0.0000	28.1195	28.1195	1.9400e-003	5.3000e-004	28.3253

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

Category	tons/yr											MT/yr					
	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	
Area	0.0512	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.3000e-004	2.3000e-004	0.0000	0.0000	0.0000	2.5000e-004
Energy	1.8500e-003	0.0168	0.0141	1.0000e-004	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	0.0000	28.1192	28.1192	1.9400e-003	5.3000e-004	28.3251	
Mobile	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	
Waste					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Water					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total	0.0530	0.0168	0.0142	1.0000e-004	0.0000	1.2800e-003	1.2800e-003	0.0000	1.2800e-003	1.2800e-003	0.0000	28.1195	28.1195	1.9400e-003	5.3000e-004	28.3253	

Percent Reduction	tons/yr											MT/yr					
	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	
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	0.00	

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	2/17/2023	2/17/2023	5	1	
3	Paving	Paving	2/18/2023	2/24/2023	5	5	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Site Preparation Phase): 0.3

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

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

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
Site Preparation	2	5.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	8.30	6.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

Category	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
	tons/yr															
Fugitive Dust					1.6000e-004	0.0000	1.6000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-004	3.0900e-003	1.9600e-003	0.0000	1.1000e-004	1.1000e-004	1.1000e-004	1.0000e-004	1.0000e-004	1.0000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4309
Total	2.7000e-004	3.0900e-003	1.9600e-003	0.0000	1.6000e-004	1.1000e-004	2.7000e-004	2.0000e-005	1.0000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4309

Unmitigated Construction Off-Site

Category	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
	tons/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	1.0000e-005	0.0000	5.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0118	0.0118	0.0000	0.0000	0.0119
Total	1.0000e-005	0.0000	5.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0118	0.0118	0.0000	0.0000	0.0119

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2023

Mitigated Construction On-Site

Category	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
tons/yr																
Fugitive Dust					1.6000e-004	0.0000	1.6000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-004	3.0900e-003	1.9600e-003	0.0000	1.1000e-004	1.1000e-004	1.1000e-004	1.0000e-004	1.0000e-004	1.0000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4309
Total	2.7000e-004	3.0900e-003	1.9600e-003	0.0000	1.6000e-004	1.1000e-004	2.7000e-004	2.0000e-005	1.0000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4309
MT/yr																

Mitigated Construction Off-Site

Category	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
tons/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	1.0000e-005	0.0000	5.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0118	0.0118	0.0000	0.0000	0.0119
Total	1.0000e-005	0.0000	5.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0118	0.0118	0.0000	0.0000	0.0119
MT/yr																

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3.4 Paving - 2023

Unmitigated Construction On-Site

Category	tons/yr											MT/yr				
	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
Off-Road	1.5300e-003	0.0138	0.0176	3.0000e-005	6.6000e-004	6.6000e-004	6.6000e-004	6.2000e-004	6.2000e-004	6.2000e-004	0.0000	2.3498	2.3498	6.8000e-004	0.0000	2.3669
Paving	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
Total	1.5300e-003	0.0138	0.0176	3.0000e-005	6.6000e-004	6.6000e-004	6.6000e-004	6.2000e-004	6.2000e-004	6.2000e-004	0.0000	2.3498	2.3498	6.8000e-004	0.0000	2.3669

Unmitigated Construction Off-Site

Category	tons/yr											MT/yr				
	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
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	1.2000e-004	8.0000e-005	8.8000e-004	0.0000	2.8000e-004	2.8000e-004	2.8000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2116	0.2116	1.0000e-005	1.0000e-005	0.2140
Total	1.2000e-004	8.0000e-005	8.8000e-004	0.0000	2.8000e-004	2.8000e-004	2.8000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2116	0.2116	1.0000e-005	1.0000e-005	0.2140

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3.4 Paving - 2023

Mitigated Construction On-Site

Category	tons/yr											MT/yr				
	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
Off-Road	1.5300e-003	0.0138	0.0176	3.0000e-005	6.6000e-004	6.6000e-004	6.6000e-004	6.2000e-004	6.2000e-004	6.2000e-004	0.0000	2.3498	2.3498	6.8000e-004	0.0000	2.3669
Paving	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
Total	1.5300e-003	0.0138	0.0176	3.0000e-005	6.6000e-004	6.6000e-004	6.6000e-004	6.2000e-004	6.2000e-004	6.2000e-004	0.0000	2.3498	2.3498	6.8000e-004	0.0000	2.3669

Mitigated Construction Off-Site

Category	tons/yr											MT/yr				
	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
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	1.2000e-004	8.0000e-005	8.8000e-004	0.0000	2.8000e-004	2.8000e-004	2.8000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2116	0.2116	1.0000e-005	1.0000e-005	0.2140
Total	1.2000e-004	8.0000e-005	8.8000e-004	0.0000	2.8000e-004	2.8000e-004	2.8000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2116	0.2116	1.0000e-005	1.0000e-005	0.2140

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	tons/yr										MT/yr					
	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
Mitigated	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
Unmitigated	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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles				Trip %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	6.60	5.50	6.40	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	0.492113	0.052876	0.208088	0.152800	0.029700	0.007146	0.010959	0.006131	0.000966	0.000597	0.030829	0.003523	0.004272

Ray Water Company - Santa Barbara-North of Santa Ynez County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	tons/yr										MT/yr					
	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
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9.8177	9.8177	1.5900e-003	1.9000e-004	9.9148
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9.8177	9.8177	1.5900e-003	1.9000e-004	9.9148
NaturalGas Mitigated	1.8500e-003	0.0168	0.0141	1.0000e-004	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	0.0000	18.3015	18.3015	3.5000e-004	3.4000e-004	18.4103
NaturalGas Unmitigated	1.8500e-003	0.0168	0.0141	1.0000e-004	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	0.0000	18.3015	18.3015	3.5000e-004	3.4000e-004	18.4103

Ray Water Company - Santa Barbara-North of Santa Ynez County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use kBTU/yr	tons/yr										MT/yr					
		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
General Light Industry	342958	1.8500e-003	0.0168	0.0141	1.0000e-004	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	0.0000	18.3015	18.3015	3.5000e-004	3.4000e-004	18.4103
Total		1.8500e-003	0.0168	0.0141	1.0000e-004	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	0.0000	18.3015	18.3015	3.5000e-004	3.4000e-004	18.4103

Mitigated

Land Use	NaturalGas Use kBTU/yr	tons/yr										MT/yr					
		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
General Light Industry	342958	1.8500e-003	0.0168	0.0141	1.0000e-004	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	0.0000	18.3015	18.3015	3.5000e-004	3.4000e-004	18.4103
Total		1.8500e-003	0.0168	0.0141	1.0000e-004	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	1.2800e-003	0.0000	18.3015	18.3015	3.5000e-004	3.4000e-004	18.4103

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	106110	9.8177	1.5900e-003	1.9000e-004	9.9148
Total		9.8177	1.5900e-003	1.9000e-004	9.9148

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	106110	9.8177	1.5900e-003	1.9000e-004	9.9148
Total		9.8177	1.5900e-003	1.9000e-004	9.9148

6.0 Area Detail

6.1 Mitigation Measures Area

Ray Water Company - Santa Barbara-North of Santa Ynez County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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																
Mitigated	0.0512	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.3000e-004	2.3000e-004	0.0000	0.0000	0.0000	2.5000e-004
Unmitigated	0.0512	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.3000e-004	2.3000e-004	0.0000	0.0000	0.0000	2.5000e-004
	MT/yr																

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															
Architectural Coating	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
Consumer Products	0.0512				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.3000e-004	2.3000e-004	0.0000	0.0000	2.5000e-004
Total	0.0512	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.3000e-004	2.3000e-004	0.0000	0.0000	2.5000e-004
	MT/yr															

Ray Water Company - Santa Barbara-North of Santa Ynez County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

SubCategory	tons/yr										MT/yr					
	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
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0512					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	2.3000e-004	2.3000e-004	0.0000	0.0000	0.0000	2.5000e-004
Total	0.0512	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3000e-004	2.3000e-004	0.0000	0.0000	2.5000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

Ray Water Company - Santa Barbara-North of Santa Ynez County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal				
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Ray Water Company - Santa Barbara-North of Santa Ynez County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Ray Water Company - Santa Barbara-North of Santa Ynez County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

Land Use	Waste Disposed tons	Total CO2	CH4	N2O	CO2e
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

Land Use	Waste Disposed tons	Total CO2	CH4	N2O	CO2e
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

Ray Water Company - Santa Barbara-North of Santa Ynez County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

PUBLIC REVIEW DRAFT

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Appendix C
Biological Resources Report

PUBLIC REVIEW DRAFT

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Ray Water Company Consolidation with City
of Santa Maria Water System Project
Santa Maria, CA
Biological Resource Report

September 2021

Prepared by



Denise Duffy & Associates, Inc.
Contact: Jami Davis
947 Cass St. Suite 5
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Prepared for

Ray Water Company
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Santa Maria, CA 93455

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1.0 INTRODUCTION

1.1 Project Description

DENISE DUFFY & ASSOCIATES, Inc. (DD&A) was contracted by the Ray Water Company to assess the biological resources within the Ray Water Company Consolidation with City of Santa Maria Water System Project (project). The project is located on the western edge of the City of Santa Maria; however, a portion of the project site is also located within unincorporated Santa Barbara County (**Figure 1**). The proposed project components are primarily within the West Betteravia Road right-of-way, with some components located to south of West Betteravia Road, on Rayville Lane. The project consists of consolidating Ray Water Company with the City of Santa Maria's (City's) water system. The proposed project consists of an approximately 3,400-foot water main, an approximately 500-foot distribution line, and 13 service connections¹ (approximately 60-feet each). The water main will extend from Rayville Lane east along West Betteravia Road to connect with the City's water system near the intersection of West Betteravia Road and A Street. The distribution line will run south of the water main within Rayville Lane. The proposed project includes 13 service connections, including 10 on Rayville Lane and three on West Betteravia Road (**Figure 2**). In addition to the proposed project area, the Ray Water Company requested a biological analysis of their entire service area (**Figure 2**). As such, the biological resource report includes a survey area that is larger than project's impact area.

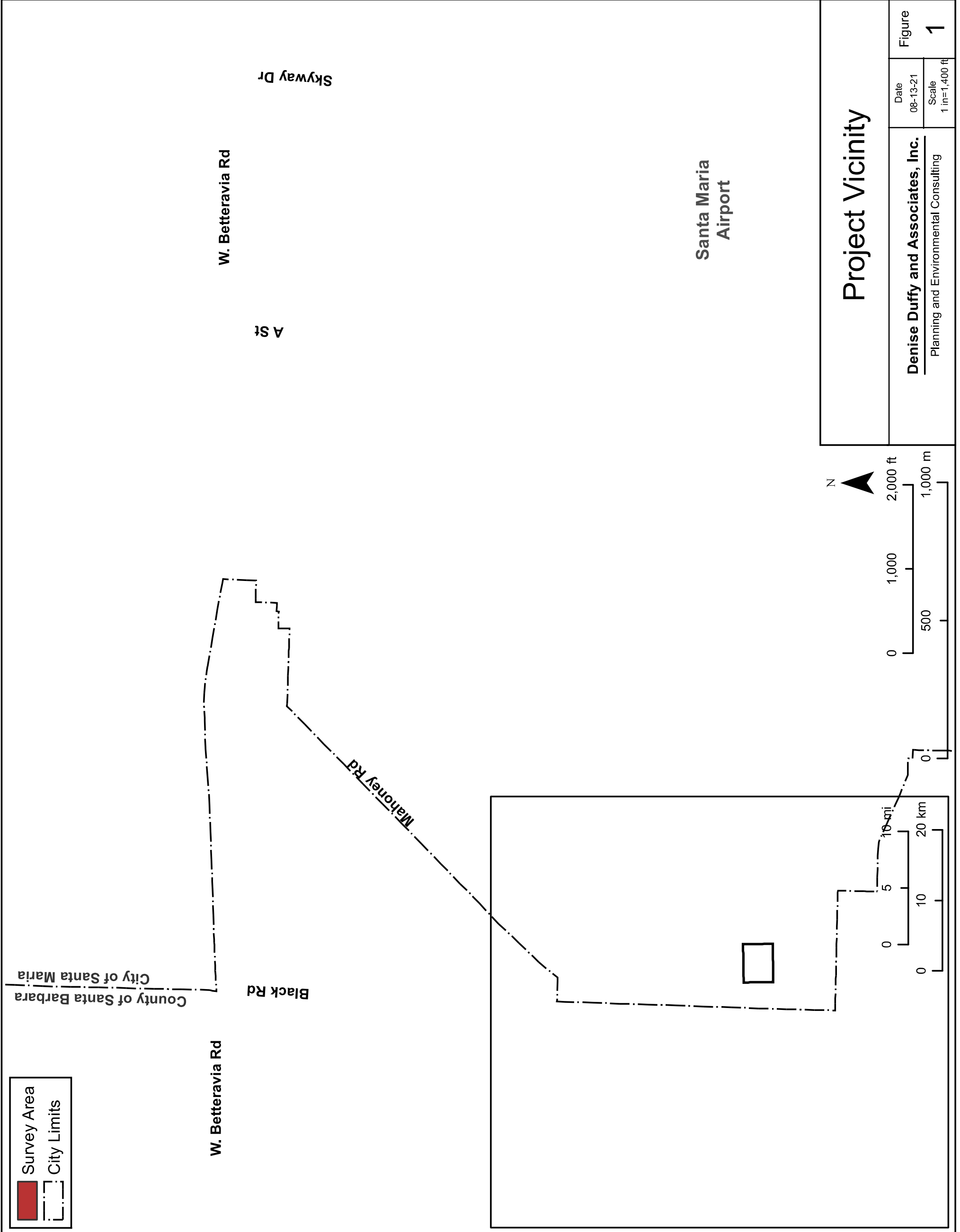
This report presents the findings of a biological resource assessment conducted by DD&A for the project. The emphasis of this study is to describe existing biological resources within the survey area and project site, identify any special-status species and sensitive habitats, and assess potential impacts that may occur to biological resources as a result of the project, and recommend appropriate avoidance, minimization, and mitigation measures necessary to reduce those impacts to a less-than-significant level in accordance with local and state ordinances including the California Environmental Quality Act (CEQA).

1.2 Summary of Results

Two vegetation types were observed within the survey area, riparian and ruderal; however, only ruderal habitat is present within the areas proposed to be impacted by the project. In addition, portions of the survey area and project site are developed. The floristic alliance occurring within the riparian habitat is listed as sensitive on the California Department of Fish and Wildlife's (CDFW's) *List Vegetation Alliances and Associations* (CDFW, 2020). Portions of the riparian area may be federal wetlands and a drainage is present within the survey area, which may be jurisdictional other waters of the U.S. or state, regulated by the U.S. Army Corps of Engineers (ACOE) and/or California Regional Water Quality Control Board (RWQCB).

No special-status species have the potential to occur within the survey area based on lack of appropriate habitat, and no known occurrences within the vicinity of the project. Raptors and other avian species protected under California Fish and Game Code have the potential to nest within trees present within and adjacent to the survey area and project site. All other species evaluated have a low potential to occur, are assumed unlikely to occur, or were determined not present within the survey area for the species-specific reasons presented in **Appendix B**.

¹ Please note that Figure 2 shows the general location of the service connections. The exact locations have not been determined at this time.



Project Vicinity		Date	08-13-21	Figure	1
		Scale	1 in=1,400 ft		
Denise Duffy and Associates, Inc. Planning and Environmental Consulting					

A St

W. Betteravia Rd

W. Betteravia Rd

City of Santa Maria
County of Santa Barbara

Rayville Ln

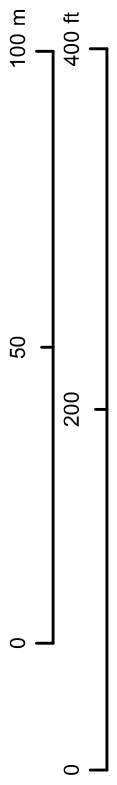
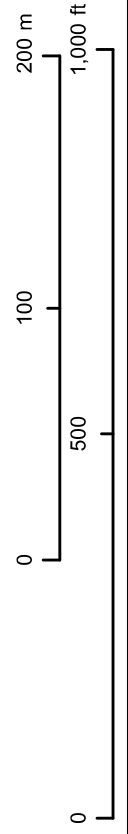
Maloney Rd

Maloney Rd

Legend

- Survey Area
- Trenching
- Potential Service Connection Areas
- Potential Staging Area

ATTACHMENT F



Project Site

Denise Duffy and Associates, Inc. Planning and Environmental Consulting	Date 09-09-21
Scale 1 in=250 ft	

Figure
2

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2.0 METHODS

2.1 Personnel and Survey Dates

DD&A biologists evaluated the survey area on June 14, 2021. The survey area was defined by Ray Water Company service area as well as the portion of the project alignment that connects from the service area to Santa Maria Water System (**Figure 2, Appendix A**). The survey area also includes all staging and access areas. Survey methods included walking the survey area and using aerial maps to identify general and sensitive vegetation types, conducting a focused survey for perennial and summer-blooming annual special-status plant species, and identifying potential habitat for special-status wildlife species and spring-blooming special-status plant species. Data collected during the survey were used to assess the environmental conditions of the survey area and its surroundings, evaluate environmental constraints at the site and within the local vicinity, and provide a basis for recommendations to minimize and avoid impacts.

The survey area was evaluated for botanical resources following the applicable guidelines outlined in: *Guidelines for Conducting and Reporting Botanical Inventories for Federally listed, Proposed and Candidate Plants* (U.S. Fish and Wildlife Service [USFWS], 2000), *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW, 2019), and *CNPS Botanical Survey Guidelines* (California Native Plant Society [CNPS], 2001).

2.2 Special-Status Species

Special-status species are those plants and animals that have been formally listed or proposed for listing as endangered or threatened or are candidates for such listing under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA). Listed species are afforded legal protection under the ESA and CESA. Species that meet the definition of rare or endangered under the CEQA Section 15380 are also considered special-status species. Animals on the CDFW's list of "species of special concern" (most of which are species whose breeding populations in California may face extirpation if current population trends continue) and avian species on USFWS's "Birds of Conservation Concern" list (birds that, without additional conservation actions, are likely to become candidates for listing under the ESA) meet this definition and are typically provided management consideration through the CEQA process, although they are not legally protected under the ESA or CESA. Additionally, the CDFW also includes some animal species that are not assigned any of the other status designations on their "Special Animals" list; however, these species have no legal or protection status.

Plants listed as rare under the California Native Plant Protection Act (CNPPA) or included in CNPS California Rare Plant Ranks (CRPR; formerly known as CNPS Lists) 1A, 1B, 2A, and 2B are also treated as special-status species as they meet the definitions of Sections 2062 and 2067 of the CESA and in accordance with CEQA Guidelines Section 15380.² In general, the CDFW requires that plant species on CRPR 1A (Plants presumed extirpated in California and Either Rare or Extinct Elsewhere), CRPR 1B (Plants rare, threatened, or endangered in California and elsewhere), CRPR 2A (Plants presumed extirpated in California, but more common elsewhere); and CRPR 2B (Plants rare, threatened, or endangered in California, but more common elsewhere) of the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 2021) be fully considered during the preparation of environmental documents relating

² CNPS initially created five CRPR to categorize degrees of concern; however, to better define and categorize rarity in California's flora, the CNPS Rare Plant Program and Rare Plant Program Committee have developed the new CRPR 2A and CRPR 2B.

to CEQA.³ In addition, species of vascular plants, bryophytes, and lichens listed as having special-status by the CDFW are considered special-status plant species (CDFW, 2021a). CNPS CRPR 4 species (plants of limited distribution) may, but generally do not, meet the definitions of Sections 2062 and 2067 of the CESA, and are not typically considered in environmental documents relating to CEQA. While other species (i.e., CRPR 3 or 4 species) are sometimes found in database searches or within the literature, these were not included within the analysis as they did not meet the definitions of Section 2062 and 2067 of the CESA.

