AGREEMENT FOR SHARING CONSULTANT COSTS FOR COMPLETION OF INITIAL LEAD AND COPPER RULE REVISIONS LEAD SERVICE LINE INVENTORY

This Agreement for Sharing Consultant Costs for Completion of Initial Lead and Copper Rule Revisions Lead Service Line Inventory ("Agreement") is made and entered into as of _____ by and between:

1. MWDOC
2. City of Garden Grove

(collectively "Participating Agencies" and individually "Participating Agency") and the Municipal Water District of Orange County ("MWDOC"). The Participating Agencies and MWDOC are also collectively referred to as "Parties."

RECITALS

WHEREAS, on January 15, 2021, the United States Environmental Protection Agency (US EPA) published revisions to the Lead and Copper Rule known as the Lead Copper Rule Revisions (LCRR); and

WHEREAS, under the LCRR, US EPA requires all community water systems to conduct a comprehensive inventory of both publicly owned and privately owned service line materials "regardless of ownership"; and

WHEREAS, 40 CFR §141.84(a)(8) requires water systems to identify any lead, galvanized steel pipe requiring replacement, or "lead status unknown" service lines and to make the inventory information publicly available and if a water system serves more than 50,000 people, their inventory must be provided online; and

WHEREAS, under the LCRR, each Participating Agency has the responsibility to prepare Initial Service Line Inventories (SLIs) by October 16, 2024; and

WHEREAS, the Participating Agencies are retail and wholesale agencies in Orange County that share infrastructure and are similarly situated with regard to legacy lead pipe material; and

WHEREAS, the Participating Agencies and MWDOC have a successful history of collaboration and cost sharing and now desire to coordinate in the preparation of their SLIs to obtain economies of scale and thereby reduce preparation time and costs for each of the Participating Agencies; and

WHEREAS, MWDOC and the Participating Agencies have jointly prepared and agreed to a Scope of Work that was incorporated into a Request for Proposals. In response, five consulting firms submitted proposals which were reviewed by a panel comprised of representatives of MWDOC and several Participating Agencies and which resulted in the selection of *Hazen and Sawyer* ("*Hazen"* or "Consultant") as the consultant to prepare SLIs for the Participating Agencies (the "Work"); and

WHEREAS, MWDOC and its staff are willing to coordinate this process, including the preparation and administration of a professional services agreement with the Consultant; and the administration of the cost sharing provisions of this Agreement;

NOW, THEREFORE, in consideration of the payment of money as set forth below and the mutual promises of the Parties hereto, it is agreed:

1. Engagement of Consultant and Administration of Consultant Agreement

1.1 MWDOC shall award a professional services agreement for the work identified in the Request for Proposals to Hazen ("Consultant Agreement"). MWDOC shall use its standard professional services agreement form for the Consultant Agreement, including any minor negotiated deviations approved by MWDOC General Manager and Legal Counsel, and require appropriate types and limits of insurance coverage and indemnification as required by this Agreement. Each CGL policy shall identify MWDOC, the Participating Agencies, and their directors, officers, agents, employees, attorneys, consultants and volunteers as additional insureds, or be endorsed to identify these parties as additional insureds using a form acceptable to MWDOC. The Consultant Agreement will require the Consultant's insurer(s) to waive all rights of subrogation against MWDOC, the Participating Agencies, and their directors, officers, agents, employees, attorneys, consultants and volunteers. The Consultant Agreement will further require the Consultant to indemnify, defend and hold harmless MWDOC, the Participating Agencies, and its elected officials, officers and employees, and each of them from and against all third party actions, proceedings, damages, costs, expenses, penalties or liabilities, in law or equity, of every kind or nature whatsoever, including reasonable legal fees and costs, arising out of, resulting from, or on account of Consultant's negligent acts or willful misconduct in the performance of the work under this agreement, provided, however, that Consultant's liability under this indemnity shall not apply to the extent of the contributory negligence of the MWDOC, the Participating Agencies, its employees and contractors. The Consultant Agreement will require Consultant to ensure that its sub-consultants, if any, provide similar insurance coverage.

1.2 MWDOC shall coordinate all aspects of the proposed work with the selected Consultant and communicate with each Participating Agency, and upon request of the Participating Agency, regarding the status and substance of completion and submission of the SLIs;

1.3 MWDOC shall make payments to the Consultant for progress payments as work proceeds.

1.4 Each Participating Agency shall, within a reasonable timeframe, provide all documents, information and assistance requested by the selected Consultant during the performance of the Consultant Agreement.

1.5 The Parties acknowledge that the US EPA may make changes to the Lead and Copper Rule Improvements after execution of this Agreement and agree to work cooperatively with the Consultant based upon how the rule changes may develop (see sections 2.1.2, 2.2.3, and 2.2.4.)

2. Cost Sharing by Participating Agencies

2.1 MWDOC shall:

2.1.1 Collect from each Participating Agency upon execution of this Agreement the 50% of the Participating Agency's proportionate share of the total cost of the Work as described in the Consultant's proposal, which is in Exhibit A, attached hereto and incorporated herein by this reference;

2.1.2 Inform each Participating Agency of any proposed contingency work or changes to level of effort assessments under the Consultant Agreement that would result in an increase in that Participating Agency's payment under this Agreement. MWDOC and the affected Participating Agency must both approve such work before MWDOC will notify Consultant to proceed with the work. Exhibit B includes each Participating Agency's base cost with elected items;

2.1.3 Be responsible for receiving consultant invoices and billing the Participating Agencies, in the second fiscal year (July and December 2024), for two progress payments in the amount of 25% for each Participating Agency's remaining proportionate share of the total cost of the Work as described in the Consultant's proposal and such related invoice, including additional amounts owed for any approved changes to level of effort assessments or contingency work under the Consultant Agreement;

2.1.4 Be responsible for making progress payments directly to Consultant from funds paid to MWDOC by Participating Agencies (see section 1.3);

2.1.5 Prepare a final accounting and either distribute any remaining funds collected from the Participating Agencies back to the Participating Agencies or issue a final bill to Participating Agencies where there are funds due;

2.1.6 Share information relative to adjustments in costs among Participating Agencies on a periodic basis if decisions to participate by the various Participating Agencies effect the cost of Work.

2.2 Each Participating Agency shall:

2.2.1 Pay to MWDOC upon execution of this Agreement [*50%]* of the Participating Agency's proportionate share of the total cost of the Work as described in the Consultant's proposal (Exhibit A);

2.2.2 Within 60 days of each progress payment invoice date, pay to MWDOC for the Participating Agency's remaining proportionate share of the total cost of the Work as described in such invoice in accordance with the Consultant's proposal and this Agreement;

2.2.3 Pay to MWDOC, upon approval, the full amount owed for the approved changes to level of effort assessments or contingency work under the Consultant Agreement. Each Participating Agency shall bear all costs associated with the work it approves, described within Exhibit A and B;

2.2.4 If Participating Agency requests or requires supplemental Work under the Consultant Agreement that was not included in the calculation of the total cost of the Work under this Agreement, pay to MWDOC, the full amount owed for the supplemental Work upon next progress payment;

2.2.5 If Participating Agency requests or requires Additional Services, as provided in Exhibit A, Participating Agency shall enter into a separate agreement with the Consultant for such work.

2.2.6 Acknowledge that as Participating Agencies decide to participate or not to participate , the cost sharing among the Participating Agencies may vary somewhat from agency to agency. Information relative to adjustments in costs among Participating Agencies shall be shared by MWDOC with the Participating Agencies on a periodic basis as decisions are being made by the various Participating Agencies.

3. Accounting

3.1 Upon request of any Participating Agency, MWDOC will provide copies of the selected Consultant's invoices and MWDOC's payment records.

4. Non-Appropriation of Funds

4.1 Payments to be made by a Participating Agency under Section 2.2 to MWDOC for any Work performed by the selected Consultant within the current fiscal year are within the current fiscal budget and within an available, unexhausted fund. In the event that a Participating Agency does not appropriate sufficient funds for payment of the selected Contractor's Work beyond the current fiscal year, this Agreement shall cover payment for such Work only to the conclusion of the last fiscal year in which the Participating Agency appropriates sufficient funds and shall automatically terminate at the conclusion of such fiscal year.

4.2 The Participating Agencies agree to use reasonable efforts to ensure appropriated funds are available and acknowledge that MWDOC is facilitating payment to the Consultant under this Agreement for benefit of and cost-savings for the Participating Agencies.

5. Independent Contractor

5.1 Any consultant engaged by MWDOC on behalf of the Participating Agencies as contemplated in this Agreement will not be a party to this Agreement and will not be an employee or agent of MWDOC or any of the Participating Agencies, either as a result of this Agreement or as a result of a professional services agreement between MWDOC and the Consultant. Any consultant engaged as contemplated in this Agreement will be an independent contractor to MWDOC.

6. Warranty, Indemnification and Defense

6.1 MWDOC shall use its best efforts in administering the Consultant Agreement, but makes no representations, guarantees or warranties to the Participating Agencies as to the quality or timeliness of work product provided by Consultant pursuant to the Consultant Agreement.

6.2 Subject to Section 6.1 and 6.3, the Participating Agencies, and each of them, shall indemnify MWDOC, its directors, officers, agents, employees, attorneys, and volunteers against, and will hold and save them harmless from, any and all actions, claims, penalties, obligations or liabilities, in law or in equity, of every kind or nature whatsoever, whether actual, alleged or threatened, that may be asserted or claimed by any person, firm, entity, corporation, political subdivision or other organization arising out of or in any manner directly or indirectly connected with the Consultant Agreement and/or any other work contemplated by this Agreement. Notwithstanding the preceding sentence, Participating Agencies shall not have any duty to defend, indemnify or save harmless MWDOC, its directors, officers, agents, employees, attorneys, and volunteers for any actions, claims, penalties, obligations or liabilities (a) to the extent arising out of, caused by or related to the negligent acts or omissions and/or willful misconduct of MWDOC in the performance of this Agreement and/or the Consultant Agreement; (b) to the extent arising out of, caused by or related to the negligent acts or omissions and/or willful misconduct of MWDOC's Consultant in the performance of the Consultant Agreement; or (c) for exemplary or punitive damages. Subject to these foregoing exclusions, in the event MWDOC, its directors, officers, agents, employees, attorneys, and volunteers are made a party to any action or proceeding filed in connection with a challenge to any work prepared pursuant to the Consultant Agreement and/or any other work contemplated in this Agreement, the Participating Agency whose work is challenged shall provide a complete defense to MWDOC, its directors, officers, agents, employees, attorneys, and volunteers and shall reimburse MWDOC for all costs and expenses incurred as a result of the action or proceeding, including reasonable attorney's fees.

6.3 As between Participating Agencies, any costs associated with the defense and indemnity obligations set forth in Sections 6.1 and 6.2 shall be the financial responsibility of each Participating Agency based on their proportionate share of fault, as determined by final arbitration or court decision or by the agreement of the Participating Agencies.

7. Notice

7.1 Any notice or communication required to be given under this Agreement shall be in writing and effective when deposited, first class postage prepaid with the United States Postal Service addressed to the contracting Parties as follows:

Notice to Parties	
1. MWDOC	Harvey De La Torre, Interim General Manager Municipal Water District of Orange County 18700 Ward St. P.O. Box 20895 Fountain Valley, CA 92728 With copy to: Charles Busslinger and Sarina Sriboonlue
2. City of Garden Grove	Authorized Signer's Name and Title City of Garden Grove 11222 Acacia Parkway Garden Grove, CA 92840

8. Jurisdiction and Venue

8.1 In all matters concerning the validity, interpretation, performance, or effect of this Agreement, the laws of the State of California shall govern and be applicable. The Parties hereby agree and consent to the exclusive jurisdiction of the courts of the State of California and that venue of any action brought hereunder shall be in Orange County, California.

9. Counterparts and Facsimile

9.1 This Agreement may be executed by the Parties in counterparts, which counterparts shall be construed together and have the same effect as if all the Parties had executed the same instrument. Counterpart signatures may be transmitted by facsimile, email, or other electronic means and have the same force and effect as if they were original signatures. All parties have participated in the drafting of this Agreement.

10. Severability

10.1 If any provision of this Agreement shall be held illegal, invalid, or unenforceable, in whole or in part, the legality, validity, and enforceability of the remaining provisions shall not be affected thereby.

11. Term

11.1 This Agreement shall commence upon the date of the earliest execution by any Participating Agency below and shall extend thereafter through the completion of all work product generated by the Consultant and delivered to MWDOC and to each Participating Agency. The scheduled completion date by the Consultant is October 16, 2024. MWDOC shall issue a Notice of Completion to all Participating Agencies upon close-out of the Consultant Agreement. Notwithstanding anything to the contrary in this Section 10, this Agreement may be terminated earlier by MWDOC in its discretion upon or after termination of the Consultant Agreement.

12. Entire Agreement

12.1 This Agreement contains the entire agreement of the Parties relating to the subject matter hereof; and the Parties have made no agreements, representations, or warranties, either written or oral, relating to the subject matter hereof that are not set forth herein. Except as provided herein, this Agreement may not be modified or altered without prior written approval from both parties.

IN WITNESS WHEREOF, the Parties have hereunto affixed their names as of the day and year thereinafter written, which shall be and is the effective date of This Agreement.

Execution of Agreement by the Parties	
MWDOC	Date: _____ By:_____ Harvey De La Torre, Interim General Manager Municipal Water District of Orange County Approved as to Form: Date:_____ By: _____ Joseph P. Byrne, Partner Best Best & Krieger LLP
[Participating Agency]	Date: _____ By:_____ Authorized Signer's name and title Approved as to Form: Date:_____ By: _____ Authorized Signer's name and title *[City Attorney/General Counsel]*

Exhibit A

STANDARD AGREEMENT FOR CONSULTANT SERVICES

This **AGREEMENT** for consulting services dated September 25, 2023, which includes all exhibits and attachments hereto, "**AGREEMENT**" is made on the last day executed below by and between **MUNICIPAL WATER DISTRICT OF ORANGE COUNTY**, hereinafter referred to as "**DISTRICT**," and, **Hazen and Sawyer** hereinafter referred to as "**CONSULTANT"** for **technical consulting services for the Lead and Copper Rule Revisions (LCRR) Service Line Inventories Project** hereinafter referred to as **"SERVICES."**[1] **DISTRICT** and **CONSULTANT** are also referred to collectively herein as the **"PARTIES"** and individually as **"PARTY"**. The **PARTIES** agree as follows:

I PURPOSE AND SCOPE OF WORK

A. Consulting Work

DISTRICT hereby contracts with **CONSULTANT** to provide general or special **SERVICES**, as more specifically set forth in **Exhibit "B"** attached hereto and incorporated herein, and in coordination with "PARTICIPATING AGENCIES", as more specifically set forth in **Exhibit "C"**[2]. Tasks other than those specifically described therein shall not be performed without prior written approval of **DISTRICT's** General Manager.

B. Independent Contractor

CONSULTANT is retained as an independent contractor for the sole purpose of rendering professional and/or special **SERVICES** described herein and is not an agent or employee of **DISTRICT**. **CONSULTANT** shall be solely responsible for the payment of all federal, state and local income tax, social security tax, Workers' Compensation insurance, state disability insurance, and any other taxes or insurance **CONSULTANT,** as an independent contractor, is responsible for paying under federal, state or local law. **CONSULTANT** is thus not eligible to receive workers' compensation, medical, indemnity or retirement benefits, including but not limited to enrollment in CalPERS. Unless, expressly provided herein, **CONSULTANT** is not eligible to receive overtime, vacation or sick pay. **CONSULTANT** shall not represent or otherwise hold out itself or any of its directors, officers, partners, employees, or agents to be an agent or employee of **DISTRICT**. **CONSULTANT** shall have the sole and absolute discretion in determining the methods, details and means of performing the **SERVICES** required by **DISTRICT**. **CONSULTANT** shall furnish, at his/her own expense, all labor, materials, equipment and transportation necessary for the successful completion of the **SERVICES** to be performed under this **AGREEMENT. DISTRICT** shall not have any right to direct the methods, details and means of the **SERVICES;** however, **CONSULTANT** must receive prior written approval from **DISTRICT** before using any sub-consultants for **SERVICES** under this **AGREEMENT**.

CONSULTANT represents and warrants that in the process of hiring **CONSULTANT's** employees who participate in the performance of **SERVICES**, **CONSULTANT** conducts such lawful screening of those employees (including, but not limited to, background checks and Megan's Law reviews) as are appropriate and standard for employees who provide **SERVICES** of the type contemplated by this Agreement.

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[1] Pursuant to Section 8002 of the District's Administrative Code, the District's "Ethics Policy" set forth at sections 7100-7111 of the Administrative Code is attached hereto as Exhibit "A" and incorporated herein by this reference.

[2] The PARTIES acknowledge that the list of PARTICIPATING AGENCIES as set forth in **Exhibit "C**" is subject to modification by addendum.

C. Changes in Scope of Work

If **DISTRICT** requires changes in the tasks or scope of work shown in **Exhibit "B"** or additional work not specified therein, **DISTRICT** shall prepare a written change order. If **CONSULTANT** believes work or materials are required outside the tasks or scope of work described in **Exhibit "B,"** it shall submit a written request for a change order to the **DISTRICT**. A change order must be approved and signed by the **PARTIES** before **CONSULTANT** performs any work outside the scope of work shown in **Exhibit "B."** **DISTRICT** shall have no responsibility to compensate **CONSULTANT** for such work without an approved and signed change order. Change orders shall specify the change in the budgeted amount for **SERVICES.**

II TERM

This **AGREEMENT** shall commence upon the date of its execution and shall extend thereafter for the period specified in **Exhibit "B"** or, if no time is specified, until terminated on thirty (30) days notice as provided herein.

III BUDGET, FEES, COSTS, BILLING, PAYMENT AND RECORDS

A. Budgeted Amount for Services

CONSULTANT is expected to complete all **SERVICES** within the Budgeted Amount set forth on **Exhibit "B."** The total compensation for the **SERVICES** to be performed under this **AGREEMENT** shall not exceed the Budgeted Amount unless modified as provided herein. Upon expending and invoicing the **DISTRICT 80%** of the Budgeted Amount, **CONSULTANT** shall prepare and provide to **DISTRICT** a "cost to complete" estimate for the remaining **SERVICES**. The **PARTIES** shall work together to complete the project within the agreed-upon Budgeted Amount, but the obligation to complete the **SERVICES** within the Budgeted Amount lies with the **CONSULTANT**.

B. Fees

Fees shall be billed per the terms and conditions and at the rates set forth on **Exhibit "B"** for the term of the **AGREEMENT.** Should the term of the **AGREEMENT** extend beyond the period for which the rates are effective, the rates specified in **Exhibit "B"** shall continue to apply unless and until modified by consent of the **PARTIES**.

C. Notification Clause

Formal notices, demands and communications to be given hereunder by either **PARTY** shall be made in writing and may be effected by personal delivery or by registered or certified mail, postage prepaid, return receipt requested and shall be deemed communicated as of the date of mailing. If the name or address of the person to whom notices, demands or communication shall be given changes, written notice of such change shall be given, in accordance with this section, within five(5) working days.

Notices shall be made as follows:

Municipal Water District of Orange County
Harvey De La Torre
Interim General Manager
18700 Ward Street, P.O. Box 20895
Fountain Valley, CA 92708

Hazen and Sawyer
Cindy Miller, PE
Program Director
7700 Irvine Center Drive #200
Irvine, CA 92618
949-557-8549

Nicole Blute, PhD, PE
Program Manager
7700 Irvine Center Drive, #200
Irvine, CA 92618
949-557-8549

D. **Billing and Payment**

CONSULTANT's fees shall be billed by the 25th day of the month for the previous month's activities. Invoices received by the 25th day of the month will be paid by **DISTRICT** by the end of the following month. Invoices shall reference the Purchase Order number from **DISTRICT**.

DISTRICT shall review and approve all invoices prior to payment. **CONSULTANT** agrees to submit additional supporting documentation to support the invoice if requested by **DISTRICT**. If **DISTRICT** does not approve an invoice, **DISTRICT** shall send a notice to **CONSULTANT** setting forth the reason(s) the invoice was not approved. **CONSULTANT** may re-invoice **DISTRICT** to cure the defects identified in the **DISTRICT** notice. The revised invoice will be treated as a new submittal. If **DISTRICT** contests all or any portion of an invoice, **DISTRICT** and **CONSULTANT** shall use their best efforts to resolve the contested portion of the invoice.

E. **Billing Records**

CONSULTANT shall keep records of all **SERVICES** and costs billed pursuant to this **AGREEMENT** for at least a period of seven (7) years and shall make them available for review and audit if requested by **DISTRICT**.

IV DOCUMENTS

All **MATERIALS** as defined in Paragraph XI below, related to **SERVICES** performed under this **AGREEMENT** shall be furnished to **DISTRICT** upon completion or termination of this **AGREEMENT**, or upon request by **DISTRICT**, and are the property of **DISTRICT**.

V TERMINATION

Each **PARTY** may terminate this **AGREEMENT** at any time upon thirty (30) days written notice to the other **PARTY**, except as provided otherwise in **Exhibit "B."** In the event of termination: (1) all work product prepared by or in custody of **CONSULTANT** shall be promptly delivered to **DISTRICT**; (2) **DISTRICT** shall pay **CONSULTANT** all payments for services performed and due under this **AGREEMENT** on the effective date of termination; (3) **CONSULTANT** shall promptly submit a final invoice to the **DISTRICT**, which shall include any and all non-cancelable obligations owed by **CONSULTANT** at the time of termination, (4) neither **PARTY** waives any claim of any nature whatsoever against the other for any breach of this **AGREEMENT**; and; (6) **DISTRICT** and **CONSULTANT** agree to exert their best efforts to expeditiously resolve any dispute between the **PARTIES**.

VI INSURANCE REQUIREMENTS

CONSULTANT shall obtain prior to commencing work and maintain in force and effect throughout the term of this **AGREEMENT**, all insurance set forth below.

A. Workers' Compensation Insurance

By his/her signature hereunder, **CONSULTANT** certifies that he/she is aware of the provisions of Section 3700 of the California Labor Code, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and that **CONSULTANT** will comply with such provisions before commencing the performance of the **SERVICES** under this **AGREEMENT**.

CONSULTANT and sub-consultant will keep workers' compensation insurance for their employees in effect during all work covered by this **AGREEMENT** in accordance with applicable law. An ACORD certificate of insurance or other certificate of insurance satisfactory to **DISTRICT**, evidencing such coverage must be provided (1) by **CONSULTANT** and (2) by sub-consultant's upon request by **DISTRICT**.

B. Professional Liability Insurance

CONSULTANT shall file with **DISTRICT**, before beginning professional **SERVICES**, an ACORD certificate of insurance, or any other certificate of insurance satisfactory to **DISTRICT**, evidencing professional liability coverage of not less than $1,000,000 per claim and $1,000,000 aggregate, requiring 30 days notice of cancellation (10 days for non-payment of premium) to **DISTRICT**.

Such coverage shall be placed with a carrier with an A.M. Best rating of no less than A: VII, or equivalent. The retroactive date (if any) of such insurance coverage shall be no later than the effective date of this **AGREEMENT**. In the event that the **CONSULTANT** employs sub-consultants as part of the **SERVICES** covered by this **AGREEMENT**, **CONSULTANT** shall be responsible for requiring and confirming that each sub-consultant meets the minimum insurance requirements specified herein.

C. **Other Insurance**

CONSULTANT will file with **DISTRICT**, before beginning professional **SERVICES**, ACORD certificates of insurance, or other certificates of insurance satisfactory to **DISTRICT**, evidencing general liability coverage of not less than $1,000,000 per occurrence for bodily injury, personal injury and property damage; automobile liability (owned, scheduled, non-owned or hired) of at least $1,000,000 for bodily injury and property damage each accident limit; workers' compensation (statutory limits) and employer's liability ($1,000,000) (if applicable); requiring 30 days (10 days for non payment of premium) notice of cancellation to **DISTRICT**. For the coverage required under this paragraph, the insurer(s) shall waive all rights of subrogation against **DISTRICT**, the **PARTICIPATING AGENCIES**, and its directors, officers, agents, employees, attorneys, consultants or volunteers. **CONSULTANT's** insurance coverage shall be primary insurance as respects **DISTRICT**, the **PARTICIPATING AGENCIES**, and its directors, officers, agents, employees, attorneys, consultants and volunteers for all liability arising out of the activities performed by or on behalf of the **CONSULTANT**. Any insurance pool coverage, or self-insurance maintained by **DISTRICT**, the **PARTICIPATING AGENCIES**, and its directors, officers, agents, employees, attorneys, consultants or volunteers shall be excess of the **CONSULTANT's** insurance and shall not contribute to it.

The general liability coverage shall give **DISTRICT**, the **PARTICIPATING AGENCIES**, and its directors, officers, agents, employees, attorneys, consultants and authorized volunteers additional insured status using ISO endorsement CG2010, CG2033, or equivalent. Coverage shall be placed with a carrier with an A.M. Best rating of no less than A: VII, or equivalents. In the event that the **CONSULTANT** employs sub-consultant as part of the work covered by the **AGREEMENT**, it shall be the **CONSULTANT's** responsibility to require and confirm that each sub-consultant meets the minimum insurance requirements specified herein.

D. **Expiration of Coverage**

If any of the required coverages expire during the term of the **AGREEMENT**, **CONSULTANT** shall deliver the renewal certificate(s) including the general liability additional insured endorsement to **DISTRICT** at least ten (10) days prior to the expiration date.

VII INDEMNIFICATION

CONSULTANT shall indemnify, defend and hold harmless **DISTRICT**, the **PARTICIPATING AGENCIES**, and its elected officials, officers and employees, and each of them from and against all third party actions, proceedings, damages, costs, expenses, penalties or liabilities, in law or equity, of every kind or nature whatsoever, including reasonable legal fees and costs, arising out of, resulting from, or on account of **CONSULTANT's** negligent acts or willful misconduct in the performance of the work under this agreement, provided, however, that **CONSULTANT's** liability under this indemnity shall not apply to the extent of the contributory negligence of the **DISTRICT**, the **PARTICIPATING AGENCIES**, its employees and contractors.

CONSULTANT's obligation to indemnify shall survive the termination or completion of this agreement for the full period of time allowed by law and shall not be restricted to insurance proceeds, if any, received by **DISTRICT**, the **PARTICIPATING AGENCIES**, or its directors, officers, employees, or authorized volunteers.

VIII FINANCIAL DISCLOSURE AND CONFLICTS OF INTEREST

Although **CONSULTANT** is retained as an independent contractor, **CONSULTANT** may still be required, under the California Political Reform Act and **DISTRICT's** Administrative Code, to file annual disclosure reports. **CONSULTANT** agrees to file such financial disclosure reports

upon request by **DISTRICT**. Further, **CONSULTANT** shall file the annual summary of gifts required by Section 7105 of the **DISTRICT's** Ethics Policy, attached hereto as **Exhibit "A."**

Failure to file financial disclosure reports upon request and failure to file the required gift summary are grounds for termination of this **AGREEMENT.** Any action by **CONSULTANT** that is inconsistent with **DISTRICT's** Ethic's Policy current at the time of the action is grounds for termination of this **AGREEMENT**. The Ethics Policy as of the date of this **AGREEMENT** is attached hereto as **Exhibit "A."**

IX PERMITS AND LICENSES

CONSULTANT shall procure and maintain all permits, licenses and other government-required certification necessary for the performance of its **SERVICES**, all at the sole cost of **CONSULTANT**. None of the items referenced in this section shall be reimbursable to **CONSULTANT** under the **AGREEMENT**. **CONSULTANT** shall comply with any and all applicable local, state, and federal regulations and statutes including Cal/OSHA requirements.

X LABOR AND MATERIALS

CONSULTANT shall furnish, at its own expense, all labor, materials, equipment, tools, transportation and other items or services necessary for the successful completion of the **SERVICES** to be performed under this **AGREEMENT**. **CONSULTANT** shall give its full attention and supervision to the fulfillment of the provisions of this **AGREEMENT** by its employees and sub-consultant and shall be responsible for the timely performance of the **SERVICES** required by this **AGREEMENT**. All compensation for **CONSULTANT's SERVICES** under this **AGREEMENT** shall be pursuant to **Exhibit "B"** to the **AGREEMENT**.

Only those **SERVICES,** materials, administrative, overhead and travel expenses specifically listed in **Exhibit "B"** will be charged and paid. No other costs will be paid. **CONSULTANT** agrees not to invoice **DISTRICT** for any administrative expenses, overhead or travel time in connection with the **SERVICES, unless agreed upon and listed in Exhibit "B"**.

XI CONFIDENTIALITY AND RESTRICTIONS ON DISCLOSURE

A. Confidential Nature of Materials

CONSULTANT understands that all documents, records, reports, data, or other materials (collectively **"MATERIALS"**) provided by **DISTRICT** and **PARTICIPATING AGENCIES** to **CONSULTANT** pursuant to the **AGREEMENT**, including but not limited to draft reports, final report(s) and all data, information, documents, graphic displays and other items that are not proprietary to **CONSULTANT** and that are utilized or produced by **CONSULTANT** pursuant to the **AGREEMENT** are to be considered confidential for all purposes.