Raptors (e.g., eagles, hawks, and owls) and their nests are protected in California under Fish and Game Code Section 3503.5. Section 3503.5 states that it is “unlawful to take, possess, or destroy the nest or eggs of any such bird except otherwise provided by this code or any regulation adopted pursuant thereto.”

In addition, fully protected species under the Fish and Game Code Section 3511 (birds), Section 4700 (mammals), Section 5515 (fish), and Section 5050 (reptiles and amphibians) are also considered special-status animal species. Species with no formal special-status designation but thought by experts to be rare or in serious decline may also be considered special-status animal species in some cases, depending on project-specific analysis and relevant, localized conservation needs or precedence.

2.3 Sensitive Habitats

Sensitive habitats include riparian corridors, wetlands, habitats for legally protected species, areas of high biological diversity, areas supporting rare or special-status wildlife habitat, and unusual or regionally restricted vegetation types. Vegetation types considered sensitive include those listed on the CDFW’s *California Natural Communities List* (i.e., those habitats that are rare or endangered within the borders of California) (CDFW, 2020), those that are occupied by species listed under the ESA or are critical habitat in accordance with the ESA, and those that are defined as ESHA under the CCA. Specific habitats may also be identified as sensitive in city or county general plans or ordinances. Sensitive habitats are regulated under federal regulations (such as the Clean Water Act [CWA] and Executive Order [EO] 11990 – Protection of Wetlands), state regulations (such as CEQA and the CDFW Streambed Alteration Program), or local ordinances or policies (such as city or county tree ordinances and general plan policies).

2.4 Data Sources

The primary literature and data sources reviewed in order to determine the occurrence or potential for occurrence of special-status species within the survey area are as follows:

- Current agency status information from USFWS and CDFW for species listed, proposed for listing, or candidates for listing as threatened or endangered under the ESA or CESA, and those considered CDFW “species of special concern”, including:
 - California Natural Diversity Database (CNDDDB) occurrences reports from the Santa Maria quadrangle and the eight surrounding quadrangles, including Casmalia, Orcutt, Sisquoc, Oceano, Nipomo, Huasna Peak, Guadalupe, and Twitchell Dam (CDFW, 2021b; **Appendix C**); and
 - USFWS IPaC Resource List (USFWS, 2021a; **Appendix D**).
- CDFW’s Special Animals List (CDFW, 2021a); and
- The CNPS *Inventory of Rare and Endangered Plants of California* (CNPS, 2021).

³ CRPR 3 species (Plants about which we need more information - a review list) and CRPR 4 species (Plants of limited distribution - a watch list) may, but generally do not, meet the definitions of Sections 2062 and 2067 of the CESA, and are not typically considered in environmental documents relating to CEQA.

From these resources, a list of special-status plant and wildlife species known or with the potential to occur in the vicinity of the survey area was created (**Appendix B**). This list presents these species along with their legal status, habitat requirements, and a brief statement of the likelihood to occur.

2.4.1 Botany

Vegetation types identified in *A Manual of California Vegetation* (Sawyer et.al., 2009) were utilized to determine if vegetation types identified as sensitive on CDFW's *California Natural Communities List* (CDFW, 2020) are present within the survey area. Information regarding the distribution and habitats of local and state vascular plants was also reviewed (Howitt and Howell, 1964 and 1973; Munz and Keck, 1973; Baldwin et al., 2012; Matthews and Mitchell, 2015; Jepson Flora Project, 2021). All plants observed within the survey area during the evaluation were identified to species or intraspecific taxon necessary to eliminate them as being special-status species using keys and descriptions in *The Jepson Manual: Vascular Plants of California, Edition 2* (Baldwin et al., 2012). Scientific nomenclature for plant species identified within this document follows Baldwin, et. al, (2012). A botanical inventory was recorded for the survey area and the dominant species within each habitat were noted. Dominant plant species are those which are more numerous than its competitors in an ecological community or makes up more of the biomass; generally, the species that are most abundant. Most ecological communities are defined by their dominant species.

The California Invasive Plant Council (Cal-IPC) Inventory (Cal-IPC, 2019) was reviewed to determine if any invasive plant species are present within the survey area.

2.4.2 Wildlife

The following literature and data sources were reviewed: CDFW reports on special-status wildlife (Remsen, 1978; Williams, 1986; Jennings and Hayes, 1994; Thelander, 1994; Thomson et. al, 2016); California Wildlife Habitat Relationships Program species-habitat models (Zeiner et al., 1988 and 1990); and general wildlife references (Stebbins, 1972, 1985, and 2003).

2.5 Regulatory Setting

The following regulatory discussion describes the major laws that may be applicable to the project.

2.5.1 Federal Regulations

Federal Endangered Species Act

Provisions of the ESA of 1973 (16 USC 1532 et seq., as amended) protect federally listed threatened or endangered species and their habitats from unlawful take. Listed species include those for which proposed and final rules have been published in the Federal Register. The ESA is administered by USFWS or National Oceanic and Atmospheric Administration Marine Fisheries Service (NMFS). In general, the NMFS is responsible for the protection of ESA-listed marine species and anadromous fish, whereas other listed species are under USFWS jurisdiction.

Section 9 of ESA prohibits the take of any fish or wildlife species listed under ESA as endangered or threatened. Take, as defined by ESA, is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Harm is defined as "any act that kills or injures the fish or wildlife...including significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife." In addition, Section 9 prohibits removing, digging up, and maliciously damaging or destroying federally listed plants on sites under federal jurisdiction. Section 9 does

not prohibit take of federally listed plants on sites not under federal jurisdiction. If there is the potential for incidental take of a federally listed fish or wildlife species, take of listed species can be authorized through either the Section 7 consultation process for federal actions or a Section 10 incidental take permit process for non-federal actions. Federal agency actions include activities that are on federal land, conducted by a federal agency, funded by a federal agency, or authorized by a federal agency (including issuance of federal permits).

The Clean Water Act

The ACOE and Environmental Protection Agency (EPA) regulate discharge of dredged and fill material into “Waters of the United States” (waters of the U.S.) under Section 404 of the CWA. Waters of the U.S. are defined broadly as waters susceptible to use in commerce (including waters subject to tides, interstate waters, and interstate wetlands) and other waters (such as interstate lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds) (33 CFR 328.3). Potential wetland areas are identified as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils conditions.”

Under Section 401 of the CWA, any applicant receiving a Section 404 permit from the ACOE must also obtain a Section 401 Water Quality Certification from the RWQCB. A Section 401 Water Quality Certification is issued when a project is demonstrated to comply with state water quality standards and other aquatic resource protection requirements.

2.5.2 State Regulations

California Endangered Species Act

The CESA was enacted in 1984. The California Code of Regulations (Title 14, §670.5) lists animal species considered endangered or threatened by the state. Section 2090 of CESA requires state agencies to comply with endangered species protection and recovery and to promote conservation of these species. Section 2080 of the Fish and Game Code prohibits "take" of any species that the commission determines to be an endangered species or a threatened species. “Take” is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." A Section 2081 Incidental Take Permit from the CDFW may be obtained to authorize “take” of any state listed species.

California Native Plant Protection Act

The CNPPA of 1977 directed CDFW to carry out the legislature’s intent to “preserve, protect and enhance rare and Endangered plants in the State.” The CNPPA prohibits importing rare and Endangered plants into California, taking rare and Endangered plants, and selling rare and Endangered plants. The CESA and CNPPA authorized the Fish and Game Commission to designate endangered, threatened, and rare species and to regulate the taking of these species (§2050-2098, Fish and Game Code). Plants listed as rare under the CNPPA are not protected under CESA; however, these plants may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research.

California Fish and Game Code

Birds. Section 3503 of the Fish and Game Code states that it is “unlawful to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant

thereto.” Section 3503.5 prohibits the killing, possession, or destruction of any birds in the orders Falconiformes or Strigiformes (birds-of-prey). Section 3511 prohibits take or possession of fully protected birds. Section 3513 prohibits the take or possession of any migratory nongame birds designated under the federal MBTA. Section 3800 prohibits take of nongame birds.

Fully Protected Species. The classification of fully protected was the state's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish (§5515), mammals (§4700), amphibians and reptiles (§5050), and birds (§3511). Most fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations. Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

Species of Special Concern. As noted above, the CDFW also maintains a list of animals “species of special concern.” Although these species have no legal status, the CDFW recommends considering these species during analysis of project impacts to protect declining populations and avoid the need to list them as endangered in the future.

Native Plant Protection Act

The CNPPA of 1977 directed the CDFW to carry out the legislature’s intent to “preserve, protect and enhance rare and endangered plants in the state.” The CNPPA prohibits importing rare and endangered plants into California, taking rare and endangered plants, and selling rare and endangered plants. The CESA and CNPPA authorized the Fish and Game Commission to designate endangered, threatened, and rare species and to regulate the taking of these species (§2050-2098, Fish and Game Code). Plants listed as rare under the CNPPA are not protected under CESA.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne) is California’s statutory authority for the protection of water quality and applies to surface waters, wetlands, and groundwater, and to both point and nonpoint sources. Under the Porter-Cologne, the State Water Resources Control Board (State Board) has the ultimate authority over State water rights and water quality policy. However, Porter-Cologne also establishes nine RWQCBs to oversee water quality on a day-to-day basis at the local/regional level. The Project Study Area is located within Region 3 – Central Coast RWQCB. Porter-Cologne incorporates many provisions of the federal CWA, such as delegation to the State Board and RWQCBs of the National Pollutant Discharge Elimination System (NPDES) permitting program.

Under Porter-Cologne, the state must adopt water quality policies, plans, and objectives that protect the state’s waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegate to the nine RWQCBs. The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. The Porter-Cologne sets forth the obligations of the State Board and RWQCBs to adopt and periodically update water quality control plans (basin plans). The act also requires waste dischargers to notify the RWQCBs of such activities through filing of Reports of Waste Discharge (RWD) and authorizes the State Board and RWQCBs to issue and enforce waste discharge requirements (WDRs), NPDES permits, Section 401 water quality certifications, or other approvals. The RWQCBs also have authority to issue waivers to

RWD requirements and WDRs for broad categories of “low threat” discharge activities that have minimal potential for adverse water quality effects, when implemented according to prescribed terms and conditions.

The term “Waters of the State” is defined by Porter-Cologne as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The RWQCB protects all waters in its regulatory scope but has special responsibility for wetlands, riparian areas, and headwaters, including isolated wetlands, and waters that many not be regulated by the USACE under Section 404 of the CWA. Waters of the State are regulated by RWQCB under the State Water Quality Certification Program, which regulates discharges of fill and dredged material under Section 401 of the CWA and the Porter-Cologne.

2.5.3 Local Regulations

City of Santa Maria General Plan

The entire project is subject to the City of Santa Marina General Plan (SM General Plan). The majority of the proposed water main is located within the City of Santa Maria. The water main is within the right-of-way of Betteravia Road and for this reason it does not have a land use designation or a zoning designation. Additionally, a small portion of the water main, the distribution line and the service connections are not located within the City limits, however, they are within the City sphere of influence. A sphere of influence is a planning boundary outside of an agency’s legal boundary that designates the agency’s probable future boundary and service area. This area is included in the Mahoney Ranch Specific Plan and is designated as Low-Medium Residential and Heavy Commercial/Manufacturing.

The Resources Management Element of the SM General Plan was adopted in 1996 and amended in 2001 (City of Santa Maria, 2001). The Resources Management Element provides an overview of the biological resources within the SM General Plan area. Sensitive habitats identified in the SM General Plan include central coast riparian scrub and coastal and valley freshwater marsh. In addition, the SM General Plan identifies that the “only significant wildlife habitat areas within the Planning Area are the fields surrounding the airport, riparian vegetation with the Santa Maria River and Orcutt Creek, and the Vernal Pool complex located southwest of the airport” and that the Santa Maria River, Cuyama River, and Sisquoc River are potential wildlife corridors use by wildlife to access habitat in the Sierra Madre and San Rafael Mountains.

The Mahoney Ranch Specific Plan does not identify any biological resources within the plan area.

Santa Barbara County Comprehensive Plan

A small portion of the water main, the distribution line and the service connections are located outside of the City of Santa Maria limits within unincorporated Santa Barbara County and are subject to the Santa Barbara County Comprehensive Plan (SBC Comprehensive Plan). The distribution line and service connections are located on Rayville Lane (a private road) and is zoned as General Industry (M-2) by the Land Use Element of the SBC Comprehensive Plan. The portion of the water main located within unincorporated Santa Barbara County is within the right-of-way of Betteravia Road, and therefore does not have a land use designation.

The Environmental Resource Management Element (ERME) of the SBC Comprehensive Plan was adopted in 1980 and republished in 2009 (County of Santa Barbara, 2009). The ERME identifies 57 scientific preserves, including 14 ecological communities of greatest interest that have been judged as rare and/or

endangered. The ERME also identifies significant habitats, which includes 11 communities representing 12 sites and nine freshwater streams that are prime examples of common ecological communities, as well as six additional areas of introduced grasslands and roosting sites for birds that provide significant habitat. The ERME also includes additional areas noted by biologists as having significant biological value. None of these areas occur within or adjacent to the survey area.

Habitat Conservation Plans or NCCP

There are no adopted Habitat Conservation Plans (HCP) or Natural Community Conservation Plans (NCCP) associated with the evaluation area.

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3.0 RESULTS

3.1 Vegetation Types

Two vegetation types were mapped within the survey area: riparian and ruderal; however, only ruderal vegetation is present within the project site (**Figure 3**). In addition, portions of the survey area and project site are developed. A brief description of each vegetation type can be found below along with identification of the vegetation classification from *A Manual of California Vegetation* (Sawyer et al., 2009) and whether the vegetation type is identified as sensitive on CDFW's *California Natural Communities List* (CDFW, 2020).

Vegetation Type	Area	
	Survey Area	Project Site
Ruderal/Disturbed	6.3 acres	1.5 acres
Riparian	0.7 acres	0
Developed	11.1 acres	0.8 acre ⁴

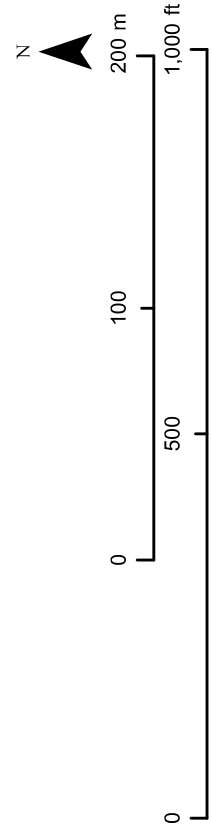
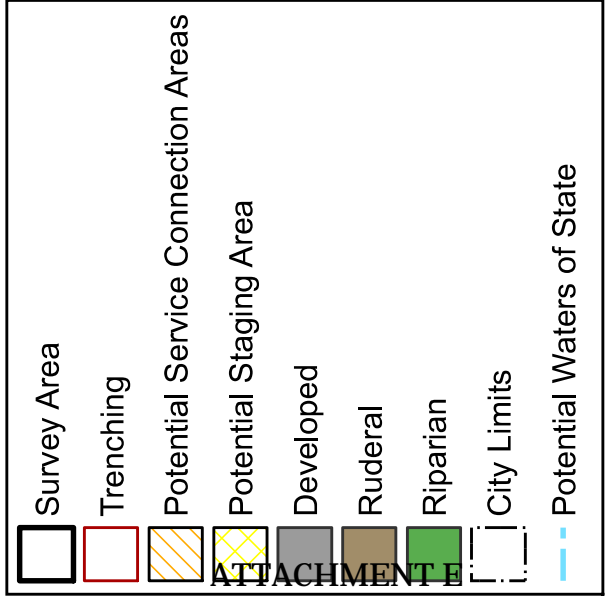
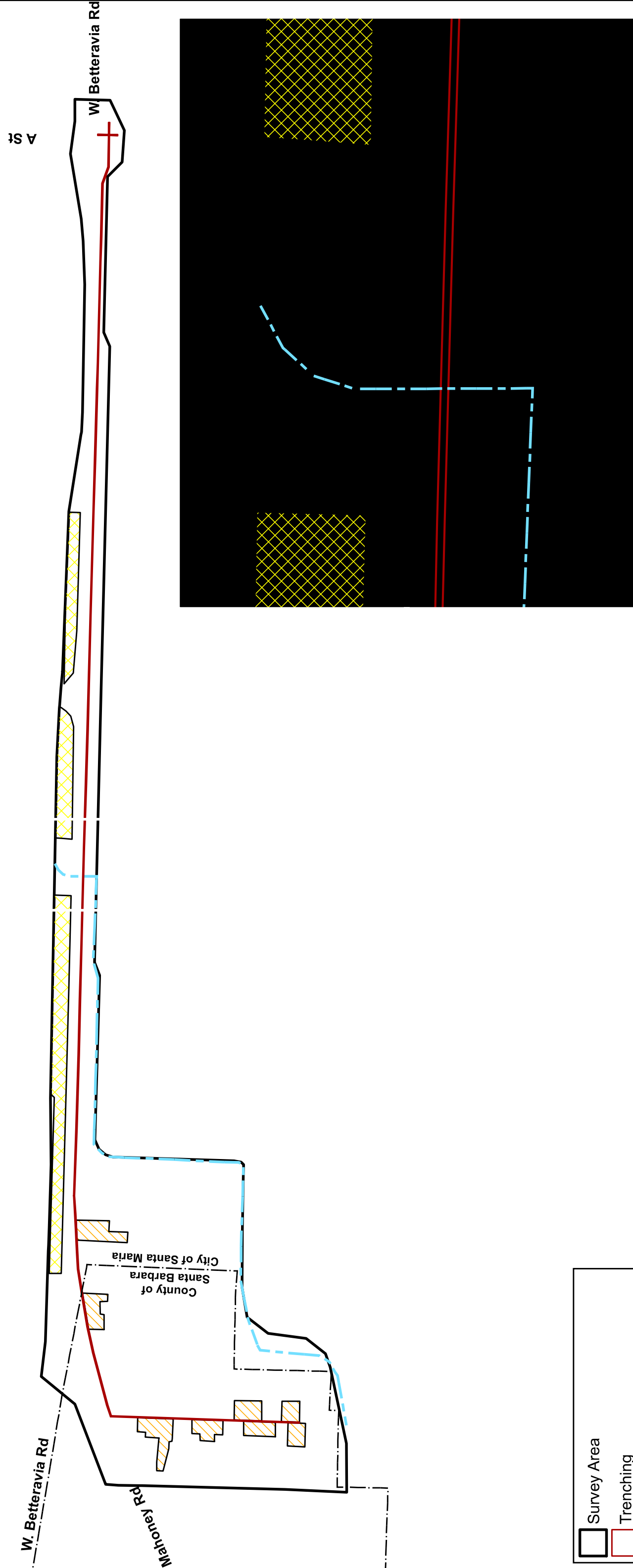
3.1.1 Ruderal/Disturbed

- *A Manual of California Vegetation* classification(s): Ice Plant Mats (*Mesembryanthemum* spp. - *Carpobrotus* spp. Herbaceous Semi-Natural Alliance) and Wild Oats and Annual Brome Grasslands (*Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance)
- *California Natural Communities List*: Not Sensitive

Ruderal areas are those areas which have been disturbed by human activities and are dominated by non-native annual grasses and other “weedy” species. Most of the undeveloped portions of the survey area (**Figure 3**) consist of ruderal habitat dominated by non-native weedy plant species, such as hottentot fig (*Carpobrotus* sp.), cheeseweed (*Malva parviflora*), wild radish (*Raphanus sativus*), mustard (*Brassica* sp.), ripgut brome (*Bromus diandrus*), filaree (*Erodium* sp.), and telegraph weed (*Heterotheca grandiflora*). Approximately 6.3 acres of ruderal/disturbed areas are present within the survey area; however, only 1.5 acres would be impacted by the project, associated mostly with staging on the north side of West Betteravia Road.