B. No Disclosure of Confidential Materials

CONSULTANT shall be responsible for protecting the confidentiality and maintaining the security of **DISTRICT MATERIALS** and records in its possession. All **MATERIALS** shall be deemed confidential and shall remain the property of **DISTRICT** and **PARTICIPATING AGENCIES**. **CONSULTANT** understands the sensitive nature of the above and agrees that neither its officers, partners, employees, agents or sub-consultants will release, disseminate, or otherwise publish said reports or other such data, information, documents, graphic displays, or other materials except as provided herein or as authorized, in writing, by **DISTRICT's** representative and the **PARTICIPATING AGENCY's** representative. **CONSULTANT** agrees not to make use of such **MATERIALS** for any purpose not related to the performance of the **SERVICES** under the **AGREEMENT**. **CONSULTANT** shall not make written or oral disclosures thereof, other than as necessary for its performance of the **SERVICES** hereunder, without the

prior written approval of **DISTRICT** and the **PARTICIPATING AGENCY**. Disclosure of confidential **MATERIALS** shall not be made to any individual, agency, or organization except as provided for in the **AGREEMENT** or as provided for by law.

C. Protections to Ensure Control Over Materials

All confidential **MATERIALS** saved or stored by **CONSULTANT** in an electronic form shall be protected by adequate security measures to ensure that such confidential **MATERIALS** are safe from theft, loss, destruction, erasure, alteration, and any unauthorized viewing, duplication, or use. Such security measures shall include, but not be limited to, the use of current virus protection software, firewalls, data backup, passwords, and internet controls.

The provisions of this section survive the termination or completion of the **AGREEMENT**.

XII OWNERSHIP OF DOCUMENTS AND DISPLAYS

All original written or recorded data, documents, graphic displays, reports or other **MATERIALS** which contain information relating to **CONSULTANT's** performance hereunder and which are originated and prepared for **DISTRICT** and **PARTICIPATING AGENCIES** pursuant to the **AGREEMENT** are instruments of service and shall become the property of **DISTRICT** and **PARTICIPATING AGENCIES** upon completion or termination of the Project. **CONSULTANT** hereby assigns all of its right, title and interest therein to **DISTRICT** and **PARTICIPATING AGENCIES**, including but not limited to any copyright interest. In addition, **DISTRICT** and **PARTICIPATING AGENCIES** reserve the right to use, duplicate and disclose in whole, or in part, in any manner and for any purpose whatsoever all such data, documents, graphic displays, reports or other **MATERIALS** delivered to **DISTRICT** and **PARTICIPATING AGENCIES** pursuant to this **AGREEMENT** and to authorize others to do so. Reuse of documents by **DISTRICT** or others on extensions or modifications of this Project or on other sites or use by others on this Project, shall be at the user's sole risk, without liability to **CONSULTANT**.

To the extent that **CONSULTANT** utilizes any of its property (including, without limitation, any hardware or software of **CONSULTANT** or any proprietary or confidential information of **CONSULTANT** or any trade secrets of **CONSULTANT**) in performing **SERVICES** hereunder, such property shall remain the property of **CONSULTANT**, and **DISTRICT** and **PARTICIPATING AGENCIES** shall acquire no right or interest in such property.

CONSULTANT hereby assigns to **DISTRICT, PARTICIPATING AGENCIES** or its designee, for no additional consideration, all **CONSULTANT**'s intellectual property rights, including, but not limited to, copyrights, in all deliverables and other works prepared by the **CONSULTANT** under this agreement. **CONSULTANT** shall, and shall cause its employees and agents to, promptly sign and deliver any documents and take any actions that **DISTRICT, PARTICIPATING AGENCIES,** or its designee reasonably requests to establish and perfect the rights assigned to **DISTRICT, PARTICIPATING AGENCIES** or its designee under this provision.

XIII EQUAL OPPORTUNITY

DISTRICT is committed to a policy of equal opportunity for all and to providing a work environment that is free of unlawful discrimination and harassment. In keeping with this commitment, **DISTRICT** maintains a policy prohibiting unlawful discrimination and harassment in any form based on race, religious creed, color, national origin, ancestry, physical or mental disability, medical condition, pregnancy or childbirth, marital status, gender, sex, sexual orientation, veteran status or age by officials, employees and non-employees (vendors, contractors, etc.).

This policy applies to all employees, consultants and contractors of the **DISTRICT**. Appropriate corrective action will be taken against all offenders, up to and including immediate discharge or termination of this **AGREEMENT**. During, and in conjunction with, the performance of this **AGREEMENT**, **CONSULTANT** shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, marital status or national origin.

XIV INTEGRATION OF ALL OTHER AGREEMENTS

This **AGREEMENT**, including any Exhibits and Addenda, contains the entire understanding of the **PARTIES**, and there are no further or other agreements or understandings, written or oral, in effect between the **PARTIES** hereto relating to the subject matter hereof. Any prior understanding or agreement of the **PARTIES** shall not be binding unless expressly set forth herein and, except to the extent expressly provided for herein, no changes of this **AGREEMENT** may be made without the written consent of both **PARTIES**.

XV ELECTRONIC SIGNATURES

The Uniform Electronic Transactions Act, California Civil Code section 1633.1 et seq., authorizes **PARTIES** to conduct business electronically. In accordance with California Civil Code section 1633.5, **PARTIES** acknowledge, consent and agree that transactions subject to this **AGREEMENT** may be effectuated by electronic means through the use of electronic and/or digital signatures. For purposes of this section, an electronic signature means an electronic symbol or process logically associated with the intent to sign an electronic record pursuant to Civil Code section 1633(h). A digital signature, which is a type of electronic signature, means an electronic identifier, created by a computer, that is intended to have the same force and effect as the use of a manual signature under Government Code 16.5(d). An example of an electronic signature would be a JPG of a manual signature imposed onto this **AGREEMENT**, an example of a digital signature would be the use of DocuSign or similar provider that requires an encrypted key that certifies the authenticity of the signature.

This consent to conduct transactions by electronic means through the use of electronic and/or digital signatures extends to the execution of this **AGREEMENT** or any related contract or other document necessary for the performance of this **AGREEMENT** including, without limitation, any related offers, proposals, bids, amendments, change orders, task orders and notices.

XVI ATTORNEYS' FEES

In any action at law or in equity to enforce any of the provisions or rights under this **AGREEMENT**, the prevailing **PARTY** shall be entitled to recover from the unsuccessful **PARTY** all costs, expenses and reasonable attorney's fees incurred therein by the prevailing **PARTY** as determined by a court of competent jurisdiction.

XVII JURISDICTION AND VENUE SELECTION

In all matters concerning the validity, interpretation, performance, or effect of this **AGREEMENT**, the laws of the State of California shall govern and be applicable. The **PARTIES** hereby agree and consent to the exclusive jurisdiction of the courts of the State of California and that venue of any action brought hereunder shall be in Orange County, California.

IN WITNESS WHEREOF, the **PARTIES** have hereunto affixed their names as of the day and year thereinafter, which shall be and is the effective date of this **AGREEMENT**.

APPROVED BY:

DocuSigned by:
Harvey De La Torre
DB0E5C258E3B412...

10/13/2023 | 4:13 PM PDT
Date _____

CONSULTANT ACCEPTANCE:

DocuSigned by:
Cindy Miller
03F220E86DC5436...

10/17/2023 | 8:31 AM PDT
Date _____

DocuSigned by:
Nicole Blute
41ADFFA2D485458...

10/13/2023 | 3:10 PM PDT
Date _____

Harvey De La Torre
Interim General Manager
Municipal Water District of Orange County
18700 Ward Street,
P.O. Box 20895
Fountain Valley, CA 92708
(714) 963-3058

Cindy Miller, PE
Program Director
Hazen and Sawyer
7720 Irvine Center Drive, #200
Irvine, CA 92618
(949) 557-8549
Tax I.D. # 13-2904652

Nicole Blute, PhD, PE
Program Manager
Hazen and Sawyer
7720 Irvine Center Drive, #200
Irvine, CA 92618
(949) 557-8549

Internal Use Only:

Program No. _____

Line Item: _____

Funding Year: _____

Contract Amt.: _____

Purchase Order # _____

EXHIBIT "A"

ETHICS POLICY	§7100-§7110

§7100 PURPOSE

The policy of MWDOC is to maintain the highest standards of ethics from its Board members, officers and employees (all shall be referred to as employees for the purposes of this section). The proper operation of MWDOC requires decisions and policy to be made in the proper manner, that public office not be used for personal gain, and that all individuals associated with MWDOC remain impartial and responsible toward the public. Accordingly, all employees are expected to abide by the highest ethical standards and integrity when dealing on behalf of MWDOC with fellow Board members or employees, vendors, contractors, customers, and other members of the public.

§7101 RESPONSIBILITIES OF BOARD MEMBERS

Board members are obliged to uphold the Constitution of the United States and the Constitution of the State of California and shall comply with all applicable laws regulating Board member conduct, including conflicts of interest and financial disclosure laws. No Board member or officer shall grant any special consideration, treatment, or advantage to any person or group beyond that which is available to every other person or group in the same circumstances.

§7102 PROPER USE OF MWDOC PROPERTY AND RESOURCES

Except as specifically authorized, no employee shall use or remove or permit the use or removal of MWDOC property, including MWDOC vehicles, equipment, telephones, office supplies, and materials for personal convenience or profit. No employee shall require another MWDOC employee to perform services for the personal convenience or profit of another employee. Each employee must protect and properly use any MWDOC asset within his/her control, including information recorded on paper or in electronic form. Employees shall safeguard MWDOC property, equipment, monies, and assets against unauthorized use or removal, as well as from loss due to criminal act or breach of trust.

Employees are responsible for maintaining written records, including expense reports, in sufficient detail to reflect accurately and completely all transactions and expenditures made on MWDOC's behalf. Creating a document with misleading for false information is prohibited.

Motion - 1/17/96;

§7103 CONFLICT OF INTEREST

All MWDOC Directors, officers, and employees at every level shall comply with the requirements of Section 1090 of the California Government Code which prohibits such persons from being financially interested in any contract made by them in their official capacity, or by any body or board of which they are members, or from being a purchaser at any sale or a vendor at any purchase made by them in their official capacity.

All Directors and employees designated under MWDOC's Conflict of Interest Code ("designated employees") and employees required to report under Chapter 7, Article 2 of the Political Reform Act (Government Code Section 7300 et seq.) shall promptly and fully comply with all requirements thereof.

MWDOC employees who are not designated employees under MWDOC's Conflict of Interest Code shall refrain from participating in, making a recommendation, or otherwise attempting to influence MWDOC's selection of a contractor, consultant, product, or source of supply if the non-designated employee, or an immediate family member, has a direct or indirect financial interest in the outcome of the selection process. No employee shall use his/her position with MWDOC in any manner for the purpose of obtaining personal favors, advantages or benefits for him/herself or an immediate family member from a person or entity doing business or seeking to do business with MWDOC. Such favors, advantages, or benefits would include, but are not limited to: 1) offers of employment; 2) free or discounted goods or services; or 3) gifts.

§7104 GIFTS

No employee shall accept, directly or indirectly, any compensation, reward or gift from any source except from MWDOC, for any action related to the conduct of MWDOC business, except as set forth below:

1. Acceptance of food and refreshments of nominal value on infrequent occasions in the ordinary course of a breakfast, luncheon or dinner meeting or other meeting or on an inspection tour where the arrangements are consistent with the transaction of official business.*

2. Acceptance of transportation, lodging, meals or refreshments, in connection with attendance at widely attended gatherings sponsored by industrial, technical or professional organizations; or in connection with attendance at public ceremonies or similar activities financed by nongovernmental sources where the employee's participation on behalf of MWDOC is the result of an invitation addressed to him or her in his/her official capacity, and the transportation, lodging, meals or refreshment accepted is related to, and is in keeping with, his/her official participation.*

3. Acceptance of unsolicited advertising or promotional materials such as pens, pencils, note pads, calendars, or other items of nominal value.*

4. Acceptance of plaques and commemorative mementoes, of nominal value, or of value only to the recipient, such as service pins, recognition awards, retirement mementoes.

5. Acceptance of incidental transportation from a private organization, provided it is furnished in connection with an employee's official duties and is of the type customarily provided by the private organization.

* Nothing herein shall be deemed to relieve any Director or designated employee from reporting the value of such meals, transportation, lodging or gifts and abstaining from participation in any decision of MWDOC which could foreseeably have a material financial effect on the donor when the value of such gifts reaches the limits set forth in MWDOC's Conflict of Interest Code and the Political Reform Act.

In no event shall any employee accept gifts from any single source, the cumulative value of which exceeds the applicable gift limit under California law.

A gift or gratuity, the receipt of which is prohibited under this section, shall be returned to the donor. If return is not possible, the gift or gratuity shall be turned over to a public or charitable institution without being claimed as a charitable deduction and a report of such action, and the reasons why return was not feasible shall be made on MWDOC records. When possible, the donor also shall be informed of this action.

Motion - 1/17/96;

§7105 PERSONS OR COMPANIES REPORTING GIFTS

All persons and companies doing business with MWDOC, with the exception of public agencies, shall submit a summary, by January 31 of each calendar year, of all gifts claimed for internal vendor audits (including meals) made to, or on behalf of, employees or Directors of MWDOC, or their immediate family members, that have occurred in the normal course of business during the previous calendar year. Failure to provide this information to MWDOC may result in the termination of MWDOC business with that person or company.

Motion - 7/21/93; Motion - 8/18/93;

§7106 USE OF CONFIDENTIAL INFORMATION

Confidential information (i.e., information which is exempt from disclosure under the California Public Records Act) shall not be released to unauthorized persons unless the disclosure is approved by the Board, President of the Board, or General Manager. Employees are prohibited from using any confidential information for personal advantage or profit.

§7107 POLITICAL ACTIVITIES

During the course and scope of their employment employees are prohibited from engaging in campaign activities associated with MWDOC Director elections, MWDOC Director appointments, the appointment of MET Directors, or from attempting to influence changes to MWDOC Division boundaries, except where such activities are expressly required in the course of official duties. Employees are otherwise free to personally, endorse, advocate, contribute to, or otherwise support any political party, candidate, or cause they may choose; however, employees are prohibited from soliciting political funds or contributions at MWDOC facilities or during the course and scope of their duties for MWDOC. In any personal political activity an employee may be involved in, it shall be made clear that the employee is acting personally and not for MWDOC. These provisions are intended to protect employees against political assessments, coerced political activities, and to prevent political activities on the part of employees from interfering with MWDOC operations. Nothing in this section shall be interpreted or applied in a manner to unlawfully curtail the constitutional right to political activity of MWDOC employees.