Ruderal areas have low biological value because they are generally dominated by non-native plant species and consist of relatively low-quality habitat from a wildlife perspective. Common wildlife species which do well in urbanized and disturbed areas that may occur within the ruderal habitat include American crow (*Corvus brachyrhynchos*), Steller's jay (*Cyanocitta stelleri*), striped skunk (*Mephitis mephitis*), scrub jay (*Aphelocoma californica*), European starling (*Sturnus vulgaris*), western fence lizard (*Sceloporus occidentalis*), and rock dove (*Columba livia*).

⁴ Please note that the exact locations of the service connections have not yet been determined. As such, this number includes the general areas shown for service connections on Figure 3. The actual work area will likely be less.



Habitat Map

Denise Duffy and Associates, Inc. Planning and Environmental Consulting		Date 09-09-21	Figure 3
		Scale 1 in=250 ft	

3.1.2 Riparian

- *A Manual of California Vegetation classification*: Arroyo Willow Thickets (*Salix lasiolepis* Shrubland Alliance)
- *CDFW List of Alliances and Associations*: Sensitive

Riparian habitats are those plant communities supporting woody vegetation found along rivers, creeks, streams, canyon bottom drainages, and seeps. They can range from a dense thicket of shrubs to a closed canopy of large mature trees. Within the survey area, this habitat type is dominated by Arroyo willow (*Salix lasiolepis*). Approximately 0.7 acre of riparian habitat is present within the survey area; however, no riparian habitat will be impacted by the project (**Figure 3**).

Riparian areas provide habitat for many wildlife species, particularly birds and herpetofauna. Common species that may be found within the riparian habitat in the site includes Sierran treefrog (*Pseudacris sierra*), red-winged blackbird (*Agelaius phoeniceus*), and song sparrow (*Melospiza melodia*).

3.1.3 Developed

- *A Manual of California Vegetation classification(s)*: None
- *California Natural Communities List*: Not Listed

Developed areas within the survey area include roadways, residences, businesses, and associated yards. Vegetation within these areas consist only of ornamental plants, lawns, and sparse weeds. As such, developed areas are considered to have no biological value. Approximately 11.1 acres of developed areas is present within the survey area; however, only approximately 0.8 acre will be impacted by the project⁵ (**Figure 3**).

3.2 Sensitive Habitats

3.2.1 Riparian Habitat

Riparian habitat is identified as sensitive on the CDFW's *California Natural Communities List* (CDFW, 2020) and in the Resources Management Element of the SM General Plan (City of Santa Maria, 2009). No riparian habitat is present within the areas that will be impacted by the project.

3.2.2 Wetlands and Other Waters

A drainage ditch is present within the survey area. The ditch begins on the north side of West Betteravia Road, enters a culvert under the road, daylights on the south side of West Betteravia Road, then runs east along the southern boundary of the survey area (**Figures 3 and 4**). The culvert on both the north and south side of West Betteravia Road is significantly blocked with sediment. The ditch ranges from approximately one to three feet wide and one to two feet deep. It is unvegetated (except where it enters the riparian area) with a silty bottom. No water was observed within the ditch during the survey, except a very small puddle at the culvert on the south side of West Betteravia Road.

⁵ Please note that the exact locations of the service connections have not yet been determined. As such, this number includes the general areas shown for service connections on Figure 3. The actual work area will likely be less.



KEY

1. Ditch on south side of W. Betteravia Rd. adjacent to project site
2. Ditch on south side of W. Betteravia Rd. adjacent to project site, near culvert
3. Culvert with water on south side of W. Betteravia Rd.
4. Ditch and culvert on north side of W. Betteravia Rd.

Site Photos
Potential Waters of the State

 Denise Duffy and Associates, Inc. Planning and Environmental Consulting	Date 09-10-21	Figure 4
	Scale N/A	

The ditch is not shown as an aquatic feature on The National Map (USGS, 2021). The source is unknown, as a culvert was not observed north of the project site and no surface features were observed outside of the survey area or on aerial imagery. The ditch continues south of the survey area and (based on aerial imagery) appears to connect to an unnamed stream that flows to Guadalupe Lake.

Based on this information, the ditch is unlikely waters of the U.S. under ACOE jurisdiction; however, the ditch may be considered waters of the state within RWQCB and CDFW jurisdiction. Where the ditch flows through the riparian habitat, wetlands may be present; however, the density of the riparian vegetation made this area inaccessible during the survey and a delineation of wetlands was not conducted. Due to the lack of vegetation within the other areas of the ditch, no other potential wetland areas are present.

The ditch is located adjacent to, but outside of the project site, except where the culvert crosses West Betteravia Road and the project site (**Figure 3**).

3.3 Special-Status Species

Raptors and other avian species protected under California Fish and Game Code have the potential to nest within trees present within and adjacent to the project site. All other special-status wildlife species are assumed unlikely to occur or have a low potential to occur based on the species-specific reasons presented in **Appendix B**, are therefore unlikely to be impacted by the project, and are not discussed further. No special-status plant species were observed during the field survey, and none are expected to occur based on the lack of suitable habitat within the project site, as identified in **Appendix B**. Therefore special-status plant species are unlikely to be impacted by the project and are not discussed further.

3.3.1 Special-Status Wildlife Species

Nesting Raptors and Other Protected Avian Species

Raptors, their nests, and other nesting birds are protected under California Fish and Game Code. While the life histories of these species vary, overlapping nesting (approximately February through August) and foraging similarities allow for their concurrent discussion. Most raptors are breeding residents throughout most of the wooded portions of the state. Stands of live oak, riparian deciduous, or other forest habitats, as well as open grasslands, are used most frequently for nesting. Breeding occurs February through August, with peak activity May through July. Prey for these species includes small birds, small mammals, and some reptiles and amphibians. Many raptor species hunt in open woodland and habitat edges.

Various species of raptors, such as red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), great horned owl (*Bubo virginianus*), American kestrel (*Falco sparverius*), and turkey vulture (*Cathartes aura*), have a potential to nest within any of the large trees present within the survey area.

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4.0 IMPACTS AND MITIGATION MEASURES

4.1 Impacts and Mitigation Measures

Potential Impact 1: *Nesting raptors and other protected avian species have the potential to occur within the project site. Construction activities may result in direct mortality of individuals or disturbance of nests. This is a potentially significant impact that can be reduced to a less-than-significant level with implementation of the mitigation measures recommended below.*

Mitigation 1a: To avoid and reduce impacts to nesting raptors and other nesting avian species, construction activities can be timed to avoid the nesting season period. Specifically, construction activities can be scheduled after September 1 and before January 31 to avoid impacts to these species. Alternatively, if avoidance of the nesting period is not feasible, a qualified biologist shall be retained to conduct pre-construction surveys for nesting raptors and other protected avian species within 250 feet of proposed construction activities if construction occurs between February 1 and August 31. Pre-construction surveys will be conducted no more than 14 days prior to the start of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). Because some bird species nest early in spring and others nest later in summer, some breed multiple times in a season, surveys for nesting birds may be required to continue during construction to address new arrivals. The necessity and timing of these continued surveys will be determined by the qualified biologist based on review of the final construction plans.

If raptors or other protected avian species nests are identified during the pre-construction surveys, the qualified biologist will notify the project applicant and an appropriate no-disturbance buffer will be imposed within which no construction activities or disturbance should take place as determined by the qualified biologist to ensure avoidance of impacts to the individuals. The buffer will remain in place until the young of the year have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.

Potential Impact 2: *The floristic alliance occurring within the riparian habitat is listed as sensitive on the CDFW's California's Natural Communities List (CDFW, 2020) and in the Resources Management Element of the SM General Plan (City of Santa Maria, 2009). Riparian habitat is under CDFW jurisdiction per Fish and Game code Section 1602. The project will not result in direct impacts to riparian habitat (Figure 3); however, if an accident during construction were to result in the release of hazardous materials (e.g., fuel for construction equipment, oil, solvents, or paints) into the environment, there is a potential to degrade the adjacent riparian habitat. This would be considered a significant impact. The project is subject to existing regulatory requirements pertaining to the use and disposal of hazardous materials; however, implementation of the mitigation measure below will reduce potential impacts related to accidental release of hazardous materials to a less-than-significant level.*

Mitigation 2: Cleaning and refueling of equipment and vehicles will occur only within designated staging areas on paved or graded parking areas. No maintenance, cleaning or fueling of equipment will occur within riparian areas, or within 100 feet of such areas if possible. At a minimum, all equipment and vehicles will be checked and maintained on a daily basis to ensure proper operation and avoid potential leaks or spills. During construction, all project-related spills of hazardous materials within or adjacent to proposed project area will be cleaned up immediately. Spill prevention and clean-up materials will be onsite at all times during construction. Construction materials/debris will also be stored within the designated staging areas. No debris, soil, silt, sand, oil, petroleum products, cement, concrete, or washings thereof will be allowed to enter into, or be placed where they may be washed by rainfall or runoff, into riparian habitat.

Potential Impact 3: A ditch is present within the survey area that conveys waters of the state likely under the jurisdiction of the RWQCB and CDFW. In addition, wetlands under RWQCB jurisdiction may be present where the ditch flows through the riparian habitat. The project will not result in direct impacts to the potential wetlands (**Figure 3**); however, if an accident during construction were to result in the release of hazardous materials (e.g., fuel for construction equipment, oil, solvents, or paints) into the environment, there is a potential to degrade the adjacent habitat and impact water quality. The project has the potential to directly impact waters of the state where the project intersects the culvert that runs under West Betteravia Road or if work were to occur outside of the project limits. These are potentially significant impacts that can be reduced to less-than-significant with implementation of the **Mitigation 2** and the measures below.

Mitigation 3a: The project shall avoid work within the potential waters of the state to the extent feasible. No Staging shall occur within potential waters of the state. Protective fencing shall be placed so as to keep construction vehicles and personnel from impacting potential waters of the state adjacent to the proposed project area outside of work limits. Typically, protective fencing, also referred to as Environmentally Sensitive Area (ESA) fencing, is four feet in height and is made of a highly visible color of polypropylene plastic.

Mitigation 3b: If avoidance of waters of the state is not feasible, the project applicant shall comply with the Clean Water Act and Fish and Game Code and coordinate with the RWQCB to obtain a Water Quality Certification and CDFW to obtain a Section 1602 Lake and Streambed Alteration Agreement prior to construction. All measures included in the permits to avoid, reduce, or mitigate impacts to waters of the state shall be implemented. These measures may include, but not be limited to, construction timing restrictions, monitoring, and reporting.

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APPENDIX A

Project Plans

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Water System Consolidation

Consolidation of Ray Water Company into the City of Santa Maria Water System Rayville Lane and Betteravia Road Santa Barbara County, CA

GENERAL NOTES

- QUALIFICATIONS**
The Contractor shall possess a Class "A" General Engineering Contractor license under the provisions of the Business and Professions Code of the State of California to do the type of work contained herein and shall be regularly engaged in the general class or type of work called for under this contract.
- CODES**
Construction and materials shall be in accordance with the California Waterworks Standards, Title 17 and 22 of the California Code of Regulations, Title 24 California Code of Regulations, California Building Code (CBC), the California Plumbing Code (CPC), the California Standard Plans and Specifications, Division of the State Architect requirements, State Fire Marshal Regulations, National Electrical Code, Americans with Disabilities Act, all other State and Federal laws, shall apply. The Contractor shall be responsible for obtaining all necessary permits from Santa Barbara Design Center. Should the Contractor discover work within the Plans not in conformance with these requirements, Contractor shall immediately submit a written Request for Information (RFI) to the Owner's Representative.
- STANDARD SPECIFICATIONS**
All wetted components must be NSF 61 certified. Construction must comply with the California Waterworks Standards, Title 17 and 22 of the California Code of Regulation, including but not limited to:
 - Section 64576 - Water Main Separation
 - Section 64578 - Water Main Valve Construction
 - Sections 64580 and 64582 - Disinfection of New Mains and Disinfection of Reservoirs
 - Section 64585 - Design and Construction for Distribution Reservoirs
 - Section 64591 - Indirect Additives (NSF 61)

Construction and materials shall be as specified and as required by the California Building Code, California Plumbing Code and California Standard Specifications. Should the Contractor discover work within the Plans not in conformance with these requirements, Contractor shall immediately submit a written Request for Information (RFI) to the Owner's Representative.

4. PERMITS
Contractor shall inform themselves of, and fully adhere to the rules, regulations and requirements of all governmental agencies having jurisdiction over the work, and all federal, state, and local laws, codes, and regulations regarding construction activity. Contractor shall be responsible to obtain all necessary permits and shall be required to apply for and procure any and all permits that may be required on the project.

5. SITE SAFETY
The Contractor agrees that in accordance with generally accepted construction practices, Contractor will be required to assume sole and complete responsibility for job site conditions, construction means, methods and techniques, and for safety measures, precautions, and programs at the project site during the course of the project, including safety of all persons and property, that this responsibility shall be solely and exclusively that of the Contractor. Contractor shall be responsible for the design and construction of all safety measures, including design and provide adequate trench and excavation shoring, bracing, formwork, scaffolding, temporary structures, etc., as required for the protection of life and property during construction. Contractor to take necessary precautions against sewage, gases, solvents, compounds, acids, preservatives, fuels, and other hazardous materials. All construction shall be performed in conformance with CAL/OSHA requirements. The Contractor agrees to defend, indemnify, and hold the Design Engineer of record harmless from any and all liability, real or alleged, in connection with the performance in work on this project, excepting liability arising from the sole negligence of the Design Engineer of Record.

6. PUBLIC SAFETY
The Contractor shall provide for the safety of traffic, and the public in accordance with the provisions of Section 7-1.09 of the Standard Specifications whenever the Contractor's operations create a hazardous condition including, but not limited to, fencing, railing, barricades, lights, signs, and other devices to prevent accidents, damage, or injury to the public.

7. SCOPE
The Contractor shall examine carefully the site of work contemplated and thoroughly review the Plans and Specifications. The submission of a bid shall be conclusive evidence that the contractor has investigated the site and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of work to be performed, the quantities of materials to be furnished, and as to the requirements of the Plans and Specifications. The Contractor shall make a detailed and thorough study of these Plans and Specifications in their entirety prior to any work on the jobsite. The Contractor is to coordinate these drawings with all other trade disciplines for the completed work.

8. INTENT
It is the intent of these Plans and General Notes/Specifications that

the work shall result in complete, finished, operating, satisfactory, and functional systems and no extra compensation will be allowed for anything omitted but fairly implied for systems function. Where changes are required, they shall be indicated on the drawings and deemed to have estimated the best quality detail. In the event certain features of the construction are not fully shown or detailed on the plans, their construction shall be as shown on the plans or details for similar best quality features. All typical details shall apply unless noted otherwise. The Owner's Representative shall have the final interpretation is deemed to control.

9. PRECEDENCE
All figured dimensions shall take precedence over scaled measurements. Should a conflict or inconsistency occur in or between the Specifications, the Plans, and the Specifications shall control over the Plans.**

10. ADDENDA
If discrepancies, apparent errors, or omissions are found in the Plans and Specifications, or any differences are found between the Plans and conditions in the field, the Contractor shall submit a written Request for Information (RFI). If the Contractor proceeds with the work affected without instructions from the Owner's Representative, the Contractor shall make good any resulting damage or defect to the satisfaction of the Owner's Representative. No substitutions, alterations or substitutions must be presented directly to the Owner's Representative in writing, accompanied by a detailed sketch and/or photograph as required, for review, before any approval will be given and before proceeding with the work.

11. VERIFICATION
The Contractor shall be responsible for field-verifying all existing conditions, dimensions, levels, and materials for all layout and construction work and shall submit a Request for Information (RFI) to the Owner's Representative to resolve any discrepancies before proceeding with the work. Contractor shall be responsible to coordinate the work so that no discrepancies result.

12. NOTICE TO PROCEED
No work shall commence without an official notice to proceed from the Owner.

13. EXISTING FACILITIES
Contractor shall protect all existing facilities and shall repair all damage to existing facilities. Contractor shall be responsible to do all cutting, fitting, or splicing of his work that may be required to make its several parts fit together properly and shall not endanger any other work by cutting, or otherwise altering the total work or any part of it. Contractor shall exercise care to protect any existing construction so that integrity and finish are not impaired. All patching, repairing, and replacing of materials and surfaces cut or damaged in execution of work shall be done with appropriate materials so the surfaces replaced will, upon completion, match surrounding similar surfaces.

14. HOUSEKEEPING
The job site shall be maintained daily in a neat, clean, orderly condition free of debris and litter. shall not be unreasonably encumbered with any materials or equipment. Materials stored on the site shall be properly stacked and protected to prevent damage and deterioration until use. Failure to protect materials may be cause for rejection of work. Dust shall be controlled and mud and debris shall be cleaned off public right of ways.

15. WORKING HOURS
Normal working hours shall be limited to times as directed by Loma Prieta Elementary School and no work shall be done on Sundays or legal holidays unless written permission is given.

16. SUBMITTALS
No work shall commence with unapproved materials. Submittals and shop drawings shall be supplied to the Owner's Representative for review for the following:
 a. All material and equipment items
 b. Traffic Control Plan
 c. Water Pollution Control Plan
 d. Utility Interruption Plan

17. The Contractor shall supply submittals sufficiently detailed to demonstrate compliance with the Plans and Specifications. Each submittal shall be sequentially numbered, dated, titled, and checked by the Contractor. The Owner's Representative will require 10 days for review. The Contractor's responsibility for errors, omissions, and deviations is not relieved by the submittal review.

18. OBSERVATION
Contractor shall notify the Owner's Representative 48 hours in advance for the following observations:
 a. Utility pipes prior to backfill
 b. Reinforcing steel prior to concrete placement
 c. Utility pipe pressure and leakage testing

SPECIFICATIONS

CULTURAL

BIOLOGICAL

SYMBOLS

- W WATER VALVE
- HY FIRE HYDRANT
- GV GAS VALVE OR METER
- SM SEWER MANHOLE OR CLEANOUT
- SD STORM DRAIN MANHOLE
- TF TRAFFIC FLOW
- DF DRAINAGE FLOW
- HS HANDICAP SPACE
- AL AREA LIGHT
- SP SIGN POST
- UP UTILITY POLE
- W WELL
- M MONUMENT
- SL STREET LIGHT
- WM WATER METER
- CB CATCH BASIN OR OTHER STRUCTURE AS NOTED

REVISED BY		APPROVED DATE	APPROVED DATE
A RP		CD	06/21
REVISIONS		ITEM	
30% DESIGN DEVELOPMENT			
CITY OF SANTA MARIA		DEPARTMENT OF PUBLIC WORKS	
DRAWN BY: RP		CHECKED BY:	
DATE: 6/23/2021		SHEET 2 OF 5 SHEETS	
REFERENCES:		FILE NO. WA-1.1	
GENERAL NOTES			



Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
130 Westgate Drive, Watsonville, CA 95076
(831) 722-3380 / www.weber-hayes.com

Ray Water Company Consolidation

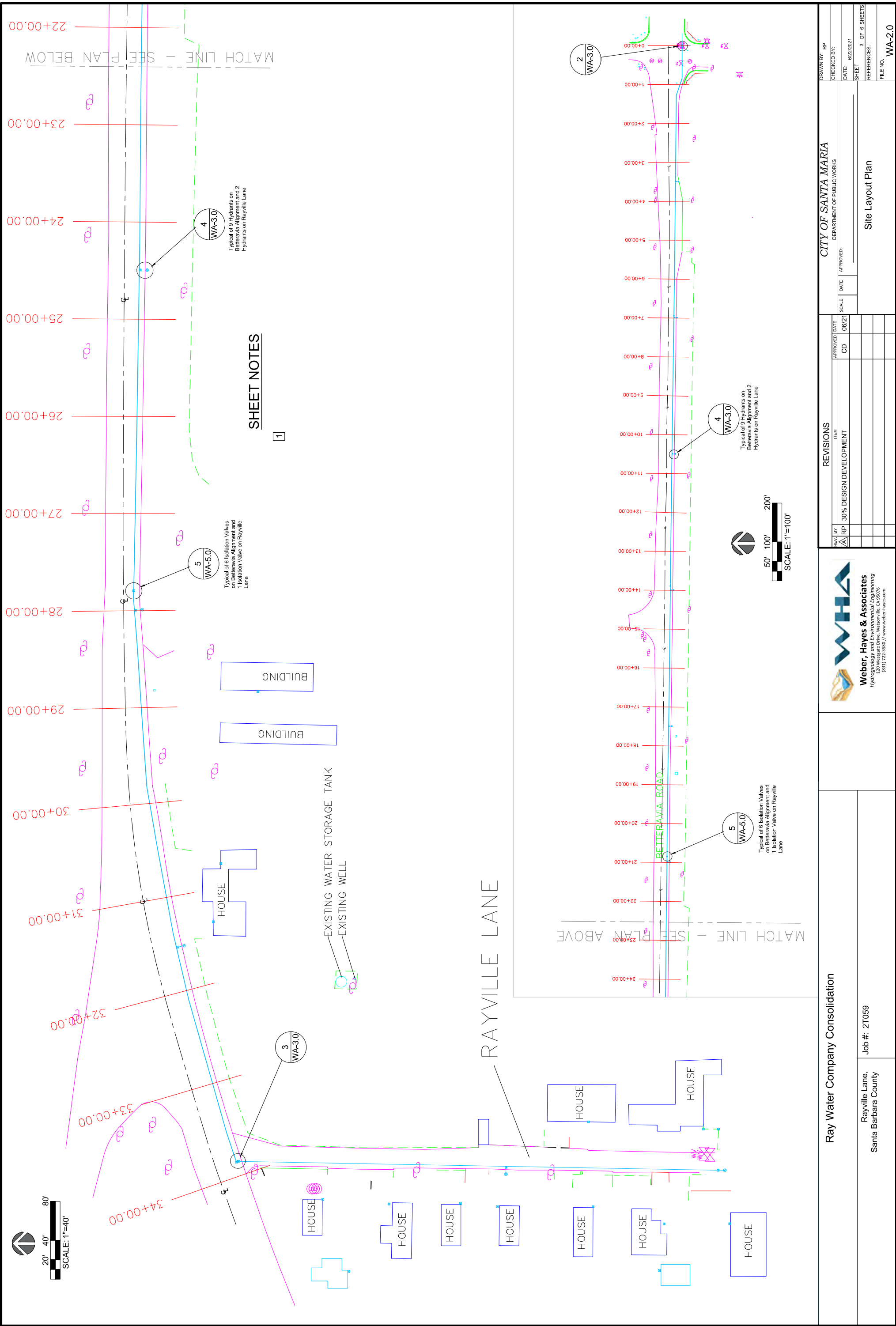
Job #: 2T059

Rayville Lane,
Santa Barbara County

Ray Water Company Consolidation

Job #: 2T059

Rayville Lane,
Santa Barbara County



SHEET NOTES

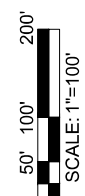
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WA-3.0

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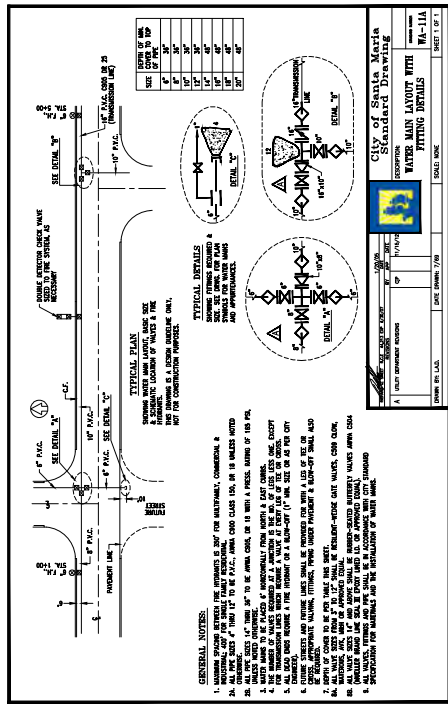
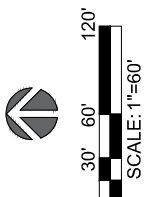
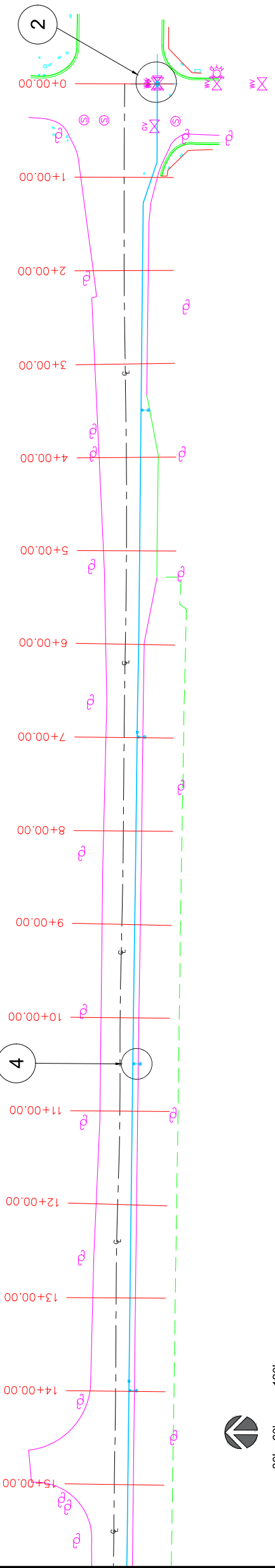
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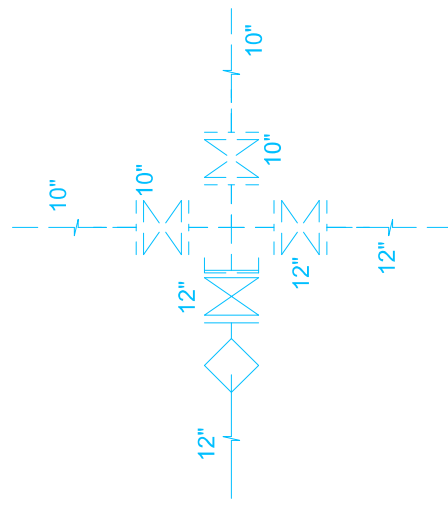
Ray Water Company Consolidation Rayville Lane, Santa Barbara County		Job #: 2T059	
WHA Weber, Hayes & Associates Hydrogeology and Environmental Engineering 1000 West Santa Barbara Street, Suite 200 Santa Barbara, CA 93101 (805) 965-1500 / www.weber-hayes.com		CITY OF SANTA MARIA DEPARTMENT OF PUBLIC WORKS	
DRAWN BY: RP CHECKED BY:	APPROVED DATE: 06/21 SCALE: CD	APPROVED DATE: 06/21 SCALE: CD	DATE: 6/22/2021 SHEET: 3 OF 6 SHEETS REFERENCES: FILE NO. WA-2.0
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SHEET NOTES

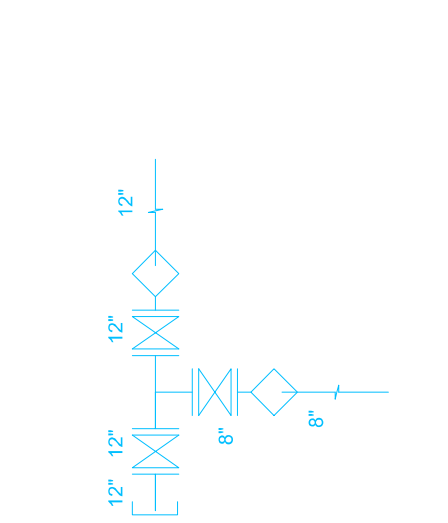
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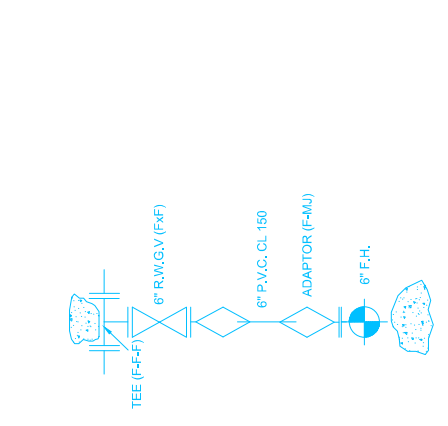
WATER MAIN LAYOUT STANDARD DRAWING 1



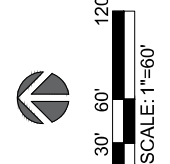
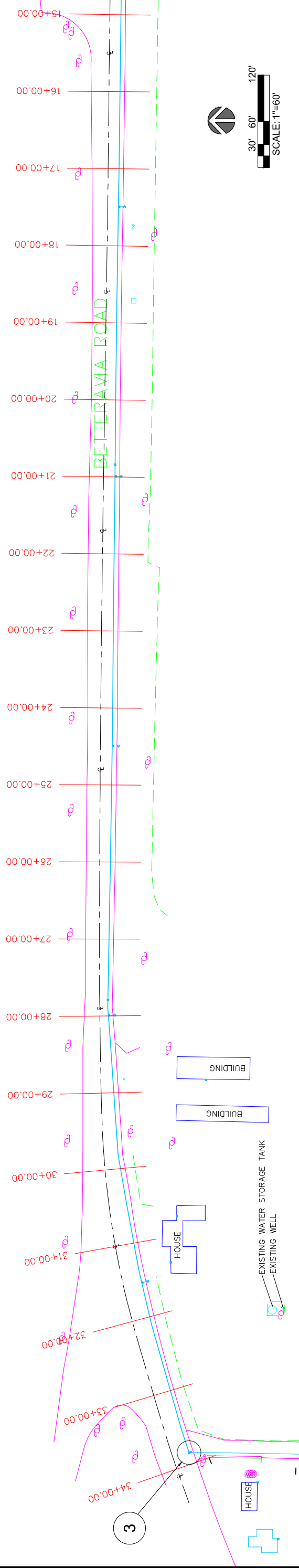
WATER MAIN CONNECTION SCHEMATIC 2



NEW DISTRIBUTION CONNECTION 3



6" FIRE HYDRANT SCHEMATIC 4



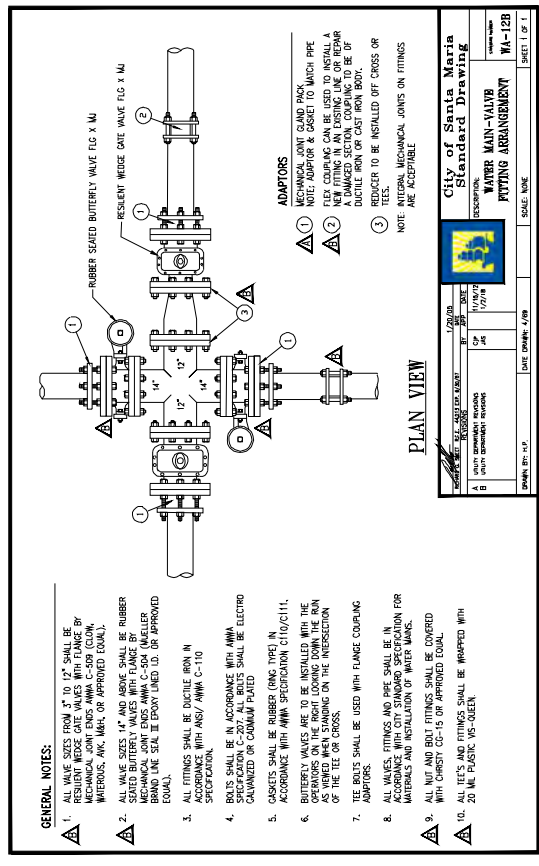
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REV. BY	RP	DATE	06/21
CHECKED BY	RP	DATE	06/21
DRAWN BY	RP	DATE	06/21

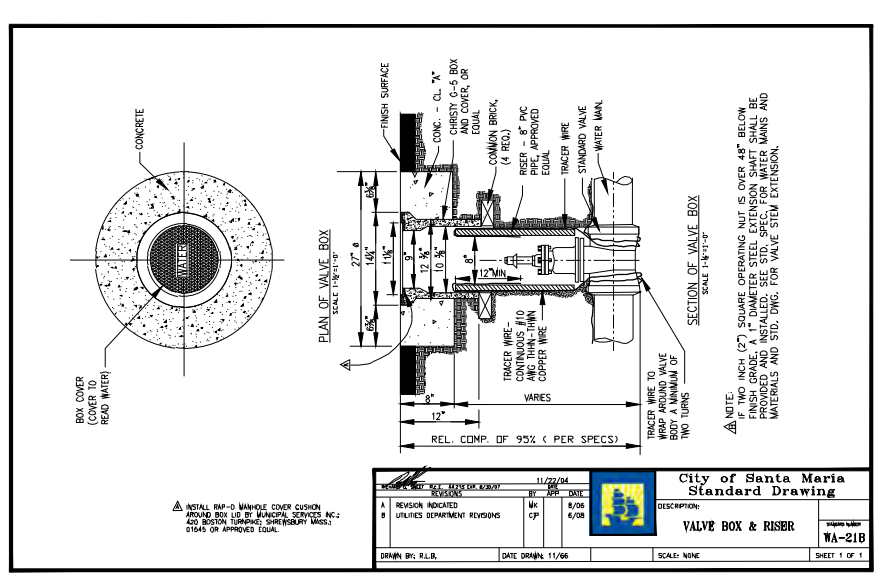
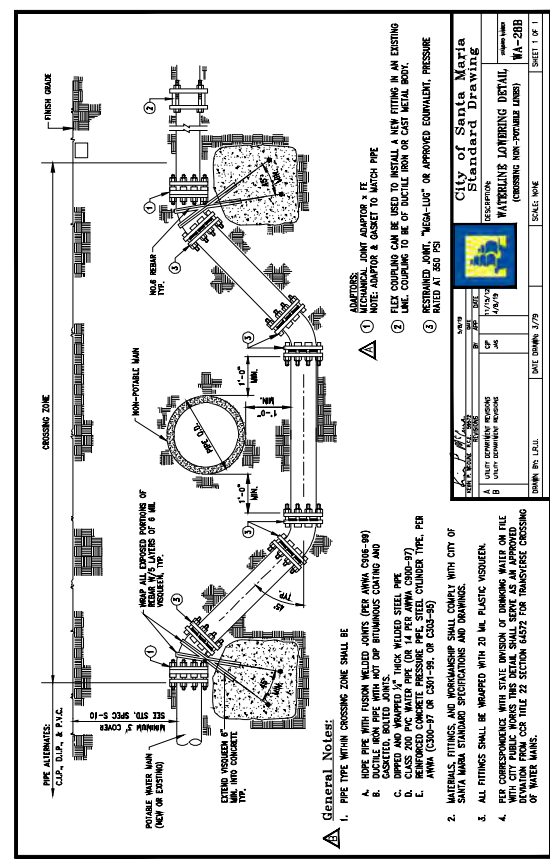
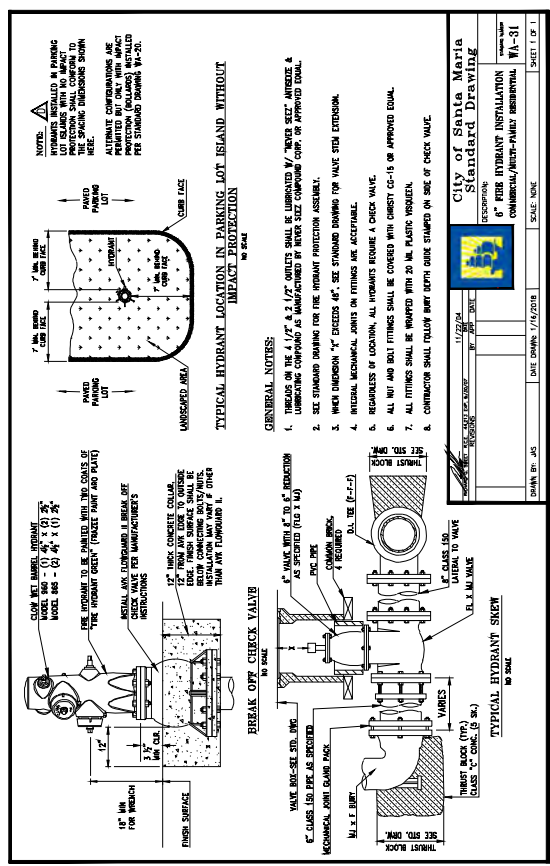
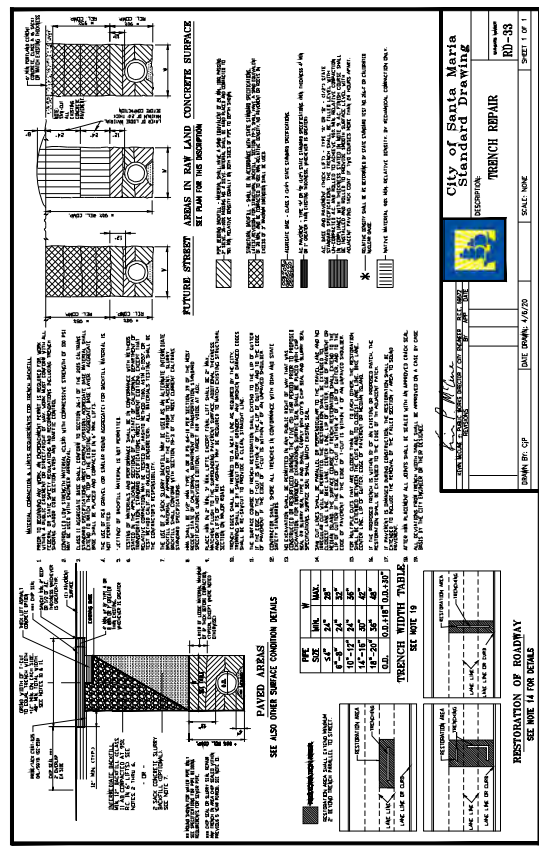
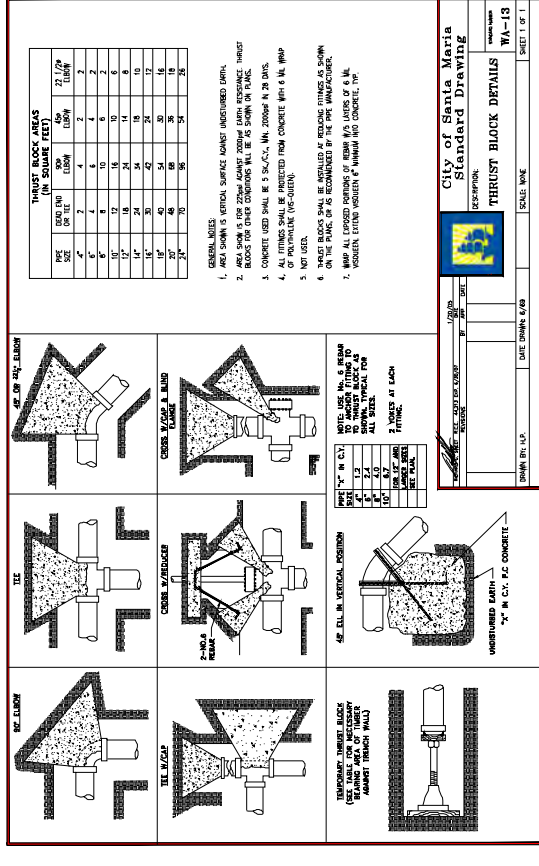
CITY OF SANTA MARIA	DEPARTMENT OF PUBLIC WORKS
Betteravia Road Alignment	
REFERENCES:	4 OF 6 SHEETS
FILE NO.	WA-3.0