Motion – 6/17/15

§7108 IMPROPER ACTIVITIES

Employees shall not interfere with the proper performance of the official duties of others, but are strongly encouraged to fulfill their own moral obligations to the public, MWDOC, and its member agencies by disclosing, to the extent not expressly prohibited by law, improper activities within their knowledge. No employee shall directly or indirectly use or attempt to use the authority or influence of his/her position for the purpose of intimidating, threatening, coercing, commanding, or influencing any person with the intent of interfering with that person's duty to disclose improper activity.

§7109 VIOLATION OF POLICY – STAFF AND STAFF OFFICERS

If an employee is reported to have violated MWDOC's Ethics Policy, the matter shall be referred to any of the following: (1) the General Manager; (2) Human Resources; (3) the Board of Directors; or (4) any member of the management staff, for investigation and consideration of any appropriate action warranted which may include employment action such as demotion, reduction in salary, or termination.

If a Board appointed officer (Secretary, Treasurer or General Manager) is reported to have violated MWDOC's Ethics Policy, the matter shall be referred to the Executive Committee for investigation

and consideration of any appropriate action. The Executive Committee may make a determination and present the issue to the full Board.

Motion - 1/17/96; 6/17/15

§7110 VIOLATION OF POLICY -- DIRECTORS

A perceived violation of this policy by a Director should be referred to the President of the Board or the full Board of Directors for investigation, and consideration of any appropriate action warranted. A violation of this policy may be addressed by the use of such remedies as are available by law to MWDOC, including, but not limited to: (a) adoption of a resolution expressing disapproval of the conduct of the Director who has violated this policy, (b) injunctive relief, or (c) referral of the violation to MWDOC Legal Counsel and/or the Grand Jury.

§7111 PERIODIC REVIEW OF ETHICS, CONFLICT OF INTEREST AND ADMINISTRATIVE GUIDELINES

Pursuant to the terms of Government Code Sections 53234 through 53235.2, each Director shall receive at least two hours of training in general ethics principles every two years. Pursuant to Government Code Section 53235(c), the curricula for ethics training must be approved by the Fair Political Practices Commission (FPPC) and the Attorney General. It is the general desire of the MWDOC Board to meet and review and/or receive a presentation that addresses principles relating to reporting guidelines on compensation, conflict of interest issues, and standards for rules of conduct during the first quarter of the year immediately following an election (every two years).

Each Director shall retain the certificate of completion from any ethics course in which he/she participates and shall provide a copy of such report to MWDOC. Such records shall be retained for five years from the date they are received.

M-12/21/05

Please note If using Consultant's proposal as Exhibit "B" please attach the proposal or complete the standard Exhibit "B" Form below, BOTH Parties must verify that all sections of this form are FULLY ADDRESSED and the appropriate Exhibit is attached and labeled accordingly

EXHIBIT "B"

SCOPE OF WORK, TERMS OF AGREEMENT AND TERMS AND CONDITIONS FOR BILLING

Company: Hazen and Sawyer
Name: Nicole Blute, Ph.D., P.E.
Address: 7700 Irvine Center Drive, #200
Irvine, CA 92618
Phone: 949-557-8549
Tax I.D. #13-2904652

1. Term – Commencement September 25, 2023Termination June 30, 2025

2. Fees/Rates to be billed - Lump Sum except for Task 11 (Hourly Rate). See pages 35-36 of July 26, 2023 Proposal and page 3 of September 13, 2023 Proposal attached.

3. Budgeted Amount – Compensation is "lump sum", not to exceed $2,948,000. **CONSULTANT's** fees shall be billed by the 25th day of the month for the previous month's activities. Invoices received by the 25th day of the month will be paid by **DISTRICT** by the end of the following month. Invoices shall reference the Purchase Order number from **DISTRICT**.

   Consultant shall prepare a breakdown of percent complete by task by Participating Agency to submit with each monthly invoice.

   Upon invoicing **DISTRICT** 80% of the contract amount, **CONSULTANT** shall prepare and provide to **DISTRICT** a "cost to complete" estimate for the remaining work.

4. Scope of Work/Services – Development of Lead and Copper Rule Revisions Service Line Inventories for Pariticipating Agencies.

5. Consultant Representative: Nicole Blute

MWDOC

Proposal for

Assistance with Completion and Submission of Lead and Copper Rule Revisions Service Line Inventories for a Number of Orange County Agencies

RFP ENG. 2023-01 | July 26, 2023

Hazen

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Hazen

July 26, 2023

Charles Busslinger, P.E.
Director of Engineering, District Engineer
Municipal Water District of Orange County
18700 Ward Street
Fountain Valley, CA 92708
cbusslinger@mwdoc.com

RE: Response to RFP for Professional Services for Assistance with Completion and Submission of Lead and Copper Rule Revisions Service Line Inventories for a Number of Orange County Agencies (RFP Eng. 2023-01)

Dear Mr. Busslinger and Members of the Selection Committee:

Hazen and Sawyer (Hazen) is pleased to submit this proposal in response to the above-referenced Request for Proposals (RFP). We understand the Municipal Water District of Orange County (MWDOC) and several Orange County (OC) Water Agencies are evaluating the advantages that a joint effort can afford each Water Agency in achieving compliance with the Lead and Copper Rule Revisions (LCRR). Building upon Hazen's diverse experience in providing LCRR compliance support for utilities nationwide, our response to the RFP was developed with a focus on delivering high-quality professional services that support a joint effort and provide the most cost-effective and time-efficient project execution. We also understand the level of technical assistance required for each Water Agency is likely to vary and will be agreed upon prior to commencement of the scope of work.

Our thorough review of the RFP and initial assessment of lead likelihood in Water Agencies' service areas (Section 2) guided the development of our Project Work Plan and informed the selection of an exceptional team of LCRR experts to assist Water Agencies at various levels. Hazen is committed to assisting MWDOC and partnering OC Water Agencies be successful in the implementation of their LCRR programs and be compliant with US EPA and Division of Drinking Water (DDW) regulatory requirements.

Selecting Hazen to assist MWDOC and partnering Water Agencies offers several benefits:

Nationally Recognized Experts in LCRR Assistance and Corrosion Control. Our proposed LCRR Program Manager, **Nicole Blute, PhD, PE,** is an expert in corrosion control and has most recently been the PM for LADWP's LCRR efforts. Hazen's Technical Advisor **Becki Rosenfeldt, PE,** is a nationally recognized expert in LCRR compliance programs and a trusted advisor to more than 40 municipalities and regulatory agencies. Nicole and Becki have been working with the California State Water Resources Control Board's DDW leadership to share strategies from other states and propose alternative verification methods. Hazen offers a deep bench of national LCRR leaders who have been at the forefront of LCRR compliance programs for large water utilities across the United States, including **Cayla Cook, PE,** and **Roger Arnold, PE,** who will provide additional experiences for compliance.

Our team's experience in developing and delivering LCRR compliance programs since before the LCRR's promulgation has allowed us to optimize our tools, processes, and methods so we can deliver projects to our clients in a highly efficient and functional way.

1014-612

Simplified Functionality for Today with Growth Capacity for Tomorrow. Given the need to keep the Service Line Inventory (SLI) updated well into the future, Hazen has developed a series of modules that can be added to the basic framework for seamless, integrated management overtime. This method allows for a phased approach to meet the financial, technical, and resource needs of the agencies we support. Moreover, the inventory's added geoprocessing functionality provides auto updating to allow the utilities to continue to efficiently conduct annual inventory updates if lead status is unknown, galvanized requiring replacement (GRR), or Lead Service Lines (LSLs) remain following the October 16, 2024, submission deadline.

Familiar, Non-Proprietary Tools. While Hazen is on the cutting edge of technological advances concerning LCRR compliance, our approach relies upon off-the-shelf, non-proprietary software to the extent possible. This approach maximizes the usability and adaptability of the tools we develop for our clients and ensures minimal start-up time and cost as well as training time for OC Water Agency staff.

Using standard tools within ESRI ArcGIS, we have developed a non-proprietary model used to classify the lead, non-lead, GRR, and unknown status of service lines with a high degree of accuracy.

Effective Project Management for Simultaneous Agency LCRR Compliance. Hazen has developed effective strategies for programs similar to the proposed MWDOC and OC Water Agencies partnership, in which multiple agencies' LCRR actions are conducted simultaneously for efficiencies. Our team is implementing more than 200 LCRR Compliance Programs for small systems in New Hampshire, and all of the small systems serving less than 10,000 customers for utilities in Arizona. Both of these projects are being implemented under a single management entity to achieve LCRR compliance in the most efficient manner. The Hazen team brings to MWDOC strategies found to be effective for this framework, such as pooling adjacent small systems to provide a larger number of samples that supports a more rigorous statistical analysis (and results in an overall fewer number of field verification sites required for individual agencies).

We confirm our ability, considering current and planned workload, to complete the SLI for each participating Water Agency on time for the following milestones:

- Notice to Proceed on October 30, 2023, and
- SLI completion and submission to the State (DDW) and/or before October 1, 2024.

We also confirm our willingness to accept the terms and conditions of the provided Professional Service Agreement (Proposal – Appendix C) with the proposed modifications (subject to negotiation with MWDOC, provided as Appendix B to this proposal), and personal or organizational conflicts of interest prohibited by law do not exist.

We trust that our proposal meets with your approval. If you have any questions or require additional information, please contact me directly at (714) 814-4909 or Nicole Blute at (310) 266-6212. We look forward to working with you on this important project.

Very truly yours,

Cindy Miller, PE
Program Director

Nicole Blute, PhD, PE
Program Manager

1014-612

Section 1

Project Team

Section No. 1

Project Team

Hazen's team brings to MWDOC and partnering OC Water Agencies the expertise and demonstrable experience working on similar projects whereby multiple water agencies join efforts, benefiting from the cost and time savings this presents, whilst still addressing the unique needs of each agency.

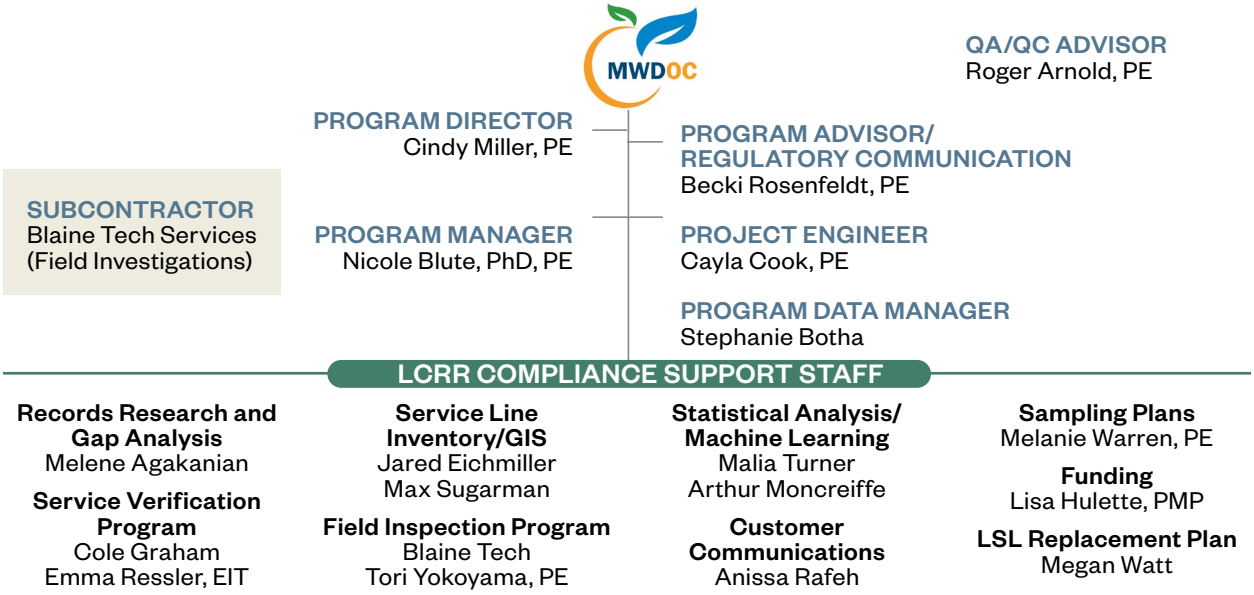
In this section, Hazen presents our exceptional team of highly skilled LCRR experts, respected for their technical knowledge in the field. Key team members, such as Becki Rosenfeldt, PE, have experience working on more than 35 LCRR projects, and most recently a project in New Hampshire, with a very similar scope and partnering strategy. She also provides LCRR guidance to regulatory agencies, including DDW. Similarly, Cayla Cook, PE, Hazen's selected project engineer for the proposed project, has been instrumental in the success of more than a dozen LCRR projects that included LSLI development for water systems in California and Arizona. Our proposed Project Manager (PM), Dr. Nicole Blute, PE, is a very experienced and hands-on PM, most recently leading LADWP's LCRR compliance project. She also has over 20 years' lead and copper rule and corrosion control experience. They are backed by a deep bench of LCRR experts who have worked side-by-side on more than 50 LCRR-related projects and programs throughout the US, including California.

A short biography for each key project member is provided below, and tailored resumes presenting relevant experience for the proposed project, for all selected project team members, are provided in Appendix A.

Members of the proposed Hazen team were selected by matching their skills and experience to the requirements of the RFP to provide efficient, cost-effective solutions to assist MWDOC and partnering OC Water Agencies in the successful submission of their respective LSLIs in the DDW Inventory Template by the October 2024 deadline.

Subconsultants

Joining the Hazen team will be Blaine Tech Services, an environmental field services contractor who will perform the field inspections to supplement agency staff in investigations of service line materials. Blaine Tech has been in operation since 1985 and has qualified personnel and equipment for conducting and/or supporting field-related services



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Key Team Members

Our team of experienced local professionals and national experts will require minimal oversight from MWDOC and partnering OC Water Agency staff unless desired. Our proven record of delivering LCRR projects in California and around the country will give you confidence in a smooth and successful project delivery.

CINDY MILLER, PE — PROGRAM DIRECTOR

Cindy is an accomplished program director, manager, and technical lead on a wide range of water projects. Cindy's broad project experience has exposed her to all phases of project planning, design, program management, and implementation of programs. This unique and diverse experience enhances her ability to work effectively with project teams, utility managers and staff, and the public. Cindy has worked for MWDOC and many of the partnering OC Water Agencies over the course of her more than 30-year career.

BENEFIT: Cindy will ensure MWDOC and the partnering OC Water Agencies' satisfaction with the Hazen team.