Ray Water Company Consolidation	Job #: 2T059
Rayville Lane, Santa Barbara County	

WHA	Webster, Hayes & Associates
Hydrogeology and Environmental Engineering	
1000 West Main Street, Suite 100	
Santa Barbara, CA 93101	
(831) 725-3580 / www.webster-hayes.com	



SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
[Symbol]	FLANGE	[Symbol]	RESILIENT-WEDGE GATE VALVE (F-F)	[Symbol]	8" BANGV(F-F)	[Symbol]	8" FLEX HYDRANT ASSEMBLY (SEE STD. DRWG.)
[Symbol]	BUNG FLANGE	[Symbol]	RESILIENT-WEDGE GATE VALVE (F-B)	[Symbol]	ADAPTOR (F-AD)	[Symbol]	WATER SERVICE - 2" SIZE (SEE STD. DRWG.)
[Symbol]	BELL (FOR A.C. PIPE)	[Symbol]	ADAPTOR (FULL FLANGE & FULL BELL)	[Symbol]	ADAPTOR (F-F)	[Symbol]	BLOW-OFF (1" SIZE SHOWN) (SEE STD. DRWG.)
[Symbol]	BELL (FOR CAST IRON PIPE)	[Symbol]	ADAPTOR (F-AD)	[Symbol]	ADAPTOR (F-F)	[Symbol]	THRUST BLOCK (12 SQ. FT. END AREA SHOWN) (SEE STD. DRWG.)
[Symbol]	ELL - 90° (F-B)	[Symbol]	ADAPTOR (F-FLEX OR G.)	[Symbol]	ADAPTOR (F-FLEX OR G.)	[Symbol]	IDENTIFIES EXISTING PIPING FITTINGS, ETC.
[Symbol]	ELL - 45° (F-B)	[Symbol]	ADAPTOR (SLOTTED FLG. WITH TEE BOLTS & SHORT BELL)	[Symbol]	ADAPTOR (F-FLEX OR G.)	[Symbol]	
[Symbol]	ELL - DEGREE SHOWN (SIZE SHOWN)	[Symbol]	PFC ADAPTOR	[Symbol]	ADAPTOR (F-FLEX OR G.)	[Symbol]	
[Symbol]	SPROUT	[Symbol]	FLANGE & COMPACT FITTING (F-FC)	[Symbol]	ADAPTOR (SLOTTED FLG. WITH TEE BOLTS & SHORT BELL)	[Symbol]	
[Symbol]	REDUCING COUPLING (SIZE SHOWN)	[Symbol]	PIPE COUPLING	[Symbol]	PIPE COUPLING	[Symbol]	
[Symbol]	REDUCER (F-F) (SIZE SHOWN)	[Symbol]	FLUG	[Symbol]	FLUG	[Symbol]	
[Symbol]	TEE (B-B-F-F) (SIZE SHOWN)	[Symbol]		[Symbol]		[Symbol]	
[Symbol]	CROSS (B-B-F-F) (SIZE SHOWN)	[Symbol]		[Symbol]		[Symbol]	
[Symbol]	FLEX COUPLING	[Symbol]		[Symbol]		[Symbol]	
[Symbol]	BATTERY VALVE-FLANGE BODY	[Symbol]		[Symbol]		[Symbol]	
[Symbol]	CAP	[Symbol]		[Symbol]		[Symbol]	



5

Ray Water Company Consolidation

Rayville Lane,
Santa Barbara County

Job #: 21059

REVISIONS

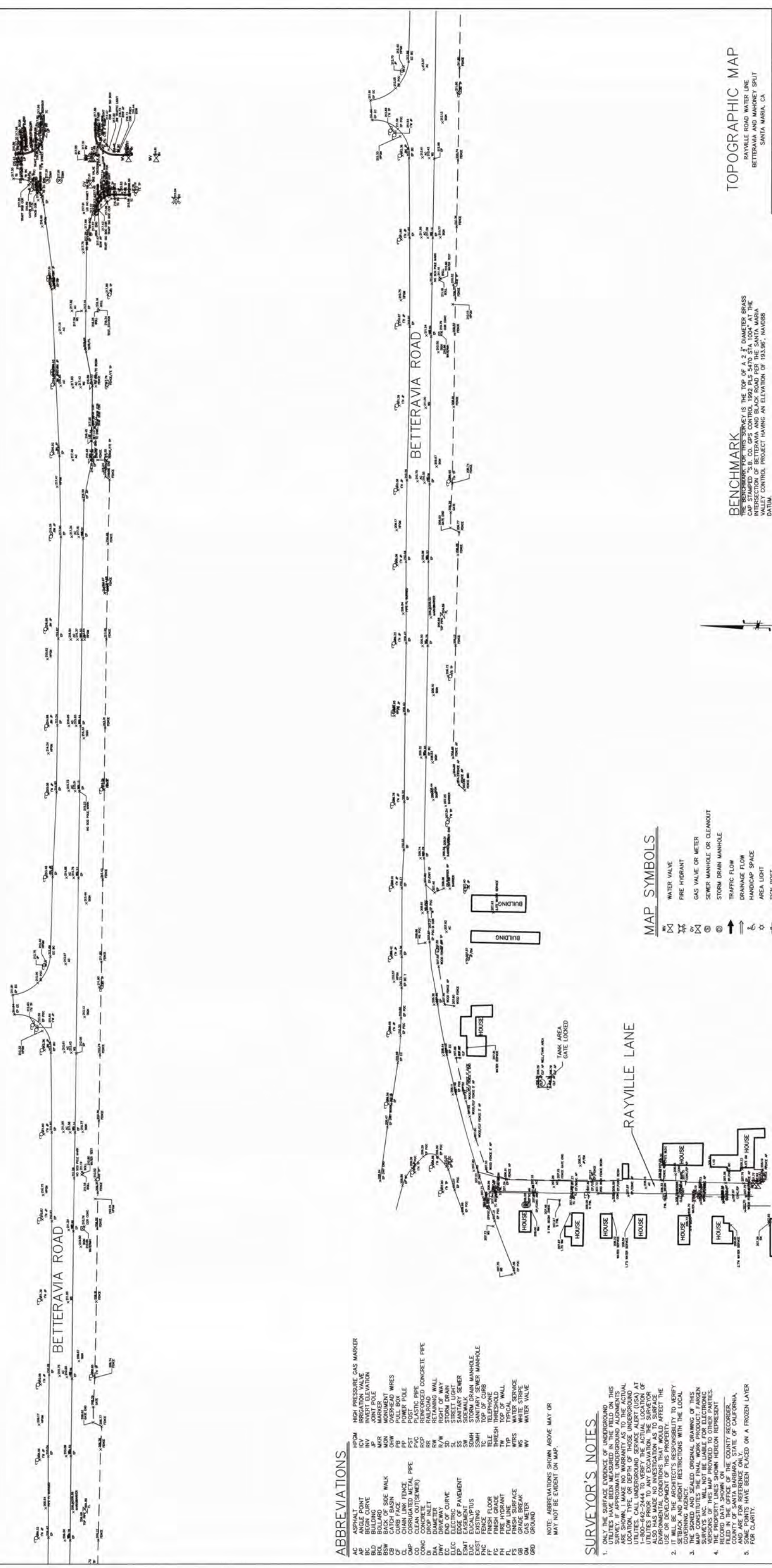
REV. BY	DATE	DESCRIPTION
RP	06/21	30% DESIGN DEVELOPMENT

WHA
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Hydrogeology and Environmental Engineering
10000 Santa Barbara Blvd., Suite 200
Santa Barbara, CA 93106
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CITY OF SANTA MARIA
DEPARTMENT OF PUBLIC WORKS

DRAWN BY: RP
CHECKED BY:
DATE: 6/22/2021
SHEET: 6 OF 6 SHEETS
REFERENCES:
FILE NO.: WA-5.0

Construction Details



ABBREVIATIONS

AC	ASPHALT	HPGM	HIGH PRESSURE GAS MARKER
AD	ADJUSTED	INTV	INTERIOR ELEVATION
BLD	BUILDING	JWP	JOINT POLE
BLLD	BOLLARD	MOR	MARKER
BSL	BOLLARD SIDE WALK	OWR	OVERHEAD WIRES
CB	CATCH BASIN	PB	PULL BOX
CF	CURB FACE FENCE	PP	POST
CM	CARRIAGED METAL PIPE	PST	POST
CO	CORNER	PVC	PLASTIC PIPE
COG	CORNER	RCP	REINFORCED CONCRETE PIPE
DA	DIAMETER	RW	RETAINING WALL
DIA	DRIVEWAY	R/W	RIGHT OF WAY
DR	DRIVEWAY	S	STREET LIGHT
ELEC	ELECTRIC	SS	SANITARY SEWER
ED	EDGE OF PAVEMENT	SSMH	SANITARY SEWER MANHOLE
EUC	EUCALYPTUS	ST	STORM DRAIN MANHOLE
EX	EXISTING	TH	THRESHOLD
FFC	FINISH FLOOR	TR	TRAILROAD
FFG	FINISH GRADE	TV	TELEPHONE
PH	FIRE HYDRANT	TP	TOP OF WALL
FS	FINISH SURFACE	WTR	WATER SERVICE
GB	GRADE BREAK	WS	WHITE STRIPE
GRD	GROUND	WV	WATER VALVE

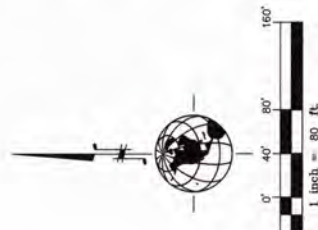
NOTE: ABBREVIATIONS SHOWN ABOVE MAY OR MAY NOT BE EVIDENT ON MAP.

SURVEYOR'S NOTES:

- ONLY THE SURFACE EVIDENCE OF UNDERGROUND UTILITIES HAVE BEEN MEASURED IN THE FIELD ON THIS SURVEY. IF APPROXIMATE UNDERGROUND ALIGNMENTS ARE KNOWN, THEY SHOULD BE SHOWN WITH THEIR LOCATION, TYPE, OR DEPTH OF THOSE UNDERGROUND UTILITIES. CALL UNDERGROUND SERVICE ALERT (USA) AT 1-800-842-2444 TO VERIFY THE ACTUAL LOCATION OF UTILITIES. THIS SURVEY IS NOT A GUARANTEE OF ENVIRONMENTAL CONDITIONS THAT WOULD AFFECT THE UTILITIES. THE SURVEYOR HAS NOT INVESTIGATED THE ENVIRONMENTAL CONDITIONS THAT WOULD AFFECT THE UTILITIES.
- IT WILL BE THE ARCHITECT'S RESPONSIBILITY TO VERIFY SETBACK AND HEIGHT RESTRICTIONS WITH THE LOCAL GOVERNING AGENCIES.
- THIS DRAWING IS A SEPALED ORIGINAL DRAWING OF THIS MAP. THE ARCHITECT'S RESPONSIBILITY TO VERIFY SETBACK AND HEIGHT RESTRICTIONS WITH THE LOCAL GOVERNING AGENCIES.
- RECORD DATA SHOWN ON THIS DRAWING IS FOR THE COUNTY OF SANTA BARBARA, STATE OF CALIFORNIA, AND ARE FOR REFERENCE ONLY.
- FOR CLARITY:

MAP SYMBOLS

- WV WATER VALVE
 - PH FIRE HYDRANT
 - GS GAS VALVE OR METER
 - SMW SEWER MANHOLE OR CLEANOUT
 - SDM STORM DRAIN MANHOLE
 - TF TRAFFIC FLOW
 - DF DRAINAGE FLOW
 - HS HANDICAP SPACE
 - AL AREA LIGHT
 - SP SIGN POST
 - UP UTILITY POLE
 - W WELL
 - M MONUMENT
 - SL STREET LIGHT
 - WM WATER METER
 - CB CATCH BASIN OR OTHER STRUCTURE AS NOTED
- NOTE: ALL SYMBOLS SHOWN ABOVE MAY OR MAY NOT BE EVIDENT ON MAP.



BENCHMARK
 THE BENCHMARK FOR THIS SURVEY IS THE TOP OF A 2" DIAMETER BRASS CAP STAMPED "S.B. CO. OP'S CONTROL 1992 PLS 5470 STA 1004" AT THE INTERSECTION OF BETTERAVIA AND BLACK ROAD PER THE SANTA MARIA COUNTY CONTROL PROJECT HAVING AN ELEVATION OF 193.96' - NAD88 DATUM.

SURVEYORS STATEMENT
 I HEREBY STATE THAT THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY SUPERVISION AND IN ACCORDANCE WITH THE PROVISIONS OF SECTION 8000 OF THE PROFESSIONAL LAND SURVEYORS ACT AND THAT SAID SURVEY CORRECTLY SHOWS THE TOPOGRAPHIC FEATURES. THE CONTOURS ARE COMPUTER GENERATED.
 KENNY L. FARSEN, L.S. 4597 DATE: 6-11-21



TOPOGRAPHIC MAP
 RAYVILLE ROAD WATER LINE
 BETTERAVIA AND MARIQUET SPLIT
 SANTA MARIA, CA

Fargen Surveys, Inc.
 2624 AIRPARK DRIVE
 SANTA MARIA, CA 93455
 PHONE: 805-933-2277
 FAX: 805-933-3448
 DATE: JUNE 2021

JOB: 21081 RAYVILLE WATERLINE TOPOLOG
 SHEET 1 OF 1

APPENDIX B

Special-Status Species Table

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Special-Status Species Database

(Santa Maria, Casmalia, Orcutt, Sisquoc, Oceano, Nipomo, Huasna Peak, Guadalupe, Twitchell Dam)

Species	Status (USFWS/ CDFW/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
MAMMALS			
<i>Antrozous pallidus</i> Pallid bat	-- / CSC / --	Occurs in a wide variety of habitats including grasslands, shrublands, arid desert areas, oak savanna, coastal forested areas, and coniferous forests of the mountain regions of California. Most common in open, dry habitats with rocky areas for roosting. Day roosts include caves, crevices, mines, and occasionally hollow trees and buildings. Seems to prefer rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Similar structures are used for night roosting and will also use more open sites such as eaves, awnings, and open areas under bridges for feeding roosts.	Unlikely: No suitable roosting habitat within or adjacent to the survey area or project site.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-- / CSC / --	Found primarily in rural settings from inland deserts to coastal redwoods, oak woodland of the inner Coast Ranges and Sierra foothills, and low to mid-elevation mixed coniferous-deciduous forests. Typically roost during the day in limestone caves, lava tubes, and mines, but can roost in buildings that offer suitable conditions. Night roosts are in more open settings and include bridges, rock crevices, and trees.	Unlikely: No suitable roosting habitat within or adjacent to the survey area or project site.
<i>Lasiurus blossevillii</i> Western red bat	-- / CSC / --	Roosting habitat includes trees and sometimes shrubs in forests and woodlands from sea level up through mixed conifer forests. Roost sites are often in edge habitats adjacent to streams, fields, or urban areas. Feeds over a wide variety of habitats, including grasslands, shrublands, open woodlands and forests, and croplands.	Unlikely: No suitable roosting habitat within or adjacent to the survey area or project site.
<i>Taxidea taxus</i> American badger	-- / CSC / --	Dry, open grasslands, fields, pastures savannas, and mountain meadows near timberline are preferred. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated grounds.	Unlikely: No suitable habitat within or adjacent to the survey area or project site. No burrows of sufficient site to support this species were observed within the survey area.
BIRDS			
<i>Agelaius tricolor</i> Tricolored blackbird (nesting colony)	-- / ST / --	Nest in colonies in dense riparian vegetation, along rivers, lagoons, lakes, and ponds. Forages over grassland or aquatic habitats.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.