NICOLE BLUTE, PHD, PE — PROGRAM MANAGER

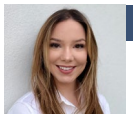
Nicole serves as Hazen's Director of Drinking Water Process Technologies and has extensive LCRR and corrosion control experience working with utilities throughout the Western United States. She has over 25 years of experience with distribution system water quality. She specializes in drinking water quality and system planning for water agencies and leads complex programs involving multiple agencies, facilities, and stakeholdders Nicole is experienced in working closely with DDW to propose and interpret regulatory direction.

BENEFIT: Nicole will draw upon her experience as a highly effective program manager and her knowledge of the LCRR requirements to deliver the program to MWDOC on schedule and budget.

BECKI ROSENFELDT, PE — PROGRAM ADVISOR/REGULATORY COMMS.

Becki has extensive experience guiding many of Hazen's clients to LCRR compliance. She serves as a Program Manager, QA/QC advisor, and various technical expert roles for the development of LSLIs including the development of alternative material verification methods such as statistical interpolation and machine learning models. Her nationally recognized expertise includes providing guidance to regulatory agencies, including DDW. Nationwide, Becki is assisting utilities with developing comprehensive LCRR compliance programs including service line inventories, replacement and sampling plans, and customer communication.

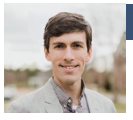
BENEFIT: Beki will leverage her experience delivering over 35 previous LCRR projects to serve as the program advisor for MWDOC.



CAYLA COOK, PE — PROJECT ENGINEER

Cayla has served as the Project Engineer, Task Manager, and Assistant Project Manager on several key LCRR efforts including LSLIs within California and Arizona, lending to a robust background and knowledge of the unique challenges utilities face associated with the LCRR. She has successfully completed multiple similar efforts and is ready to hit the ground running.

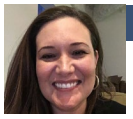
BENEFIT: Cayla will provide assistance in leading the team on the technical aspects of the LCRR and organizing simultaneous completion of LCRR compliance for multiple agencies.



ROGER ARNOLD, PE — QA/QC ADVISOR

Roger serves as a nationally recognized corrosion control expert who has helped utilities across the country optimize corrosion control and LCRR compliance. He provides technical oversight for LCRR projects nationwide and is perfectly situated to serve as the QA/QC Advisor for the project. His technical experience has focused on applying field testing, scale analysis, and pipe loop testing to solve corrosion control challenges.

BENEFIT: Roger's experience in overseeing several LCRR project nationwide will ensure the scope of work will be executed efficiently and of exceptional quality.



STEPHANIE BOTHA — PROGRAM DATA MANAGER

Stephanie brings to MWDOC and partnering OC Water Agencies extensive experience in data management and visualization techniques. She has worked with LADWP over the past 7 years to develop, implement and manage databases - supporting department decision-making and DDW permitting & compliance. Stephanie will lead the GIS and database teams.

BENEFIT: Stephanie expertise will ensure LSLI databases of utmost use to the Member Agencies and visualization of data provides clear understanding and communication.

1014-612

Maintaining Continuity and Availability of Key Staff

As Project Manager, Nicole Blute will implement Hazen standard procedures for developing, forecasting, and managing the staffing plan for this project. The importance of staff availability and continuity on the Project is well understood. Key procedural elements are as follows:

At project inception, Nicole will develop a project work plan that includes the selected project staff and their forecasted workload for the duration of the engagement.

Weekly internal workload meetings to communicate short-term project delivery activities and staffing needs.

All Hazen project managers update long-term staffing plans on a monthly basis to review workload and availability.

Should staffing issues arise, Nicole will work with Cindy Miller (Program Director) to develop solutions to meet project expectations.

We have already created a draft work plan for this project to assist in estimating the availability and commitment of our team members to provide continuity and efficiencies.

Specific Team Experience Relevant to LCRR Projects

	Percentage Time Each Member Will Contribute to the Project	Record and Code Review	SLI Database	Alternative Material Verification Methods	DDW Applications	Data Analysis	Customer Communications	Self-Verifications	LSL Replacement Plan	Manage Field Testing	Funding
Nicole Blute	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Becki Rosenfeldt	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cayla Cook	20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Roger Arnold	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Stephanie Botha	15		✓		✓	✓				✓	
Melene Agakanian	10	✓				✓				✓	
Cole Graham	10	✓	✓	✓		✓	✓	✓		✓	
Emma Ressler	10	✓	✓	✓		✓	✓	✓		✓	
Jared Eichmiller	20		✓	✓		✓			✓		
Max Sugarman	20		✓			✓					
Tori Yokoyama	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Malia Turner	10		✓	✓		✓					
Arthur Montcrieffe	15	✓	✓	✓		✓			✓		
Anissa Rafeh	10						✓				
Megan Watt	25	✓	✓	✓	✓	✓	✓		✓		✓
Melanie Warren	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lisa Hulette	10				✓						✓

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Section 2

Project Understanding and Work Plan

Section No. 2

Project Understanding and Work Plan

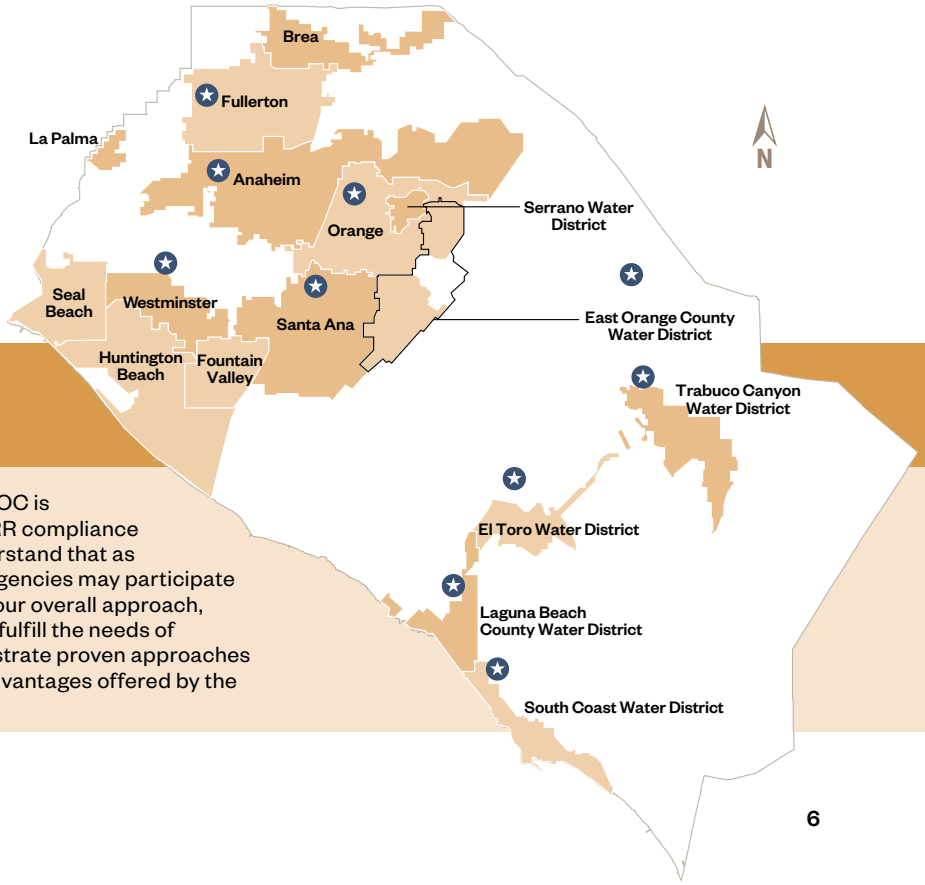
Our approach was developed with a focus on delivering superior professional services that support a collaborative effort between MWDOC and partnering OC Water Agencies. By leveraging the economies of scale for this joint effort, our work plan provides a cost-effective and time-efficient project execution.

Project Understanding

Hazen understands the objective of this joint effort between MWDOC and participating Water Agencies is an efficient completion and submission of US EPA Lead and Copper Rule Revisions (LCRR) Service Line Inventories (SLIs) to DDW by the October 2024 deadline. The work plan assumes between 8 and 15 agencies will participate and offers options for providing various levels of assistance in the completion of remaining compliance deliverables. In developing our approach, we considered three levels of assistance per the requirements of the RFP, i.e., Low Level of Effort (LLOE), Medium Level of Effort (MLOE), and High Level of Effort (HLOE), for the menu of services presented in Appendix A of the RFP. We understand that this approach allows individual agencies to choose the tasks and a level of support they require, but still benefit from the proposed joint effort. We also understand that the number of service connections per agency varies greatly, from 1,204 connections in East Orange County Water District's service area, to 64,166 for the City of Anaheim, hence our approach is scalable to address such variation.

Hazen has already begun the process of evaluating MWDOC Water Agencies' water distribution systems as presented in the next pages. We will collaborate closely with MWDOC and Water Agency staff, and our local partner, Blaine Tech Services, to accelerate our understanding of location specific details to maintain the project schedule.

Members of the Hazen team have experience with Water Agencies



Potential Partnering OC Water Agencies

In a joint effort to save cost and time, MWDOC is administering the approach to achieve LCRR compliance by the October 16, 2024 deadline. We understand that as few as eight and as many as 15 OC Water Agencies may participate in the project. In this proposal, we provide our overall approach, and when applicable, describe how we can fulfill the needs of individual Water Agencies. We also demonstrate proven approaches to accomplish compliance goals and the advantages offered by the Hazen team.

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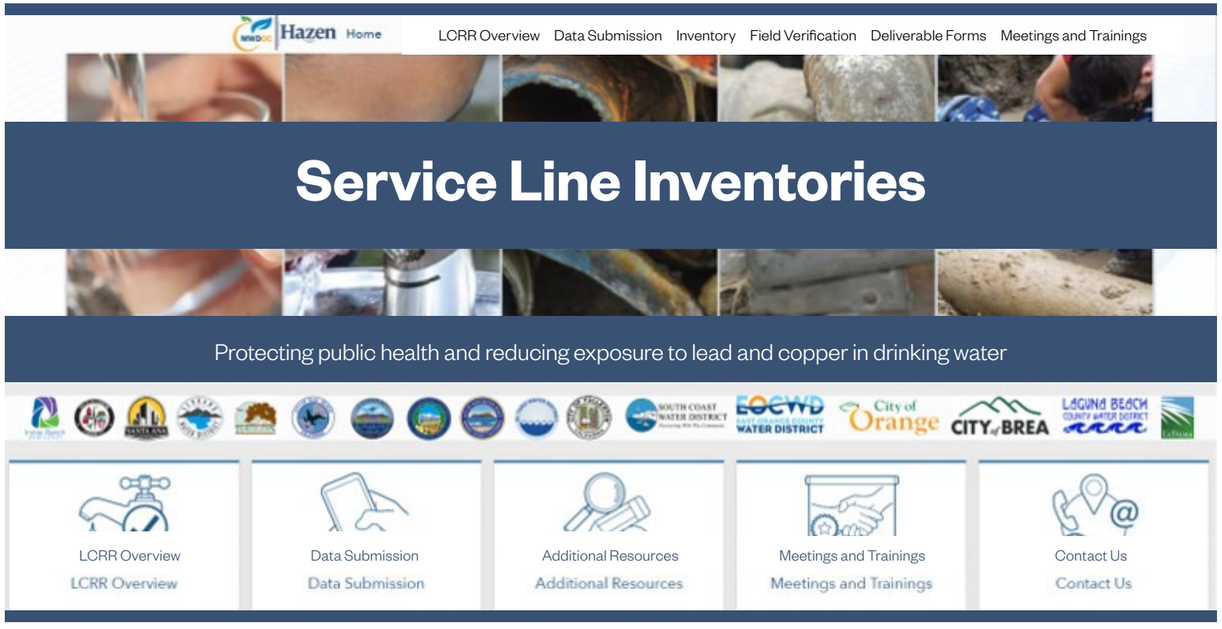
Overview of Hazen's Proposed Management Approach

Our overall approach to assist MWDOC and partnering OC Water Agencies to comply with LCRR requirements pivots on a proven collective strategy. Centralized project tools will be utilized to streamline tasks and reduce unnecessary duplication of efforts, thereby saving time and cost.

Proposed centralized tools included in Hazen's approach consist of the development of an OC LCRR Water Agency Partnership Website and Service Line Inventory Hub.

OC LCRR Water Agency Partnership Website:

The partnership website will provide a centralized location of resource material including training documents and videos. The website is also a location for the participating agencies to upload data, access their inventory, and track development of compliance deliverables.



Hazen has had great success and client(s) satisfaction utilizing centralized tools where projects include a number of water agencies teaming to achieve LCRR compliance. For example: Hazen is implementing LCRR Compliance Programs for more than 200 small and medium systems in New Hampshire under a single management entity (i.e., New Hampshire Department of Environmental Services).

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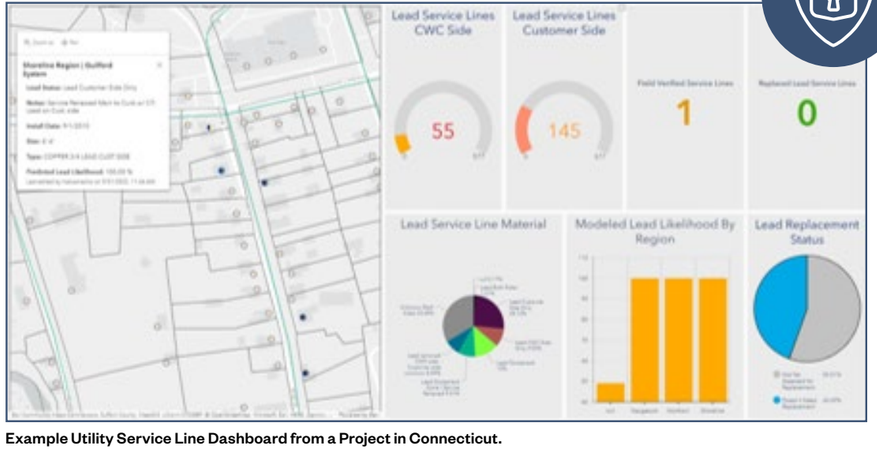
OC LCRR Service Line Inventory Hub:

- Creation of a central database or Hub will function as a single source of truth to simplify data management, streamline inventory reporting, and provide an integrated tool to manage the SLI across multiple water systems. For security reasons, each Water Agency will be provided with a different view of the inventory filtered to their system, creating individual access points for each of the partnering Water Agencies.

Utility Partnership Access to Customized LCRR Training Materials:

Team Member Roger Arnold leading a training on sequential sampling to support LCRR compliance programs.