Species	Status (USFWS/ CDFW/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
<i>Athene cunicularia</i> Burrowing owl (burrow sites & some wintering sites)	-- / CSC / --	Year round resident of open, dry grassland and desert habitats, and in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. Frequent open grasslands and shrublands with perches and burrows. Use rodent burrows (often California ground squirrel) for roosting and nesting cover. Pipes, culverts, and nest boxes may be substituted for burrows in areas where burrows are not available.	Unlikely: No suitable habitat within or adjacent to the survey area or project site and no burrows of sufficient size or depth to support this species were observed during the site visit. The CNDDDB reports a 2003 occurrence of this species, just north of Rayville Lane and West Betteravia Road; however, the area has been continually disturbed since 2005 (based on evaluation of Google Earth images) and habitat for this species is significantly degraded.
<i>Buteo swainsoni</i> Swainson's hawk (nesting)	-- / ST / --	Generally found associated with plains, range, open hills, and sparse trees. Suitable nesting habitat includes trees within mature riparian forest or corridors, lone oak trees and oak groves, and mature roadside trees. Nest sites are generally adjacent to, or within easy flying distance to suitable foraging habitat that provides available prey resources. Within California, the majority of breeding for this species occurs within the Central Valley.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
<i>Charadrius alexandrinus nivosus</i> Western snowy plover (nesting)	FT / CSC / --	Sandy beaches on marine and estuarine shores, also salt pond levees and the shores of large alkali lakes. Requires sandy, gravelly or friable soil substrate for nesting.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
<i>Empidonax traillii eximius</i> Southwestern willow flycatcher (nesting)	FE / SE / --	Breeds in riparian habitat in areas ranging in elevation from sea level to over 2,600 meters. Builds nest in trees in densely vegetated areas. This species establishes nesting territories and builds, and forages in mosaics of relatively dense and expansive areas of trees and shrubs, near or adjacent to surface water or underlain by saturated soils. Not typically found nesting in areas without willows (<i>Salix sp.</i>), tamarisk (<i>Tamarix ramosissima</i>), or both.	Low: Potential nesting habitat is present within the riparian areas of the survey area; however, this area likely provides only low-quality habitat. The CNDDDB does not report any occurrences of this species within the quads evaluated. The nearest CNDDDB occurrence is over 20 miles south of the survey area within the Santa Ynez River. No nesting habitat is present within the areas that will be impacted by the project.
<i>Falco peregrinus anatum</i> American peregrine falcon (nesting)	-- / CFP / --	Forages for other birds over a variety of habitats. Breeds primarily on rocky cliffs.	Unlikely: No suitable nesting habitat within or adjacent to the survey area or project site.
<i>Gymnogyps californianus</i> California condor	FE / SE / --	Roosting sites in isolated rocky cliffs, rugged chaparral, and pine covered mountains 2000-6000 feet above sea level. Foraging area removed from nesting/roosting site (includes rangeland and coastal area - up to 19 mile commute one way). Nest sites in cliffs, crevices, potholes. Inhabits freshwater marshes, wet meadows & shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that does not fluctuate during the year & dense vegetation for nesting habitat.	Unlikely: No suitable nesting habitat within or adjacent to the survey area or project site.
<i>Laterallus jamaicensis coturniculus</i> California black rail	-- / ST&CFP / --		Unlikely: No suitable habitat within or adjacent to the survey area or project site.

Species	Status (USFWS/ CDFW/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
<i>Setophaga petechia</i> Yellow warbler	-- / CSC / --	Usually found in riparian deciduous habitats in summer: cottonwoods, willows, alders, and other small trees and shrubs typical of low, open-canopy riparian woodland. Visits woodland, forest, and shrub habitats.	Low: Potential nesting habitat is present within the riparian areas of the survey area; however, this area likely provides only low-quality habitat. The CNDDDB includes one occurrence within the Quads evaluated, located more than 12 miles from the survey area within the Santa Maria River. No nesting habitat is present within the areas that will be impacted by the project.
<i>Sternula antillarum brownii</i> California least tern	FE / SE&CFP / --	Prefers undisturbed nest sites on open, sandy/gravelly shores near shallow-water feeding areas in estuaries. Sea beaches, bays, large rivers, bars.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
<i>Vireo bellii pusillus</i> Least Bell's vireo (nesting)	FE / SE / --	Riparian areas and drainages. Breed in willow riparian forest supporting a dense, shrubby understory. Oak woodland with a willow riparian understory is also used in some areas, and individuals sometimes enter adjacent chaparral, coastal sage scrub, or desert scrub habitats to forage.	Unlikely: The survey area is located within the historic range for this species, but not within the currently known range. The CNDDDB includes one occurrence within the Quads evaluated, located more than 12 miles from the survey area within the Santa Maria River. Riparian habitat within the survey consists of only low-quality potential nesting habitat for this species. No nesting habitat is present within the areas that will be impacted by the project.
REPTILES AND AMPHIBIANS			
<i>Ambystoma californiense</i> California tiger salamander	FT / ST&WL / --	Annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Need underground refuges and vernal pools or other seasonal water sources.	Low: No suitable upland or breeding habitat within or adjacent to survey area or project site. No occurrences within 2.2 km of the survey area. Six aquatic resources are present within 930 meters of the survey area. These ponds are surrounded by development and agriculture and are man-made detention basins that likely provide only low-quality habitat. No hydrology or occurrence data is known for these resources. Based on this information, the potential for this species to occur within the survey area or project site is low and take of this species as a result of the project is unlikely.

Species	Status (USFWS/ CDFW/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
<i>Anaxyrus californicus</i> Arroyo toad	FE / CSC / --	Washes, streams, and arroyos, and adjacent uplands (desert, shrubland). On sandy banks in riparian woodlands (willow, cottonwood, sycamore, and/or coast live oak) in California. Along rivers that have shallow gravelly pools adjacent to sandy terraces. Adults obtain shelter by burrowing into sandy soil. Lays eggs among gravel, leaves, or sticks, or on mud or clean sand, at bottom of shallow quiet waters of streams or shallow ponds, in areas with little or no emergent vegetation. Newly metamorphosed individuals remain near pools for up to several weeks (until pools dry).	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
<i>Anniella pulchra</i> Northern California legless lizard	-- / CSC / --	Requires moist, warm habitats with loose soil for burrowing and prostrate plant cover, often forages in leaf litter at plant bases; may be found on beaches, sandy washes, and in woodland, chaparral, and riparian areas.	Unlikely: No suitable habitat within or adjacent to survey area or project site. The CNDDDB reports a historic occurrence from 1985 within a portion of the survey area and project site; however, heavily disturbed sites dominated by ice plant and other non-shrub invasive plant species are unlikely to support this species.
<i>Emys marmorata</i> Western pond turtle	-- / CSC / --	Associated with permanent or nearly permanent water in a wide variety of habitats including streams, lakes, ponds, irrigation ditches, etc. Require basking sites such as partially submerged logs, rocks, mats of vegetation, or open banks.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
<i>Phrynosoma blainvillii</i> Coast horned lizard	-- / CSC / --	Associated with open patches of sandy soils in washes, chaparral, scrub, and grasslands.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
<i>Rana boylei</i> Foothill yellow-legged frog	-- / SC&CSC / --	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats, including hardwood, pine, and riparian forests, scrub, chaparral, and wet meadows. Rarely encountered far from permanent water.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.

Species	Status (USFWS/ CDFW/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
<i>Rana draytonii</i> California red-legged frog	FT / CSC / --	Lowlands and foothills in or near permanent or late-season sources of deep water with dense, shrubby, or emergent riparian vegetation. During late summer or fall adults are known to utilize a variety of upland habitats with leaf litter or mammal burrows.	Low: The CNDDB reports five occurrences of CRLF (1995-2003) within one mile of the survey area; however, the nearest occurrence is no longer an aquatic feature (converted to agriculture). Several other aquatic features are present within one mile of the survey area, consisting mostly of man-made detention basins and an unnamed drainage. No suitable breeding or upland (within 300 feet of a suitable breeding resource) habitat is present within the survey area or project site; however, due to the distance of known occurrences, the survey area and project site may provide dispersal habitat. Specific protections for migrating CRLF are probably unwarranted because dispersal habitat is ubiquitous and migrating CRLF are widely distributed across the landscape in space and time (Bulger et. al, 2003). As such, the potential for this species to occur within the survey area or project site is low and take of this species as a result of the project is unlikely. Unlikely: No suitable habitat within or adjacent to the survey area or project site.
<i>Spea hammondi</i> Western spadefoot	-- / CSC / --	Grasslands with shallow temporary pools are optimal habitats for the western spadefoot. Occur primarily in grassland habitats, but can be found in valley and foothill woodlands. Vernal pools are essential for breeding and egg laying.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
<i>Thamnophis hammondi</i> Two-striped garter snake	-- / CSC / --	Associated with permanent or semi-permanent bodies of water bordered by dense vegetation in a variety of habitats from sea level to 2400m elevation.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
FISH			
<i>Eucyclogobius newberryi</i> Tidewater goby	FE / CSC / --	Brackish water habitats, found in shallow lagoons and lower stream reaches. Tidewater gobies appear to be naturally absent (now and historically) from three large stretches of coastline where lagoons or estuaries are absent and steep topography or swift currents may prevent tidewater gobies from dispersing between adjacent localities. The southernmost large, natural gap occurs between the Salinas River in Monterey County and Arroyo del Oso in San Luis Obispo County.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
<i>Hypomesus transpacificus</i> Delta smelt	FT / ST / --	Sacramento-San Joaquin Delta, seasonally present in Suisun Bay, Carquinez Strait, and San Pablo Bay.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.

Species	Status (USFWS/ CDFW/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
<i>Gasterosteus aculeatus williamsoni</i> Unarmored threespine stickleback	FE / SE / --	Currently restricted to three areas: the upper Santa Clara River and its tributaries in Los Angeles County, San Antonio Creek on Vandenberg Air Force Base in Santa Barbara County, and the Shay Creek vicinity in San Bernardino County. Typically found at the shallow edges of freshwater streams in areas with dense vegetation.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
<i>Gila orcuttii</i> Arroyo chub	-- / CSC / --	Native to the Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita Rivers and Malibu and San Juan Creeks in Southern California. Introductions have expanded their distribution to the Sana Ynez, Ventura, Santa Maria, Cuyama, Santa Clara, and Mojave River systems and other smaller streams. Found in habitats characterized by slow-moving water, mud or sand substrate, and depths greater than 40cm. Most common in streams with gradients less than 2.5% slope with temperatures from 10-28°F.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
<i>Oncorhynchus mykiss irideus</i> Steelhead (Southern California DPS)	FE / -- / --	Cold headwaters, creeks, and small to large rivers and lakes; anadromous in coastal streams. Found in rivers from the Santa Maria River in San Luis Obispo County to Malibu Creek in Los Angeles County.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
<i>Oncorhynchus mykiss irideus</i> Steelhead (south/central California coast DPS)	FT / -- / --	Cold headwaters, creeks, and small to large rivers and lakes; anadromous in coastal streams. Found in streams and rivers from the Pajaro River in Santa Cruz County to (but not including) the Santa Maria River in San Luis Obispo County.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
INVERTEBRATES			
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT / -- / --	Require ephemeral pools with no flow. Associated with vernal pool/grasslands from near Red Bluff (Shasta County), through the central valley, and into the South Coast Mountains Region. Require ephemeral pools with no flow.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
<i>Danaus plexippus</i> Monarch butterfly	-- / CNDDDB / --	Overwinters in coastal California using colonial roosts generally found in Eucalyptus, pine and acacia trees. Overwintering habitat for this species within the Coastal Zone represents ESHA. Local ordinances often protect this species as well.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.
PLANTS			
<i>Agrostis hooveri</i> Hoover's bent grass	-- / -- / 1B	Closed-cone coniferous forest, chaparral, cismontane woodland, and valley and foothill grassland at elevations of 6-610 meters. Perennial herb in the Poaceae family; blooms April-July	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.

Species	Status (USFWS/ CDFW/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
<i>Aphanisma blitoides</i> Aphanisma	-- / -- / 1B	Coastal bluff scrub, coastal dunes, and coastal scrub on sandy or gravelly soils at elevations of 1-305 meters. Annual herb in the Chenopodiaceae family; blooms February-June.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Arctostaphylos pilosula</i> Santa Margarita manzanita	-- / -- / 1B	Closed-cone coniferous forest, chaparral, and cismontane woodland at elevations of 170-1100 meters. Evergreen shrub in the Ericaceae family; blooms December-March.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Survey area is below the known elevation range for this species. Not identified during the survey conducted in June 2021.
<i>Arctostaphylos purissima</i> La Purissima manzanita	-- / -- / 1B	Chaparral and coastal scrub on sandy soils at elevations of 60-555 meters. Perennial evergreen shrub in the Ericaceae family; blooms November-May.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Arctostaphylos refugioensis</i> Refugio manzanita	-- / -- / 1B	Chaparral on sandstone at elevations of 274-820 meters. Perennial evergreen shrub in the Ericaceae family; blooms December-May.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Arctostaphylos rudis</i> Sand mesa manzanita	-- / -- / 1B	Maritime chaparral and coastal scrub on sandy soils at elevations of 25-322 meters. Evergreen shrub in the Ericaceae family; blooms November-February.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Arenaria paludicola</i> Marsh sandwort	FE / SE / 1B	Known from only two natural occurrences in Black Lake Canyon and at Oso Flaco Lake. Sandy openings of freshwater of brackish marshes and swamps at elevations of 3-170 meters. Stoloniferous perennial herb in the Caryophyllaceae family; blooms May-August.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Survey area is outside of the currently known range for this species. Not identified during the survey conducted in June 2021.
<i>Astragalus didymocarpus</i> var. <i>milesianus</i> Miles' milk-vetch	-- / -- / 1B	Coastal scrub on clay soils at elevations of 20-90 meters. Annual herb in the Fabaceae family; blooms March-June.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Atriplex serenana</i> var. <i> davidsonii</i> Davidson's saltscall	-- / -- / 1B	Coastal scrub and coastal bluff scrub on alkaline soils at elevations of 10-200 meters. Annual herb in the Chenopodiaceae family; blooms April-October.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Ceanothus impressus</i> var. <i>impressus</i> Santa Barbara ceanothus	-- / -- / 1B	Chaparral on sandy soils at elevations of 40-470 meters. Perennial shrub in the Rhamnaceae family; blooms February-April.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Ceanothus impressus</i> var. <i>nipomensis</i> Nipomo Mesa ceanothus	-- / -- / 1B	Chaparral on sandy soils at elevations of 30-245 meters. Perennial shrub in the Rhamnaceae family; blooms February-April.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.

Species	Status (USFWS/ CDFW/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
<i>Chenopodium littoreum</i> Coastal goosefoot	-- / -- / 1B	Coastal dunes at elevations of 10-30 meters. Annual herb in the Chenopodiaceae family; blooms April-August.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Chorizanthe rectispina</i> Straight-awned spineflower	-- / -- / 1B	Chaparral, cismontane woodland, and coastal scrub at elevations of 85-1305 meters. Annual herb in the Polygonaceae family; blooms April-July.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Cicuta maculata</i> var. <i>bolanderi</i> Bolander's water-hemlock	-- / -- / 2B	Fresh or brackish coastal swamps and marshes at elevations of 0-200 meters. Perennial herb in the Apiaceae family; blooms July-September.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Cirsium loncholepis</i> La Graciosa thistle	FE / ST / 1B	Brackish marshes and swamps, and cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on mesic, sandy soils, at elevations of 4-220 meters. Perennial herb in the Asteraceae family; blooms May-August.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Cirsium righthophilum</i> Surf thistle	-- / ST / 1B	Coastal bluff scrub and coastal dunes at elevations of 3-60 meters. Perennial herb in the Asteraceae family; blooms April-June.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Cirsium scariosum</i> var. <i>loncholepis</i> La Graciosa thistle	FE / ST / 1B	Mesic areas of coastal dunes, brackish marshes and swamps, cismontane woodland, and valley and foothill grassland at elevations of 4-220 meters. Annual herb in the Asteraceae family; blooms May-August.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Cladium californicum</i> California saw-grass	-- / -- / 2B	Alkaline or freshwater marshes and swamps, meadows, and seeps at elevations of 60-1600 meters. Perennial rhizomatous herb in the Cyperaceae family; blooms June-September.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Clarkia speciosa</i> ssp. <i>immaculata</i> Pismo clarkia	FE / SR / 1B	Margins and openings of chaparral, cismontane woodland, and valley and foothill grassland on sandy soils at elevations of 25-185 meters. Annual herb in the Onagraceae family; blooms May-July.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i> Seaside bird's-beak	-- / SE / 1B	Closed-cone coniferous forests, maritime chaparral, cismontane woodlands, coastal dunes, and coastal scrub on sandy soils, often on disturbed sites, at elevations of 0-425 meters. Annual hemi-parasitic herb in the Orobanchaceae family; blooms April-October.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Deinandra increscens</i> ssp. <i>villosa</i> Gaviota tarplant	FE / SE / 1B	Coastal bluff scrub, coastal scrub, and valley and foothill grassland at elevations of 20-430 meters. Annual herb in the Asteraceae family; blooms May-October.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.

Species	Status (USFWS/ CDFW/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
<i>Delphinium parryi</i> ssp. <i>blochmaniae</i> Dune larkspur	-- / -- / 1B	Maritime chaparral and coastal dunes at elevations of 0-200 meters. Perennial herb in the Ranunculaceae family; blooms April-May.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Dithyrea maritima</i> Beach spectaclepod	-- / ST / 1B	Coastal dunes and coastal scrub on sandy soils at elevations of 3-50 meters. Rhizomatous perennial herb in the Brassicaceae family; blooms March-May.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i> Blochman's dudleya	-- / -- / 1B	Coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland on rocky, often clay or serpentine soils at elevations of 5-450 meters. Perennial herb in the Crassulaceae family; blooms April-June.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Erigeron blochmaniae</i> Blochman's leafy daisy	-- / -- / 1B	Coastal dunes and coastal scrub at elevations of 3-45 meters. Rhizomatous perennial herb in the Asteraceae family; blooms June-August.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Eriodictyon capitatum</i> Lompoc yerba santa	FE / SR / 1B	Coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral on sandy soils at elevations of 40-900 meters. Perennial evergreen shrub in the Namaceae family; blooms May-September.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Horkelia cuneata</i> var. <i>puberla</i> Mesa horkelia	-- / -- / 1B	Cismontane woodland, maritime chaparral, and coastal scrub on sandy or gravelly soils at elevations of 70-810 meters. Perennial herb in the Rosaceae family; blooms February-July.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Horkelia cuneata</i> var. <i>sericea</i> Kellogg's horkelia	-- / -- / 1B	Openings of closed-cone coniferous forests, maritime chaparral, coastal dunes, and coastal scrub on sandy or gravelly soils at elevations of 10-200 meters. Perennial herb in the Rosaceae family; blooms April-September.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Layia carnosa</i> Beach layia	FE / SE / 1B	Coastal dunes and coastal scrub on sandy soils at elevations of 0-60 meters. Annual herb in the Asteraceae family; blooms March-July.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Layia heterotricha</i> Pale-yellow layia	-- / -- / 1B	Cismontane woodlands, coastal scrub, pinyon and juniper woodlands, and valley and foothill grasslands on alkaline or clay soils at elevations of 300-1705 meters. Annual herb in the Asteraceae family blooms March-June.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Survey area is below the known elevation range for this species. Not identified during the survey conducted in June 2021.
<i>Lupinus ludovicianus</i> San Luis Obispo County lupine	-- / -- / 1B	Chaparral and cismontane woodland on sandstone or sandy soils at elevations of 50-525 meters. Perennial herb in the Fabaceae family blooms April-July.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Lupinus nipomensis</i> Nipomo Mesa lupine	FE / SE / 1B	Coastal dunes at elevations of 10-50 meters. Annual herb in the Fabaceae family; blooms December-May.	Unlikely: No suitable habitat within or adjacent to the survey area or project site.

Species	Status (USFWS/ CDFW/CNPS)	General Habitat	Potential Occurrence within Project Vicinity
<i>Malacothamnus gracilis</i> Slender bush-mallow	-- / -- / 1B	Chaparral, usually on rocky soils, at elevations of 190-575 meters. Perennial deciduous shrub in the Malvaceae family; blooms May-October.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Survey area is below the known elevation range for this species. Not identified during the survey conducted in June 2021.
<i>Monardella sinuata</i> ssp. <i>sinuata</i> Southern curly-leaved monardella	-- / -- / 1B	Chaparral, coastal dunes, openings in coastal scrub, and cismontane woodland on sandy soils at elevations of 0-300 meters. Annual herb in the Lamiaceae family; blooms April-September.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Monardella undulata</i> ssp. <i>crispa</i> Crisp monardella	-- / -- / 1B	Coastal dunes and coastal scrub at elevations of 10-120 meters. Annual herb in the Lamiaceae family; blooms April-August.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Monardella undulata</i> ssp. <i>undulata</i> San Luis Obispo monardella	-- / -- / 1B	Coastal dunes and coastal scrub on sandy soils at elevations of 10-120 meters. Annual herb in the Lamiaceae family; blooms May-September.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Muhlenbergia utilis</i> Aparejo grass	-- / -- / 2B	Wet sites along streams and ponds at elevations of 250-1000 meters. Perennial herb in the Poaceae family; blooms October-March.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Survey area is below the known elevation range for this species. Not identified during the survey conducted in June 2021.
<i>Nasturtium gambelii</i> (formerly <i>Rorippa gambelii</i>) Gambel's water cress	FE / ST / 1B	Freshwater or brackish marshes and swamps at elevations of 5-330 meters. Perennial rhizomatous herb in the Brassicaceae family; blooms April-October.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Nemaclausis denudata</i> var. <i>denudata</i> Coast woolly-heads	-- / -- / 1B	Coastal dunes at elevations of 0-100 meters. Annual herb in the Polygonaceae family; blooms April-September.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.
<i>Scrophularia atrata</i> Black-flowered figwort	-- / -- / 1B	Closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, and riparian scrub at elevations of 10-500 meters. Perennial herb in the Scrophulariaceae family; blooms March-July.	Not Present: Marginal habitat is present within the riparian habitat in the survey area; however, no suitable habitat is present within the project site. Not identified during the survey conducted in June 2021.
<i>Symphotrichum defoliatum</i> San Bernardino aster	-- / -- / 1B	Meadows, seeps, marshes, swamps, vernal mesic valley and foothill grassland, and near ditches, streams, and springs in coastal scrub, cismontane woodland, and lower montane coniferous forest, at elevations of 2-2040 meters. Perennial rhizomatous herb in the Asteraceae family; blooms July-December.	Not Present: No suitable habitat within or adjacent to the survey area or project site. Not identified during the survey conducted in June 2021.

STATUS DEFINITIONS

Federal

- FE = listed as Endangered under the federal Endangered Species Act
- FT = listed as Threatened under the federal Endangered Species Act
- = no listing

State

- SE = listed as Endangered under the California Endangered Species Act
- ST = listed as Threatened under the California Endangered Species Act
- SR = listed as Rare under the California Endangered Species Act
- SC = Candidate for listing under the California Endangered Species Act
- CSC = California Department of Fish and Wildlife Species of Concern
- CFP = California Fully Protected Animal
- = no listing

California Native Plant Society

- 1B = California Rare Plant Rank 1B species; rare, threatened, or endangered in California and elsewhere
- 2B = California Rare Plant Rank 2B species; rare, threatened, or endangered in California, but more common elsewhere
- = no listing

POTENTIAL TO OCCUR

- Present = known occurrence of species within the site; presence of suitable habitat conditions; or observed during field surveys
- High = known occurrence of species in the vicinity from the CNDDDB or other documentation; presence of suitable habitat conditions
- Moderate = known occurrence of species in the vicinity from the CNDDDB or other documentation; presence of marginal habitat conditions within the site
- Low = species known to occur in the vicinity from the CNDDDB or other documentation; lack of suitable habitat or poor quality
- Unlikely = species not known to occur in the vicinity from the CNDDDB or other documentation, no suitable habitat is present within the site
- Not Present = species was not observed during surveys

APPENDIX C

California Natural Diversity Database Report

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Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: Quad IS (Santa Maria (3412084) OR Casmalia (3412075) OR Orcutt (3412074) OR Sisquoc (3412073) OR Oceano (3512015) OR Nipomo (3512014) OR Huasna Peak (3512013) OR Guadalupe (3412085) OR Twitchell Dam (3412083))
 AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Ablautus schlingeri</i> Oso Flaco robber fly	IIDIP42010	None	None	G1	S1	
<i>Accipiter striatus</i> sharp-shinned hawk	ABNKC12020	None	None	G5	S4	WL
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Threatened	G2G3	S1S2	SSC
<i>Agrostis hooveri</i> Hoover's bent grass	PMPOA040M0	None	None	G2	S2	1B.2
<i>Aimophila ruficeps canescens</i> southern California rufous-crowned sparrow	ABPBX91091	None	None	G5T3	S3	WL
<i>Ambystoma californiense</i> California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
<i>Anaxyrus californicus</i> arroyo toad	AAABB01230	Endangered	None	G2G3	S2S3	SSC
<i>Anniella pulchra</i> Northern California legless lizard	ARACC01020	None	None	G3	S3	SSC
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G5	S3	SSC
<i>Aphanisma blitoides</i> aphanisma	PDCHE02010	None	None	G3G4	S2	1B.2
<i>Arctostaphylos pilosula</i> Santa Margarita manzanita	PDERI042Z0	None	None	G2?	S2?	1B.2
<i>Arctostaphylos purissima</i> La Purisima manzanita	PDERI041A0	None	None	G2	S2	1B.1
<i>Arctostaphylos refugioensis</i> Refugio manzanita	PDERI041B0	None	None	G3	S3	1B.2
<i>Arctostaphylos rudis</i> sand mesa manzanita	PDERI041E0	None	None	G2	S2	1B.2
<i>Arenaria paludicola</i> marsh sandwort	PDCAR040L0	Endangered	Endangered	G1	S1	1B.1
<i>Areniscythis brachypteris</i> Oso Flaco flightless moth	IILEG49010	None	None	G1	S1	
<i>Astragalus didymocarpus var. milesianus</i> Miles' milk-vetch	PDFAB0F2X3	None	None	G5T2	S2	1B.2



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Atriplex serenana var. davidsonii</i> Davidson's saltscale	PDCHE041T1	None	None	G5T1	S1	1B.2
<i>Bombus caliginosus</i> obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
<i>Castilleja densiflora var. obispoensis</i> San Luis Obispo owl's-clover	PDSCR0D453	None	None	G5T2	S2	1B.2
<i>Ceanothus impressus var. impressus</i> Santa Barbara ceanothus	PDRHA040L1	None	None	G3T3	S3	1B.2
<i>Ceanothus impressus var. nipomensis</i> Nipomo Mesa ceanothus	PDRHA040L2	None	None	G3T2	S2	1B.2
<i>Charadrius alexandrinus nivosus</i> western snowy plover	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
<i>Chenopodium littoreum</i> coastal goosefoot	PDCHE091Z0	None	None	G1	S1	1B.2
<i>Chlosyne leanira elegans</i> Oso Flaco patch butterfly	IILEPJA051	None	None	G4G5T1T2	S1S2	
<i>Chorizanthe rectispina</i> straight-awned spineflower	PDPGN040N0	None	None	G2	S2	1B.3
<i>Cicindela hirticollis grvida</i> sandy beach tiger beetle	IICOL02101	None	None	G5T2	S2	
<i>Cicuta maculata var. bolanderi</i> Bolander's water-hemlock	PDAP10M051	None	None	G5T4T5	S2?	2B.1
<i>Cirsium rathophilum</i> surf thistle	PDAST2E2J0	None	Threatened	G1	S1	1B.2
<i>Cirsium scariosum var. loncholepis</i> La Graciosa thistle	PDAST2E1N0	Endangered	Threatened	G5T1	S1	1B.1
<i>Cladium californicum</i> California saw-grass	PMCYP04010	None	None	G4	S2	2B.2
<i>Clarkia speciosa ssp. immaculata</i> Pismo clarkia	PDONA05111	Endangered	Rare	G4T1	S1	1B.1
<i>Coelus globosus</i> globose dune beetle	IICOL4A010	None	None	G1G2	S1S2	
<i>Cordylanthus rigidus ssp. littoralis</i> seaside bird's-beak	PDSCR0J0P2	None	Endangered	G5T2	S2	1B.1
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Danaus plexippus pop. 1</i> monarch - California overwintering population	IILEPP2012	None	None	G4T2T3	S2S3	
<i>Deinandra increscens ssp. villosa</i> Gaviota tarplant	PDAST4R0U3	Endangered	Endangered	G4G5T2	S2	1B.1
<i>Delphinium parryi ssp. blochmaniae</i> dune larkspur	PDRAN0B1B1	None	None	G4T2	S2	1B.2
<i>Dithyrea maritima</i> beach spectaclepod	PDBRA10020	None	Threatened	G1	S1	1B.1
<i>Dudleya blochmaniae ssp. blochmaniae</i> Blochman's dudleya	PDCRA04051	None	None	G3T2	S2	1B.1
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Eremophila alpestris actia</i> California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
<i>Erigeron blochmaniae</i> Blochman's leafy daisy	PDAST3M5J0	None	None	G2	S2	1B.2
<i>Eriodictyon capitatum</i> Lompoc yerba santa	PDHYD04040	Endangered	Rare	G2	S2	1B.2
<i>Eucyclogobius newberryi</i> tidewater goby	AFCQN04010	Endangered	None	G3	S3	
<i>Falco peregrinus anatum</i> American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
<i>Gasterosteus aculeatus williamsoni</i> unarmored threespine stickleback	AFCPA03011	Endangered	Endangered	G5T1	S1	FP
<i>Gila orcuttii</i> arroyo chub	AFCJB13120	None	None	G2	S2	SSC
<i>Horkelia cuneata var. puberula</i> mesa horkelia	PDROS0W045	None	None	G4T1	S1	1B.1
<i>Horkelia cuneata var. sericea</i> Kellogg's horkelia	PDROS0W043	None	None	G4T1?	S1?	1B.1
<i>Lasionycteris noctivagans</i> silver-haired bat	AMACC02010	None	None	G5	S3S4	
<i>Lasiurus blossevillii</i> western red bat	AMACC05060	None	None	G5	S3	SSC
<i>Lasiurus cinereus</i> hoary bat	AMACC05030	None	None	G5	S4	
<i>Laterallus jamaicensis coturniculus</i> California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
<i>Layia carnosa</i> beach layia	PDAST5N010	Endangered	Endangered	G2	S2	1B.1
<i>Layia heterotricha</i> pale-yellow layia	PDAST5N070	None	None	G2	S2	1B.1



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Lichnanthe albipilosa</i> white sand bear scarab beetle	IICOL67010	None	None	G1	S1	
<i>Lupinus ludovicianus</i> San Luis Obispo County lupine	PDFAB2B2G0	None	None	G1	S1	1B.2
<i>Lupinus nipomensis</i> Nipomo Mesa lupine	PDFAB2B550	Endangered	Endangered	G1	S1	1B.1
<i>Malacothamnus gracilis</i> slender bush-mallow	PDMAL0Q0J0	None	None	G1Q	S1	1B.1
<i>Monardella sinuata ssp. sinuata</i> southern curly-leaved monardella	PDLAM18161	None	None	G3T2	S2	1B.2
<i>Monardella undulata ssp. crispa</i> crisp monardella	PDLAM18070	None	None	G3T2	S2	1B.2
<i>Monardella undulata ssp. undulata</i> San Luis Obispo monardella	PDLAM180X0	None	None	G2	S2	1B.2
<i>Muhlenbergia utilis</i> aparejo grass	PMPOA481X0	None	None	G4	S2S3	2B.2
<i>Myotis yumanensis</i> Yuma myotis	AMACC01020	None	None	G5	S4	
<i>Nasturtium gambelii</i> Gambel's water cress	PDBRA270V0	Endangered	Threatened	G1	S1	1B.1
<i>Nemacaulis denudata var. denudata</i> coast woolly-heads	PDPGN0G011	None	None	G3G4T2	S2	1B.2
<i>Oncorhynchus mykiss irideus pop. 10</i> steelhead - southern California DPS	AFCHA0209J	Endangered	None	G5T1Q	S1	
<i>Oncorhynchus mykiss irideus pop. 9</i> steelhead - south-central California coast DPS	AFCHA0209H	Threatened	None	G5T2Q	S2	
<i>Orobanche parishii ssp. brachyloba</i> short-lobed broomrape	PDORO040A2	None	None	G4?T4	S3	4.2
<i>Phrynosoma blainvillii</i> coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
<i>Plebejus icarioides moroensis</i> Morro Bay blue butterfly	IILEPG801B	None	None	G5T2	S2	
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
<i>Rana draytonii</i> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<i>Scrophularia atrata</i> black-flowered figwort	PDSCR1S010	None	None	G2?	S2?	1B.2
<i>Setophaga petechia</i> yellow warbler	ABPBX03010	None	None	G5	S3S4	SSC
<i>Spea hammondi</i> western spadefoot	AAABF02020	None	None	G3	S3	SSC



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Sternula antillarum browni</i> California least tern	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2	FP
<i>Symphotrichum defoliatum</i> San Bernardino aster	PDASTE80C0	None	None	G2	S2	1B.2
<i>Taxidea taxus</i> American badger	AMAJF04010	None	None	G5	S3	SSC
<i>Thamnophis hammondi</i> two-striped gartersnake	ARADB36160	None	None	G4	S3S4	SSC
<i>Trimerotropis occulens</i> Lompoc grasshopper	IIORT36310	None	None	G1G2	S1S2	
<i>Tryonia imitator</i> mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	
<i>Vireo bellii pusillus</i> least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	

Record Count: 87

APPENDIX D

IPaC Resource List

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United States Department of the Interior



FISH AND WILDLIFE SERVICE
Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
Phone: (805) 644-1766 Fax: (805) 644-3958

In Reply Refer To:

January 11, 2021

Consultation Code: 08EVEN00-2021-SLI-0131

Event Code: 08EVEN00-2021-E-00340

Project Name: Ray Water

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed list identifies species listed as threatened and endangered, species proposed for listing as threatened or endangered, designated and proposed critical habitat, and species that are candidates for listing that may occur within the boundary of the area you have indicated using the U.S. Fish and Wildlife Service's (Service) Information Planning and Conservation System (IPaC). The species list fulfills the requirements under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the species list should be verified after 90 days. We recommend that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists following the same process you used to receive the enclosed list. Please include the Consultation Tracking Number in the header of this letter with any correspondence about the species list.

Due to staff shortages and excessive workload, we are unable to provide an official list more specific to your area. Numerous other sources of information are available for you to narrow the list to the habitats and conditions of the site in which you are interested. For example, we recommend conducting a biological site assessment or surveys for plants and animals that could help refine the list.

If a Federal agency is involved in the project, that agency has the responsibility to review its proposed activities and determine whether any listed species may be affected. If the project is a major construction project*, the Federal agency has the responsibility to prepare a biological assessment to make a determination of the effects of the action on the listed species or critical habitat. If the Federal agency determines that a listed species or critical habitat is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species or their critical habitat prior to a

written request for formal consultation. During this review process, the Federal agency may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

Federal agencies are required to confer with the Service, pursuant to section 7(a)(4) of the Act, when an agency action is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10(a)). A request for formal conference must be in writing and should include the same information that would be provided for a request for formal consultation. Conferences can also include discussions between the Service and the Federal agency to identify and resolve potential conflicts between an action and proposed species or proposed critical habitat early in the decision-making process. The Service recommends ways to minimize or avoid adverse effects of the action. These recommendations are advisory because the jeopardy prohibition of section 7(a)(2) of the Act does not apply until the species is listed or the proposed critical habitat is designated. The conference process fulfills the need to inform Federal agencies of possible steps that an agency might take at an early stage to adjust its actions to avoid jeopardizing a proposed species.

When a proposed species or proposed critical habitat may be affected by an action, the lead Federal agency may elect to enter into formal conference with the Service even if the action is not likely to jeopardize or result in the destruction or adverse modification of proposed critical habitat. If the proposed species is listed or the proposed critical habitat is designated after completion of the conference, the Federal agency may ask the Service, in writing, to confirm the conference as a formal consultation. If the Service reviews the proposed action and finds that no significant changes in the action as planned or in the information used during the conference have occurred, the Service will confirm the conference as a formal consultation on the project and no further section 7 consultation will be necessary. Use of the formal conference process in this manner can prevent delays in the event the proposed species is listed or the proposed critical habitat is designated during project development or implementation.

Candidate species are those species presently under review by the Service for consideration for Federal listing. Candidate species should be considered in the planning process because they may become listed or proposed for listing prior to project completion. Preparation of a biological assessment, as described in section 7(c) of the Act, is not required for candidate species. If early evaluation of your project indicates that it is likely to affect a candidate species, you may wish to request technical assistance from this office.

Only listed species receive protection under the Act. However, sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Wildlife's Natural Diversity Data Base. You can contact the California Department of Fish and Wildlife at (916) 324-3812 for information on other sensitive species that may occur in this area.

[*A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))

(c). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.]

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Ventura Fish And Wildlife Office

2493 Portola Road, Suite B

Ventura, CA 93003-7726

(805) 644-1766

Project Summary

Consultation Code: 08EVEN00-2021-SLI-0131

Event Code: 08EVEN00-2021-E-00340

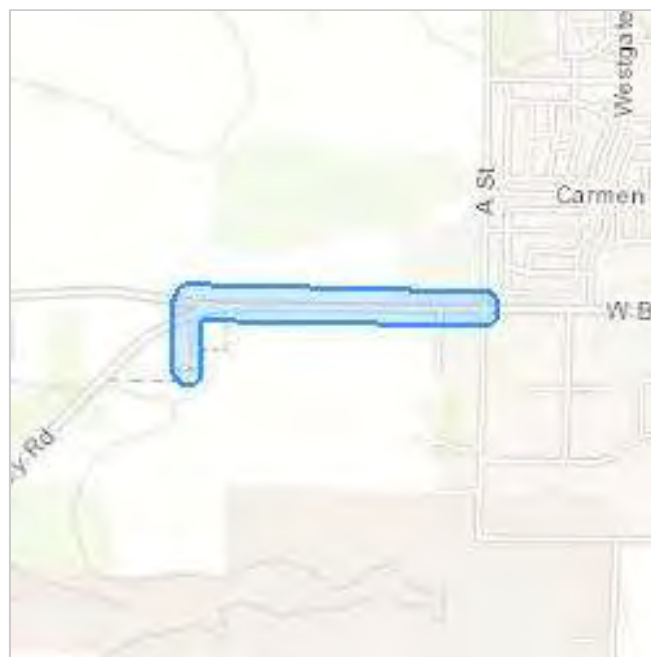
Project Name: Ray Water

Project Type: WATER SUPPLY / DELIVERY

Project Description: Pipeline

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@34.91992575,-120.47538509319233,14z>



Counties: Santa Barbara County, California

Endangered Species Act Species

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
California Condor <i>Gymnogyps californianus</i> Population: U.S.A. only, except where listed as an experimental population There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
Least Bell's Vireo <i>Vireo bellii pusillus</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> Population: U.S.A. (CA - Santa Barbara County) There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2076	Endangered

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Gambel's Watercress <i>Rorippa gambellii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4201	Endangered
La Graciosa Thistle <i>Cirsium loncholepis</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6547	Endangered
Marsh Sandwort <i>Arenaria paludicola</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2229	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

PUBLIC REVIEW DRAFT

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Appendix D

Phase 1 Cultural Report

Albion Environmental, Inc. conducted a Phase 1 Cultural Resource Inventory for the Proposed Project including a California Historical Resources Information System (CHRIS) records search, Native American consultation, and an archaeological survey of the Proposed Project area. The results of this study are summarized in the Initial Study / Mitigated Negative Declaration and detailed in a confidential report (on file at the City of Santa Maria, Planning Division office).