Secure Access to Individual Utility Compliance Deliverables:



Example Utility Service Line Dashboard from a Project in Connecticut.

Work Plan Outline

Phased Approach to LCRR Compliance

As outlined below, Hazen's proposes a phased approach to assist MWDOC and partnering OC Water Agencies to successfully complete and submit their individual SLI and remaining compliance deliverables to DDW prior to the October 2024 deadline.

CONTINUOUS TASK

- **RFP Task 1:** Project Administration and Progress Reporting
- **RFP Additional Task 4:** Hazen Recommended Additional Task: LCRR Funding Assessment / Application

PHASE 1 Building a Service Line Inventory

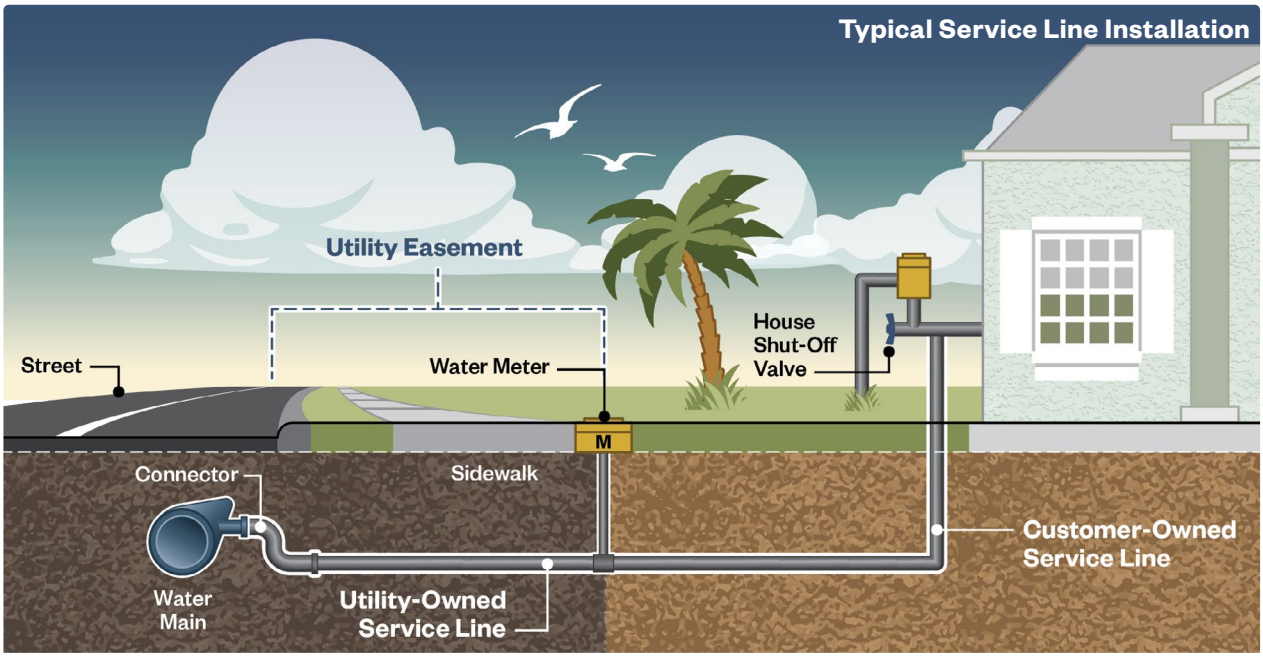
- **RFP Task 2:** Assist with Data Gathering, Records & Historical Code Review
- **RFP Task 3:** Develop LSLI Database and Initial Inventory
- **RFP Task 4:** Develop a DDW Approved Approach for Alternative Material Verification Methods
- **RFP Task 5:** Apply DDW Approved Alternative Verification Methods
- **RFP Task 6:** Assistance with Data Analysis
- **RFP Additional Task 1:** Integrate Service Line Inventory into Agency Asset Management System

PHASE 2 LSL Occurence Analysis

- **RFP Task 7:** Customer Communication
- **RFP Task 8:** Develop and Implement Private Property Owner Self-Verification
- **RFP Task 10:** Manage (Field) Inspections/Test Pitting/Meter Inspections
- **RFP Task 11:** Provide Field Inspection Personnel to Assist with Physical Visual Verification

PHASE 3 Sampling & Service Line Replacement Plan Development

- **RFP Additional Task 2:** School/Childcare Facility Sample Site Selection and SOP
- **RFP Additional Task 3:** Compliance Site Selection and SOP
- **RFP Task 9:** Develop Lead Service Line Replacement Plan
- **RFP Task 12:** Population of DDW Inventory Template and Service Line Inventory Submission



Typical service line configuration for utilities in California. This can be modified to fit each Agency's unique service line installation design.

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CONTINUOUS TASK

Task 1

Project Administration and Progress Reporting

To best serve MWDOC and partnering OC Water Agencies, Hazen considers Task 1 a continuous project task, and in accordance with the RFP, this task comprises the following key components (1) project communications, (2) meetings, (3) data collection and management, and (4) invoicing and administration. In addition to these subtasks, Hazen recommends participating OC Water Agencies consider applying for funding to support LCRR compliance activities as described in the section titled: Task 4-S Hazen Recommended Additional Task: LCRR Funding Assessment/Application/Implementation.

Proactive Communication and Meetings

On a regulatory compliance project with an expedited schedule, clear communication is key for project success. We will employ a streamlined approach to effectively communicate with MWDOC, individual OC Water Agencies, and, as needed, the public.

As described in the overall approach section, Hazen proposes to create a project website to provide MWDOC and partnering OC Water Agencies with a centralized location to access information resources, project schedule, recorded meetings and minutes, and training materials (including videos). The website will also be the location for individual Water Agencies to securely access their view of the inventory and a platform for directly uploading data files. Henceforth, the website will be referred to as the "OC LCRR Water Agencies Partnership" website.

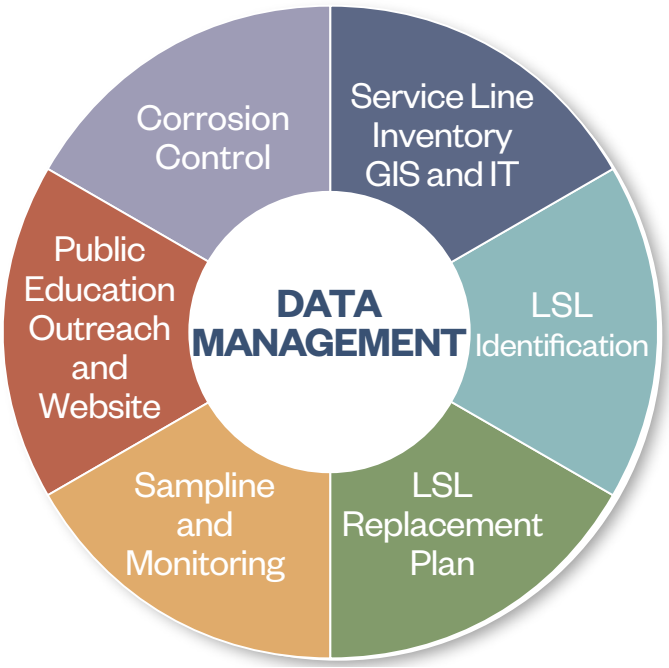
Hazen proposes to manage broad communication by utilizing the abovementioned website. Both collective meetings and meetings with individual OC Water Agencies will be held throughout the duration of the project. Meetings proposed include:

- Collective Meetings:
  - Kick-off meeting
  - Progress meetings
- Individual Agency Meetings:
  - Meeting to agree the level of effort
  - Institutional knowledge transfer meeting
  - Final preparation meeting (prior to inventory submission to DDW)

Data Collection and Management

Creating a sensible and reliable data management approach is critical to increased confidence in the SLI results. Each step of the process must follow defensible and straightforward methods that will ultimately support each participating OC Water Agency to compliance with US EPA and DDW SLI requirements.

To meet this objective, Hazen's proposes a data management approach includes the following (next page):



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Our approach to data management will leverage existing tools and datasets to provide easy integration into Water Agency digital infrastructure.

Use of Commercial Off-The-Shelf (COTS) Software.

Hazen will depend on commercial off-the-shelf (COTS) Esri software and cloud infrastructure for data management. This approach provides flexibility in the customization of data and applications while providing security through established authentication protocols and best practices provided by Esri.

Leveraging Existing Tools and Datasets.

Hazen will work with the participating OC Water Agencies to leverage internal resources, existing tools, datasets, and expand existing GIS feature classes to meet US EPA and DDW SLI requirements.

Customization Based on Individual Agency Needs.

Hazen will determine hosting and development based on each agency's requirements. A gap analysis will determine data needs for each utility to achieve LCRR compliance and population of DDW template.

Automation through Python.

Hazen proposes to use Python scripting, a highly reliable and robust open-source programming language (i.e., non-proprietary), within ArcGIS software to automate the following:

- Generation of LCRR templates and summary reports (consistent with DDW formats).
- Generation of service line material update and service line replacement update reports for submission to DDW.
- Generation of status emails and required customer notification reports.
- Likelihood analysis or machine learning analysis results.
- Data backups.

Python is scalable across multiple systems, simplifies revisions and document creation re-runs, keeps record, and is repeatable.

Hazen will utilize familiar, non-proprietary software and standard tools, such Esri ArcGIS, to develop a custom SLI for each partnering OC Water Agency.

Invoicing and Administration

Hazen will provide project management services throughout the project, including preparation of invoices (in MWDOC approved format) and progress reports to detail project progress for internal agency and public uses. Hazen's culture of highly technical services encompasses not only technical areas of projects, but also provides effective management of the scope, schedule, and budget. We utilize our custom-built Power BI Project Management Dashboards to track and manage all project financials.

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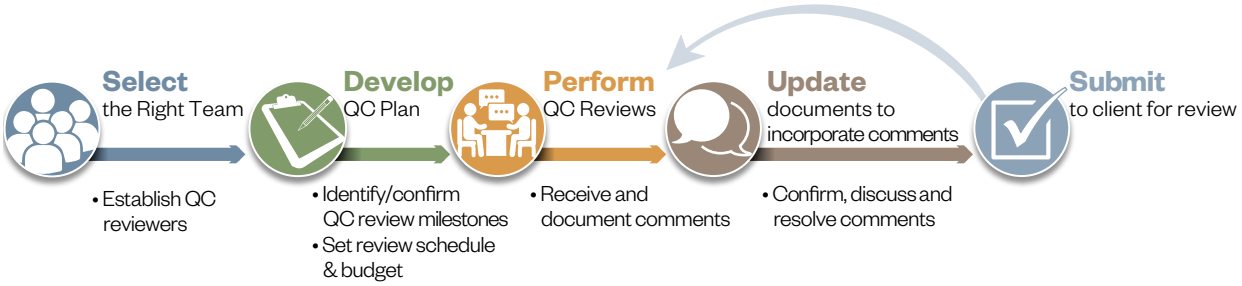
Quality Control

Quality Assurance and Quality Control (QA/QC) is part of our culture at Hazen and is integral to successful project management. Our Program Manager, **Nicole Blute**, provides strong technical leadership and focuses on quality at each level and project stage, including formal QC reviews. Our overall QA/QC process is depicted below.



Deliverables

- Data request
- Project meeting agendas and minutes:
  - Meeting types: kick-off, level of effort agreement, progress, institutional knowledge transfer, final SLI preparation
- OC LCRR Water Agencies Partnership website
- SLI training documents and videos
- Monthly invoices in format agreed with MWDOC

Assumptions

- The contract will be administered through MWDOC.
- Meetings will be conducted virtually.
- The Agency will provide a summary of available records with samples for the inventory prior to meeting with the consultant to agree upon the level of effort for each category of service.
- Hazen will post progress reports/maps on the Water Agency's secure page accessed via the OC LCRR Water Agencies Partnership website.
- SLI-related training documents and videos will be posted on the OC LCRR Water Agencies Partnership website.

PHASE 1 Task 2

Assistance with Data Gathering, Records Review, and Historical Code Review

Hazen understands that the extent of work for this task is highly dependent on the condition and accessibility of existing records and files. Per the RFP, and listed in Task 1, Hazen will arrange to meet with each participating Water Agency to determine and agree upon the level of effort required to complete this task.

Proven Approach

Not only are record and code review required by the US EPA, they're also incredibly beneficial for LSL Inventory development and the selection of critical inventory criteria. Through extensive record and code review, the quantity of unknown service line materials may be greatly reduced, decreasing the need for costly field verification efforts.

In § 141.84 – Lead service line inventory and replacement requirements, the US EPA outlines various documents required for each water system's record review. Hazen's approach begins with a "wide and shallow" record review, or subset, used to determine which required records may provide further benefit in reducing unknown service line materials. We will establish a timeline noting the potential for lead during various time periods. In preparing for this proposal, Hazen conducted an initial assessment of MWDOC member agency service areas using historical state-wide plumbing codes (illustrated on page 14 and 15). To further increase confidence in effective lead bans and provide opportunities for more aggressive inventory criteria options, local plumbing codes and system-specific historical records will be evaluated.

Recommended Records Review

To begin evaluating available information and historical records, Hazen recommends an initial records research to align with US EPA-requirements, and depending on availability may include the following:

- Private-side construction permits, e.g., plumbing permits.
- Existing records or other documentation that indicates the private-side service line material, e.g., tap cards, work order notes or forms.
- Distribution system maps and drawings of private connections (as-builts).
- Historical records on each service connection (inspection records).
- Meter installation records, e.g., typical details, GIS data on locations, diameters, and installation dates.
- Historical capital improvement plans (for as many years available).
- GIS data with installation dates, location, diameter, and material data for water mains and service lines.
- Customer billing data which includes connection dates and active accounts.
- Property Appraiser's Database (including construction date).

Through casting a wide net for record review, Hazen has a proven track record for finding records and codes that further reduce the quantity of unknown service lines. The key goal of this approach will be to provide sufficient evidence and criteria to categorize unknown service lines as non-lead, while limiting time-consuming and costly field verification.

Hazen Advantage

While the use of lead service lines in the state of California was limited, galanized service lines were widely installed. Leveraging Hazen's wide breadth of knowledge on galvanized service lines from Water Research Foundation #4910 "Evaluating Key Factors That Affect the Accumulation and Release of Lead from Galvanized Pipes" and experience supporting neighboring utilities on similar challenges, the Hazen Team can outline multiple pathways involving record review to confidently move GRR into a non-lead category.

Deliverables

- Upon receipt of the summary of available records from the Water Agency (Task 1), Hazen will develop a data request summarizing information needed for the SLI and submit the request to the Water Agency.

Assumptions

- Summary of available records from the Water Agency is received prior to kick-off meeting.
- The Water Agency will provide available GIS records of service line or meter locations, or a customer account service listing to identify which parcels or buildings are served by the system.
- The Water Agency will securely upload all data files via the upload feature provided on the OC LCRR Water Agencies Partnership website.
- Support for continued record review, if requested by a Water Agency, would be under a separate task order.

PHASE 1 Task 3

Develop Lead Service Line Inventory Database and Initial Inventory

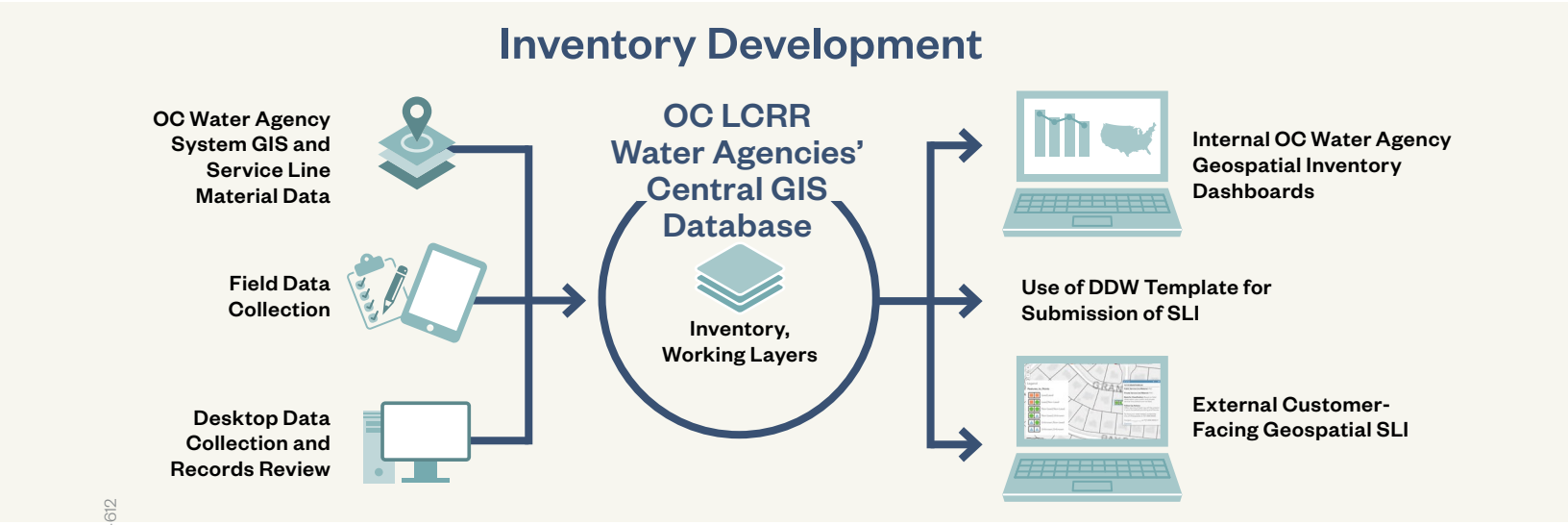
Hazen will work with MWDOC and the participating Water Agencies to leverage internal resources, existing tools, and datasets and expand existing GIS feature classes to meet DDW inventory requirements. The SLI will be developed to serve as a central live database to streamline other LCRR Compliance deliverables.

The SLI will serve not only replacement efforts, but also be a tool for achieving other compliance requirements. With a well-designed inventory, tasks such as sample site selection,customer notification, and replacement progress dashboard updates can be automated to maintain compliance for years to come. These strategies have been implemented for utilities such as Sweetwater, Tempe, LADWP, and New Hampshire DES.

If acceptable to agencies to use a GIS platform, Hazen will utilize ArcGIS products and collect, integrate, and display data. The databases will be set up to enable statistical interpolation and predictive modeling for LSL if statistical modeling is selected as an optional task. The final database is ArcGIS compatible and can be integrated into an agency's extended plan for LCRR.

Proven Approach

The development of the SLI will begin with an assessment, compilation, and integration of available historical records including construction date, water connection date, meter tap size, water service orders, customer provided information, and other data sources. These data layers will then be input into an ESRI ArcGIS model to "join" useful information to the associated service line identifier (such as the water meter or location ID). The established criteria will then be used to discern if the service material is lead, non-lead, galvanized requiring replacement (GRR), or unknown on both system-owned and customer-owned. The system-owned and customer-owned service connections may pull from different criteria to highlight how each is a unique data set. Python scripting will be used to automate the population of the DDW Inventory Template, which will now be required for inventory submission.



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Preliminary Assessment of 15 OC Retail Water Agency Service Areas:

The customer-side lead likelihood was assessed using the construction year of service area parcels. Through a more thorough record review, Hazen can further document confirmed locations of LSLs, predict the location of unknown LSLs, and document service lines as non-lead within Water Agencies' service areas.

Historical Records Research

1900-1929

Highest likelihood of LSL's based on national research.

1950-1986

DDW-recognized time period in which lead was typically not used in California.

1900 '10 '20 '29 '40 '50 '60 '70 '80 1986

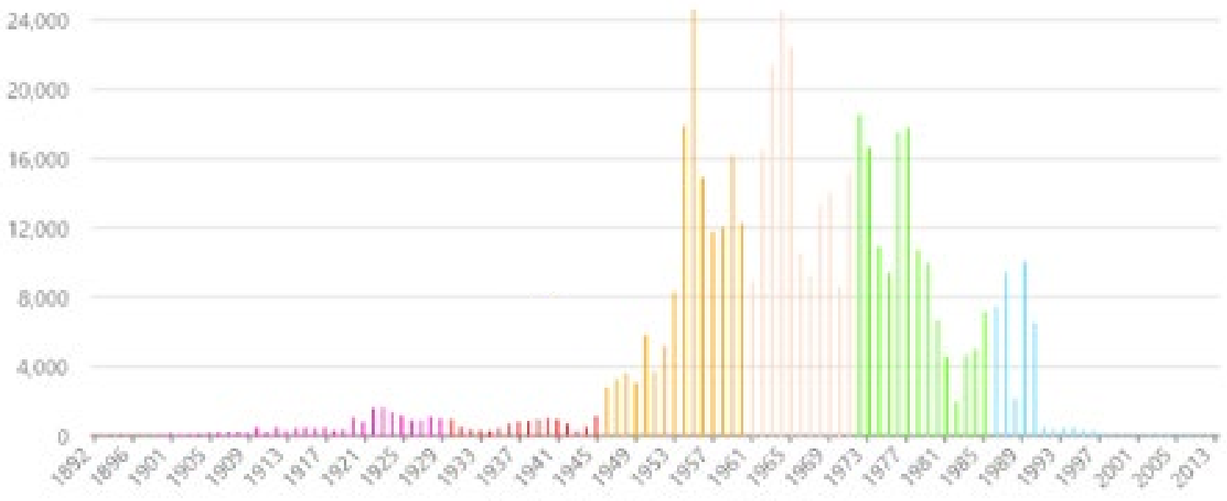
1986

California Lead Ban/California Health and Safety Code Section 300.6

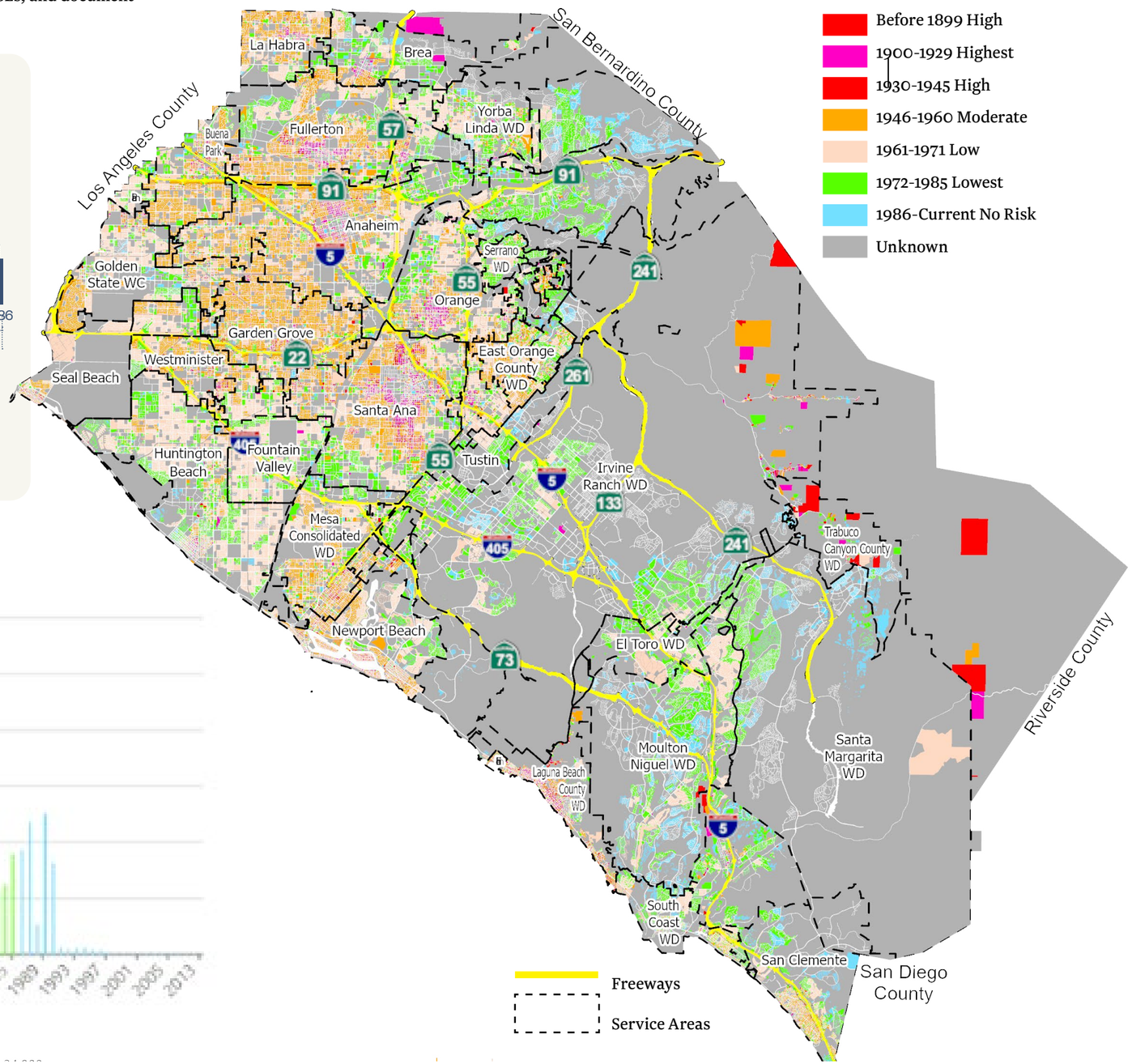
1986

U.S. Congress amends the Safe Drinking Water Act to ban lead.

Understanding Lead Likelihood in MWDOC Member Agency Service Areas



Year Built Split by Lead Likelihood

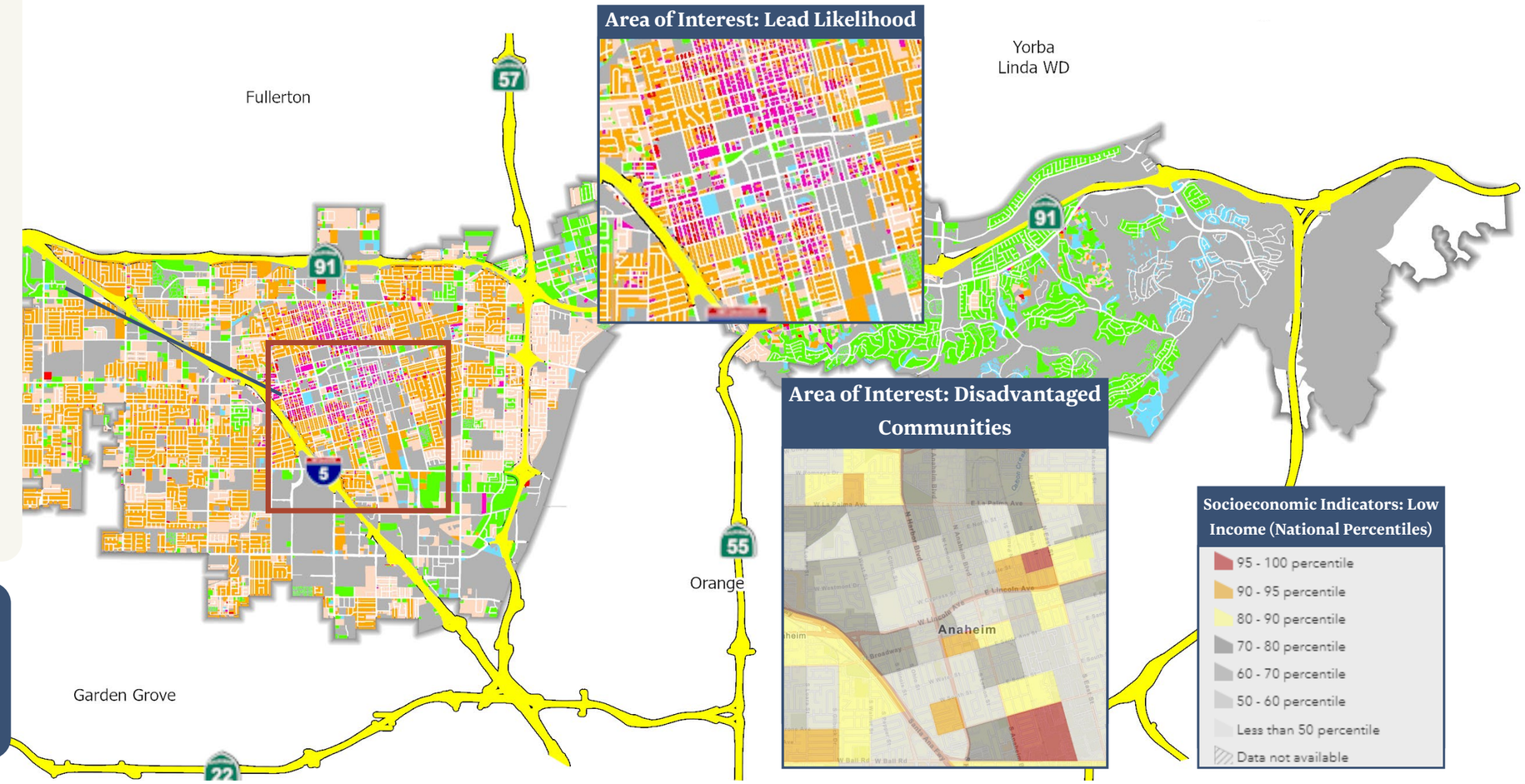


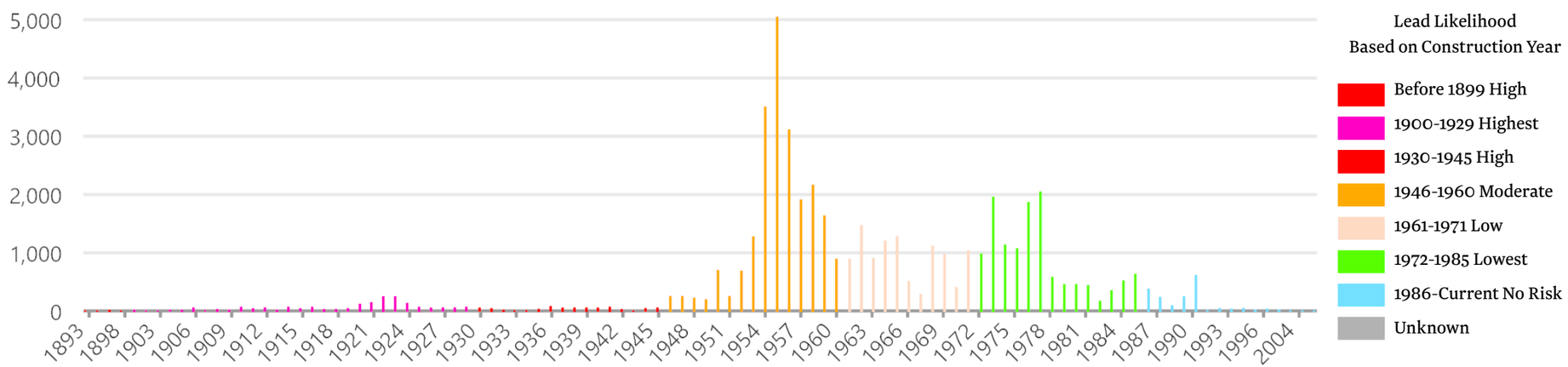
Understanding Lead Likelihood
City of Anaheim