State of California - Department of Fish and Wildlife
2022 ENVIRONMENTAL DOCUMENT FILING FEE
CASH RECEIPT
 DFW 753.5a (REV. 01/01/22) Previously DFG 753.5a

Print StartOver Save

RECEIPT NUMBER:
 42 — 11/02/2022 — 259
 STATE CLEARINGHOUSE NUMBER (If applicable)

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

LEAD AGENCY City of Santa Maria	LEAD AGENCY EMAIL cgraybehl@cityofsantamaria.org	DATE 11/02/2022
COUNTY/STATE AGENCY OF FILING Santa Barbara	DOCUMENT NUMBER	

PROJECT TITLE

Ray Water Project

PROJECT APPLICANT NAME Denise Duffy & Associates, Inc.	PROJECT APPLICANT EMAIL dstaines@ddaplanning.com	PHONE NUMBER (831) 373-4341
PROJECT APPLICANT ADDRESS 947 Cass Street, Suite 5	CITY Monterey	STATE CA
		ZIP CODE 93940

PROJECT APPLICANT (Check appropriate box)

- Local Public Agency
 School District
 Other Special District
 State Agency
 Private Entity

CHECK APPLICABLE FEES:

- | | | | |
|---|------------|----|----------|
| <input type="checkbox"/> Environmental Impact Report (EIR) | \$3,539.25 | \$ | 0.00 |
| <input checked="" type="checkbox"/> Mitigated/Negative Declaration (MND)(ND) | \$2,548.00 | \$ | 2,548.00 |
| <input type="checkbox"/> Certified Regulatory Program (CRP) document - payment due directly to CDFW | \$1,203.25 | \$ | 0.00 |

- Exempt from fee
 Notice of Exemption (attach)
 CDFW No Effect Determination (attach)
 Fee previously paid (attach previously issued cash receipt copy)

- | | | | |
|---|----------|----|-------|
| <input type="checkbox"/> Water Right Application or Petition Fee (State Water Resources Control Board only) | \$850.00 | \$ | 0.00 |
| <input checked="" type="checkbox"/> County documentary handling fee | | \$ | 50.00 |
| <input type="checkbox"/> Other | | \$ | |

PAYMENT METHOD:

- Cash
 Credit
 Check
 Other

TOTAL RECEIVED \$ 2,598.00

SIGNATURE

X

AGENCY OF FILING PRINTED NAME AND TITLE

Brianda Negrete, Deputy Clerk



State of California - Department of Fish and Wildlife
2022 ENVIRONMENTAL DOCUMENT FILING FEE
CASH RECEIPT
 DFW 753.5a (REV. 01/01/22) Previously DFG 753.5a

NOTICE

Each project applicant shall remit to the county clerk the environmental filing fee before or at the time of filing a Notice of Determination (Pub. Resources Code, § 21152; Fish & G. Code, § 711.4, subdivision (d); Cal. Code Regs., tit. 14, § 753.5). Without the appropriate fee, statutory or categorical exemption, or a valid No Effect Determination issued by the California Department of Fish and Wildlife (CDFW), the Notice of Determination is not operative, vested, or final, and shall not be accepted by the county clerk.

COUNTY DOCUMENTARY HANDLING FEE

The county clerk may charge a documentary handling fee of fifty dollars (\$50) per filing in addition to the environmental filing fee (Fish & G. Code, § 711.4, subd. (e); Cal. Code Regs., tit. 14, § 753.5, subd. (g)(1)). A county board of supervisors shall have the authority to increase or decrease the fee or charge, that is otherwise authorized to be levied by another provision of law, in the amount reasonably necessary to recover the cost of providing any product or service or the cost of enforcing any regulation for which the fee or charge is levied (Gov. Code, § 54985, subd. (a)).

COLLECTION PROCEDURES FOR COUNTY GOVERNMENTS

Filing Notice of Determination (NOD):

- Collect environmental filing fee or copy of previously issued cash receipt. *(Do not collect fee if project applicant presents a No Effect Determination signed by CDFW. An additional fee is required for each separate environmental document. An addendum is not considered a separate environmental document. Checks should be made payable to the county.)*
- Issue cash receipt to project applicant.
- Attach copy of cash receipt and, if applicable, previously issued cash receipt, to NOD.
- Mail filing fees for CRP document to CDFW prior to filing the NOD or equivalent final approval (Cal. Code Regs. Tit. 14, § 753.5 (b)(5)). The CRP should request receipt from CDFW to show proof of payment for filing the NOD or equivalent approval. Please mail payment to address below made attention to the Cash Receipts Unit of the Accounting Services Branch.

If the project applicant presents a No Effect Determination signed by CDFW, also:

- Attach No Effect Determination to NOD *(no environmental filing fee is due)*.

Filing Notice of Exemption (NOE) (Statutorily or categorically exempt project (Cal. Code Regs., tit. 14, §§ 15260-15285, 15300-15333))

- Issue cash receipt to project applicant.
- Attach copy of cash receipt to NOE *(no environmental filing fee is due)*.

Within 30 days after the end of each month in which the environmental filing fees are collected, each county shall summarize and record the amount collected on the monthly State of California Form No. CA25 (TC31) and remit the amount collected to the State Treasurer. Identify the remittance on Form No. CA25 as "Environmental Document Filing Fees" per Fish and Game Code section 711.4.

The county clerk shall mail the following documents to CDFW on a monthly basis:

- ✓ A photocopy of the monthly State of California Form No. CA25 (TC31)
- ✓ CDFW/ASB copies of all cash receipts (including all voided receipts)
- ✓ A copy of all CDFW No Effect Determinations filed in lieu of fee payment
- ✓ A copy of all NODs filed with the county during the preceding month
- ✓ A list of the name, address and telephone number of all project applicants for which an NOD has been filed. If this information is contained on the cash receipt filed with CDFW under California Code of Regulations, title 14, section 753.5, subdivision (e)(6), no additional information is required.

DOCUMENT RETENTION

The county shall retain two copies of the cash receipt (for lead agency and county clerk) and a copy of all documents described above for at least 12 months.

RECEIPT NUMBER

- # The first two digits automatically populate by making the appropriate selection in the County/State Agency of Filing drop down menu.
- # The next eight digits automatically populate when a date is entered.
- # The last three digits correspond with the sequential order of issuance for each calendar year. For example, the first receipt number issued on January 1 should end in 001. If a county issued 252 receipts for the year ending on December 31, the last receipt number should end in 252. CDFW recommends that counties and state agencies 1) save a local copy of this form, and 2) track receipt numbers on a spreadsheet tabbed by month to ensure accuracy.

DO NOT COMBINE THE ENVIRONMENTAL FEES WITH THE STATE SHARE OF FISH AND WILDLIFE FEES.

Mail to:

California Department of Fish and Wildlife
 Accounting Services Branch
 P.O. Box 944209
 Sacramento, California 94244-2090



2022 CEQA Transmittal Memorandum

County of Santa Barbara - Clerk of the Board of Supervisors

105 E. Anapamu St. Room 407 • Santa Barbara • CA • 93101

(805) 568-2240

Complete this form when filing a Negative Declaration, Mitigated Negative Declaration, Environmental Impact Report or Notice of Exemption.

You will need to submit one original for posting plus one copy for the Department of Fish & Wildlife. A scanned copy including the date/time of posting will be emailed to the Lead Agency and Project Applicant. If you would like a return copy, please submit an extra copy along with a pre-addressed, stamped envelope.

Contact Person Cody Graybehl		Phone 805-925-0951 x 2552	
Lead Agency City of Santa Maria		Lead Agency Email cgraybehl@cityofsantamaria.org	
Project Title Ray Water Project			
Project Applicant Denise Duffy & Associates, Inc.	Email dstaines@ddaplanning.com	Phone 831-373-4341	
Project Applicant Address 947 Cass Street, Suite 5	City Monterey	State CA	Zip 93940

DOCUMENT BEING FILED:

- Environmental Impact Report (EIR)
 - 2022 Filing Fee\$3,539.25
 - Previously Paid (must attach receipt) \$0.00
 - No Effect Determination (must be attached)..... \$0.00

- Negative Declaration or Mitigated Negative Declaration
 - 2022 Filing Fee\$2,548.00
 - Previously Paid (must attach receipt) \$0.00
 - No Effect Determination (must be attached)..... \$0.00

- Notice of Exemption \$0.00

- County Administrative Handling Fee (required for all filings, effective 7/19/18) \$50.00

TOTAL: **\$ 2,598.00**

PAYMENT METHOD: ALL APPLICABLE FEES MUST BE PAID AT THE TIME OF FILING

- Cash
 - Credit Card
 - Check # 33621
 - Journal Entry # _____
- (in person only)

NOTICE OF DETERMINATION

To: Office of Planning and Research
P.O. Box 3044
Sacramento, CA 95812-3044

From: City of Santa Maria
Community Development Dept.
110 South Pine Street, #101
Santa Maria, CA 93458

Clerk of the Board
County of Santa Barbara
105 East Anapamu Street, Room 407
Santa Barbara, CA 93101

Lead Agency (if different from above):

Subject: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

Ray Water Company Project

Project Title and File Numbers

2022060195

State Clearinghouse Number (if applicable)

Dana Eady, Planning Manager

(805) 925-0959 Ext. 2444

Lead Agency Contact Person

Telephone Number

South of Mahoney Road at the E Street alignment, including properties with Assessor Parcel Numbers 111-030-005, -006, -007, -008, -009, -011, -012, -013 and 111-040-010

Project Location (include County)

The proposed project is a consolidation of Ray Water Company with the City of Santa Maria's water system. The primary project goal is to provide Ray Water Company residents with safe and reliable drinking water. The proposed project consists of a new water main, a new distribution line, and service connections. In total, these components include 4,860 linear feet (0.92 miles) of new pipelines.

Project Description

This is to advise that the City of Santa Maria as the Lead Agency has approved the above described project on October 4, 2022 and has made the following determinations regarding the above described project:

1. The project will [] will not [X] have a significant effect on the environment.
2. [] An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
[X] A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures were [X] were not [] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan was [X] was not [] adopted for this project.
5. A Statement of Overriding Considerations was [] was not [X] adopted for this project.
6. Findings were [X] were not [] made pursuant to the provisions of CEQA.

This is to certify that the negative declaration and record of project approval is available to the General Public at:

Community Development Department, 110 South Pine Street, #101, Santa Maria, CA 93458

Dana Eady
Signature

Planning manager
Title

10/25/22
Date

ATTACHMENT F



COUNTY OF SANTA BARBARA

X2159359

COB

Department

Date 11/1/22

Received from City of Santa Maria

In Payment of NOD and filing fee

two thousand five hundred ninety-eight and 00 Dollars \$ 2598.00
100

Received original of the above numbered receipt

CREDIT CARD	<input type="checkbox"/>
CASH	<input type="checkbox"/>
CHECK	<input checked="" type="checkbox"/>

Bank Mt
AUTHORIZED SIGNATURE

AC-147

SIGNATURE OF PAYOR

33621

Notice of Determination

Appendix D

To:

Office of Planning and Research
U.S. Mail: _____ *Street Address:* _____
 P.O. Box 3044 1400 Tenth St., Rm 113
 Sacramento, CA 95812-3044 Sacramento, CA 95814

County Clerk
 County of: _____
 Address: _____

From:

Public Agency: _____
 Address: _____

 Contact: _____
 Phone: _____

Lead Agency (if different from above): _____
 Address: _____

 Contact: _____
 Phone: _____

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): _____

Project Title: _____

Project Applicant: _____

Project Location (include county): _____

Project Description:

This is to advise that the _____ has approved the above
 (Lead Agency or Responsible Agency)

described project on _____ and has made the following determinations regarding the above
 (date)
 described project.

1. The project [will will not] have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
 A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [were were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [was was not] adopted for this project.
5. A statement of Overriding Considerations [was was not] adopted for this project.
6. Findings [were were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:

 Signature (Public Agency): MAPJ Title: _____

Date: _____ Date Received for filing at OPR: _____

LAFCO 23-xx

LAFCO 23-02 OUT-OF AGENCY SERVICE AGREEMENT (OASA)

AUTHORIZATION BY THE LOCAL AGENCY FORMATION COMISSION FOR THE
CITY OF SANTA MARIA TO PROVIDE OUT-OF-AGENCY SERVICES TO RAY
WATER COMPANY

(APNs 111-030-005 (3.01 acres), 111-030-006 (0.30 acres), 111-030-007 (0.20 acres), 111-030-008 (0.33 acres), 111-030-009 (0.43 acres), 111-030-011 (0.49 acres), 111-30-012 (0.25 acres), 111-030-013 (0.22 acres), 111-040-010 (1.40 acres))

WHEREAS, the City of Santa Maria and property owners of Ray Water Company have filed a proposal with the Executive Officer of the Santa Barbara Local Agency Formation Commission pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act (Section 56000 et seq. of the Government Code) for the City to provide services outside of its boundaries to approximately 6.6 acres located west on Betteravia Road, Santa Maria, CA 93456; and

WHEREAS, Government Code Section 56133 authorizes the Commission to approve such out of agency service agreements provided the subject area is within the sphere of influence, in this case the City has provided the commission with documentation of a threat to the health and safety of the public or the affected residents and is in anticipation of a later change of organization; and

WHEREAS, for purposes of the California Environmental Quality Act (“CEQA”), the City of Santa Maria is the lead agency for this project. The “project” is to provide potable water services from the City to the Ray Water Company users located along West Betteravia Road, in the unincorporated area of the County west of the City of Santa Maria. The City adopted a Mitigated Negative Declaration, indicating the connection would not result significant impacts since there will be no modification to the original development and no change in land use.

WHEREAS, Santa Barbara County Environmental Health Services (“EHS”) has determined that Ray Water Company’s water system has violated or is violating the California Safe Drinking Water Act because surveys indicate nitrate levels are exceeding the maximum allowable contaminant level. Pursuant to an EHS citation, Ray Water Company was required to submit a plan for correction to EHS. Ray Water Company plan of correction is to obtain potable drinking water from the City of Santa Maria.

WHEREAS, the proposed domestic water connection would not result in additional impacts since there will be no modification to the original development approval and no change in use. The domestic water connection would be provided solely to mitigate a threat to the health and safety of the public.

NOW, THEREFORE, BE IT RESOLVED, DETERMINED AND ORDERED by the Local Agency Formation Commission of Santa Barbara County as follows:

(1) The Commission is acting as the responsible agency for purposes of compliance with CEQA. The Commission has considered the Final Mitigated Negative Declaration prepared by the City of Santa Maria as Lead Agency under the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., for the Ray Water Company Consolidation Project SP2021-0008.

(2) The Commission finds the out-of-agency service request to be in the best interests of the affected area. The Commission finds that the new potable water service being provided responds to an existing threat to the health or safety of the public or residents of the affected territory. The City has provided documentation of the threat to public health by providing the documentation from EHS.

(3) The extension of services shall be subject to the following conditions:

a) The City's provision of water services shall be limited to Ray Water Company site of approximately 6.6 acres located at Right-of-Way, Betteravia Road, APNs 111-030-005 (3.01 acres), 111-030-006 (0.30 acres), 111-030-007 (0.20 acres), 111-030-008 (0.33 acres), 111-030-009 (0.43 acres), 111-030-011 (0.49 acres), 111-30-012 (0.25 acres), 111-030-013 (0.22 acres), 111-040-010 (1.40 acres), Santa Maria, CA 93456.

b) The property owners shall execute and record an agreement approved by the Executive Officer that consents to annexation of the territory, which agreement shall enure to and bind all successors in interest to the property.

c) Said out-of-agency service agreement is for potable water service only shall remain in effect until such time as an annexation is approved by the Commission.

(4) Said out-of-agency service agreement is hereby approved for water service only.

PASSED AND ADOPTED this day of April 6, 2023, in Santa Barbara, California by the following vote.

AYES:

NOES:

ABSTAINS:

Dated: _____

Chair
Santa Barbara Local Agency
Formation Commission

ATTEST

Natasha Carbajal, Clerk/Analyst
Santa Barbara Local Agency Formation Commission

Recording Requested By:

LAFCO

Santa Barbara Local Agency Formation Commission

Return via interoffice mail to:

LAFCO

105 East Anapamu Street Rm. 407
Santa Barbara CA 93101
805-568-3391 FAX 805-568-2249

LANDOWNER CONSENT TO ANNEXATION TO THE CITY OF SANTA MARIA
UNDER AN OUT-OF AGENCY SERVICE AGREEMENT (OASA)

Santa Barbara Local Agency Formation Commission (LAFCO)

April 7, 2023

**LAFCO FILE OASA No 23-02: THE CITY OF SANTA MARIA TO PROVIDE OUT-OF-
AGENCY WATER SERVICE TO RAY WATER COMPANY**

As landowner(s) of the property described below, I hereby consent to my/our property being included in the above referenced OASA.

Approval of this Out-of-Agency Service Agreement ("Agreement") is conditioned upon recordation of the landowner's consent and agreement to future annexation of the property subject to the Agreement to City of Santa Maria, which consent shall run with the land and be binding upon the heirs, executors, administrators and successors and assigns of landowner.

PROPERTY OWNER ADDRESS: 1800 W. Betteravia Road, Santa Maria. CA.93455

ASSESSORS PARCEL NO: 111-030-005

LANDOWNER(S): CAMPOS SALVADOR/ADA IRIS
1800 W BETTERAVIA RD D
SANTA MARIA CA 93455

Signature _____ Date _____

PROPERTY OWNER ADDRESS: 2207 Rayville Lane, Santa Maria. CA.93455

ASSESSORS PARCEL NO: 111-030-006

LANDOWNER(S): SILVEIRA FAMILY TRUST
4630 ORCUTT RD
SANTA MARIA CA 93455

Signature

Date

PROPERTY OWNER ADDRESS: 2215 Rayville Lane, Santa Maria. CA.93455

ASSESSORS PARCEL NO: 111-030-007

LANDOWNER(S): SILVEIRA FAMILY TRUST
4630 ORCUTT RD
SANTA MARIA CA 93455

Signature

Date

PROPERTY OWNER ADDRESS: 2244 Rayville Lane, Santa Maria. CA.93455

ASSESSORS PARCEL NO: 111-030-008

LANDOWNER(S): CORTES, ANARBOL
2244 RAYVILLE LN
SANTA MARIA CA 93455

Signature

Date

PROPERTY OWNER ADDRESS: 2266 Rayville Lane, Santa Maria. CA.93455

ASSESSORS PARCEL NO: 111-030-009

LANDOWNER(S): SAVOY FAMILY TRUST
156 HOBBS LN
SANTA MARIA CA 93455

Signature

Date

PROPERTY OWNER ADDRESS: 2275 Rayville Lane, Santa Maria. CA.93455

ASSESSORS PARCEL NO: 111-030-011

LANDOWNER(S): BARTLETT, RAY JR
2266 RAYVILLE LN
SANTA MARIA CA 93455

Signature

Date

PROPERTY OWNER ADDRESS: 2255 Rayville Lane, Santa Maria. CA.93455

ASSESSORS PARCEL NO: 111-030-012

LANDOWNER(S): WALKER, LLOYD M
835 COLUMBINE CT
SAN LUIS OBISPO CA 93401

Signature

Date

PROPERTY OWNER ADDRESS: 2249 Rayville Lane, Santa Maria. CA.93455

ASSESSORS PARCEL NO: 111-030-013

LANDOWNER(S): ROB GILBERTSON
1261 OAK KNOLL RD
SANTA MARIA CA 93455

Signature _____ Date _____

Please attach an Acknowledgement from a Notary for all signatures.