An example preliminary LSL occurrence heat map has been provided for the City of Anaheim system to delineate areas of the City which may have the highest likelihood for lead based on County Assessor's parcel information and criteria developed using national and state plumbing codes. This map will be developed and updated for all participating MWDOC agencies based on historical records research results and will be used to prioritize field investigation and replacement efforts.

Prioritizing Disadvantaged Communities:

The EPA Environmental Justice Tool maps out several socioeconomic and environmental indexes to highlight disadvantaged communities. Layering this tool with existing service line data can provide insight to prioritize the verification and replacement of service lines in these vulnerable areas, as well as maximize principal forgiveness in funding.





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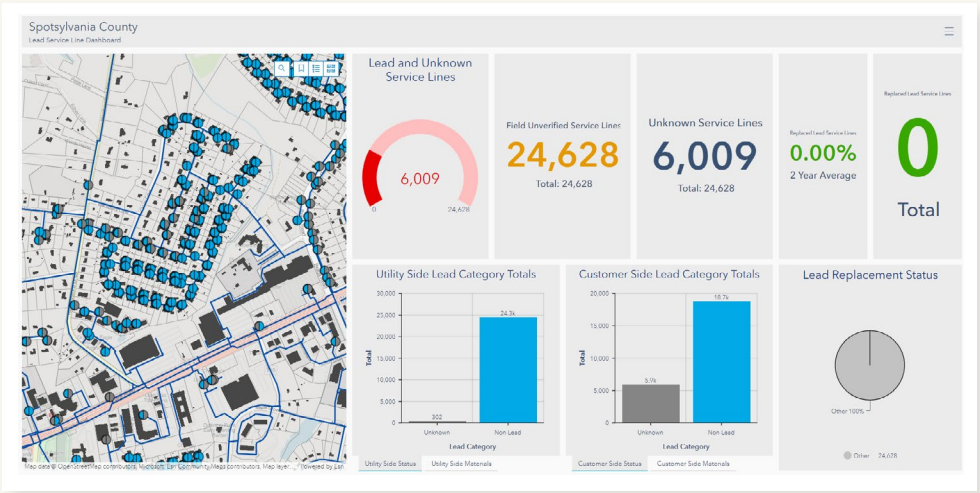
Hazen Advantage

With more than a 35 SLIs successfully completed, Hazen employs a multi-faceted approach to build a digital inventory capable of integrating existing database frameworks as well as subsequent investigation efforts. Hazen is prepared to package and deliver automatic updating features that will further simplify future inventory updates. The goal of our approach is to maximize the confidence in identifying LSL's, GRR, and Non-Lead service lines as cost-effectively, streamlined, and efficiently as possible not just now but for the foreseeable future. The resulting inventory is produced in a non-proprietary software, ESRI ArcGIS, which allows the agency open access to the data set in the future without the burdensome red tape of competitors' proprietary software(s). The proposed ArcGIS tool will provide functionality and encourage continued, straightforward updates long after the project is complete. Use of python scripting will streamline future inventory updates to DDW, completing what is normally a time-consuming task with the push of a single button.

Seamless Digital Integration

Hazen will provide MWDOC with a custom-built Service Line GIS Dashboard, creating a robust inventory and narrative for targeted visual identification.

The dashboard will include site - specific parcel information and address search functions, mobile app interface that can be utilized by City operators to provide live updates to the database, and the option to correlate identification results with key attributes to predict LSLs or galvanized service line location.



Example dashboard from a Hazen LCRR project in Virginia

Deliverables

- SLI database for the collection, integration, and display of service line information using ESRI ArcGIS (unless a spreadsheet approach is preferred by an agency).
- Preliminary inventory maps will be provided to show data gaps and areas of prioritization for internal use, and online public display of inventory status for customers.

Assumptions

- Hazen will utilize the definition of a GRR service line approved by DDW which states: *"Galvanized Requiring Replacement" (GRR) where a galvanized service line is or was at any time downstream of a lead service line or is currently downstream of a "Lead Status Unknown" service line. If the water system is unable to demonstrate that the galvanized service line was never downstream of a lead service line, it must presume there was an upstream lead service line."*
- Water systems will provide all available water system data (i.e., service connection, water mains, parcel data, etc.), as well as an electronic Real Estate Assessor's database for the water service area in GIS format indicating building construction dates and building types.
- SLI will include all US EPA and DDW required information pertaining to LCRR SLI compliance.

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PHASE 1 Task 4

Develop Approach for Alternative Material Verification Methods and Submit to Division of Drinking Water (DDW) for Approval

Proven Approach

Following the initial LSLI development, several "lead status unknown" service lines will likely remain in each system. We will develop an action plan to help identify these unknown service lines. Hazen has experience with various service line material identification methods and will create a systematic, cost-effective service line identification program for each agency.

Hazen will evaluate alternative material verification utilizing direct and indirect methods in this task, including:

1. Field inspection
2. Customer validation (Task 8)
3. Sequential sampling
4. Statistical analysis
5. Predictive modeling

The considerations for each of the potential verification methods are described in the table below. A combination of these available efforts will likely be required, and selection of the most cost-effective methods will be impacted by available resources and community characteristics.

DDW-Approved Verification Method Type	Relevance for MWODC	Cost
Viewing/Survey of Service Line Entry into Building by Water Customers or 3rd-Party Entities	Effective method with sufficient public outreach. May require confirmation at the meter but can save money by reducing excavation on private property.	$
Predictive Methods*	Predictive methods can be used to target field inspections and replacement.	$$
Water Sampling for Lead*	Requires establishing a community-specific threshold to indicate possible presence of an LSL: Invasive to the homeowner.	$$
Field/Visual Inspection	Field inspections completed by potholing can be costly and invasive. Other methods can be used initially to minimize need for field investigation, such as field staff surveys for identification during meter readings, replacements, and other routine and CIP field projects.	$$$
Other Tools/Instruments	Accuracy and cost effectiveness of other methods will be reviewed.	$$
Statistical Analysis*	Relies on statistics and system uniformity to interpolate or extrapolate service line materials within a given geographic area	$

*Method requires submission of approach and approval by DDW.

Potential Service Line Material Verification Methods

Verification Method	Considerations for Verification
 **Field Inspections**	Visual examinations of service line materials can be completed during ongoing meter change-out program or future water main replacement projects. Hazen will develop a mobile identification tool for field staff to verify service line materials. The app will prompt field staff to upload a photo of the service line, and results can be used to update the SLI automatically. A survey will be provided to guide staff through the identification process
 **Customer Validation**	Hazen is proposing to engage and enable customers to verify service line materials. Customer outreach will be geared towards specific community needs and characteristics. Outreach methods may include a complete community-wide education program, and targeted communication using billing statement inserts, postcards, and door hangers to encourage customer participation. These materials will be made available for review on the MWDOC LCRR Service Line Inventories Hub.
 **Sequential Monitoring***	Sequential sampling can determine the presence of lead at locations with a high likelihood of containing an LSL or GRR service connection. While elevated lead levels for sequential samples can be used to verify the presence of lead, a low lead result cannot be used to indicate the absence of lead.
 **Statistical Analysis***	Multiple types of geospatial statistical analysis are available today requiring case-by-case approval from DDW. These include interpolative analysis and confidence levels. Interpolative analysis is typically applied within subdivisions or other geographically distinct areas that follow similar construction styles. This method fits well within service areas with older subdivisions or geographically distinct areas. Alternatively, a confidence level approach allows a service area to rely simply upon statistics, often requiring a significantly lower number of sites even than interpolative analysis for large sample sizes.
 **Predictive Modeling***	Hazen will identify systems that would benefit from machine learning. Hazen will develop a custom machine learning program using non-proprietary software to streamline field verification and identification efforts for these identified systems. If approved as a verification method, Hazen will coordinate with DDW to validate statistical model requirements and ensure the model complies with DDW guidance.

* DDW case-by-case approval

Hazen will work with key staff to identify internal resources and establish a systematic approach to identifying service line materials within each system. The outcome of this exercise will be the development of standard operating procedures (SOPs) for service line material verification that will be embedded into a larger, more comprehensive Service Line Identification Action Plan. This will include procedures and tools for data collection and storage, a prioritization strategy and index for field verification, as well as customer education and outreach materials to engage customers in assisting with service line identification. The identification program will build upon both existing and future CIP projects, and prioritization will consider areas with the highest likelihood of containing lead and locations with sensitive or disadvantaged populations.

The most costly aspect of the inventory development will be field investigations of service lines, both in the utility right-of-way and on customer property. Our goal is to use every tool available to minimize the need for physically excavating service lines. This approach is a win-win strategy by both saving costs and reducing customer impacts.

Hazen Advantage

Hazen has successfully worked with multiple agencies, including in California, to create, define, and implement strategic alternative, or indirect, service line material identification programs. These programs have effectively reduced tens of thousands of sites to less than one thousand sites in some cases, and Hazen understands that all Member Agencies will want a varied level of site reduction as a trade-off for higher assurance of non-lead service line materials. The Service Line Identification Action Plans will follow a template-approach for cost savings that carries through for each Member Agency while allowing for distinction between the unique, intricate aspects of each system to utilize the most personalized option.

Deliverables

- Hazen will develop a Service Line Identification Action Plan and obtain DDW's pre-approval of alternative methods of verification.
- Hazen will provide the Water Agency with pre-approval verification notification(s) from DDW for all alternative methods of verification.

Assumptions

- Machine learning, or predictive modeling, may be selected as a recommended option. Machine learning requires substantial additional efforts including data curation, training, and retraining of the model. This can be done by Hazen under a separate task order.
- DDW pre-approval for alternative methods of verification required prior to commencement of analysis work.
- Review of field verification results and updates to the SLI may be done by the Water Agency staff, or Hazen under a separate task order.
- DDW will respond to requests for pre-authorization of alternative methods of verification within 2 weeks of receiving the request.

PHASE 1 Task 5

Apply DDW Approved Alternative Verification Methods

Proven Approach

After each agency has selected a preferred alternative, or indirect, method for service line material identification, Hazen will coordinate with **Blaine Tech** to implement this concept in the field. This includes providing substitute sites, as needed, that still meet DDW's randomized sample site requirements, for example. This effort will be specific to each Water Agency's selected method, service area, and even individual sites.

Following field verification, Hazen will utilize robust data management efforts to appropriately categorize and identify each of the service lines relying upon the alternative method.

Hazen Advantage

The Hazen team is successfully supporting agencies with the application of approved alternative methods in their service area currently. Unique challenges and solutions are available for each alternative method, and Hazen will support MWDOC through this effort leveraging prior experience.

Included in Scope Enhancement: Automated Processing and Simplification of Reporting

Hazen can write Python scripts to automate the following:

- Generation of LCRR templates and summary reports
- Generation of service line material update and service line replacement update reports for submission to DDW
- Generation of status emails and required customer notification reports
- Likelihood analysis or machine learning analysis results
- Data backups

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Deliverables

- List of prioritized sites for verification.

Assumptions

- Alternative methods will remain the same after selection by each Water Agency for the duration of the project.

PHASE 1 Task 6
Assistance with Data Analysis

Service line verification is a critical component in providing updates to the initial LSLI. The chosen service line identification methodology will be applied to collect verification data. Following the field verification, Hazen will coordinate with Blaine Tech to ensure the data is received efficiently. Hazen will leverage a comprehensive data management effort to streamline the service line material identification and categorization process. This analysis could include determining strategic areas of additional verification if LSL or GRR are discovered during service line material identification, for example. The LSLI will be updated with service line material identification and categorization results.

Hazen Advantage

Updates to the inventory will be streamlined through Hazen's proposed data management as service line material identification progresses. Hazen has successfully worked with other agencies to review and analyze verification data. Distinct challenges may arise when conducting analysis on verification data and service line identification. Hazen team members have direct and applicable expertise to create customized solutions.

Deliverables

- Hazen will provide updates to the custom-built Service Line GIS dashboard. Hazen will develop a web-enabled version of the Service Line Inventory suitable for public interface to satisfy applicable DDW publicly available inventory requirements.

Assumptions

- Pipe material identification is possible with approved methods and select approved alternative methods of service line verification. If pipe material is desired to be included in the inventory updates compared to a non-lead classification as described in the RFP, then this needs to be considered by the Water Agency when selecting the verification method.

PHASE 2 Task 7
Customer Communications

Public education and outreach are key components to the success of an agency's compliance program. The LCRR will require utilities to provide both routine and rapid public notification. Given the sensitivity of lead materials in drinking water, it is important to get ahead of public perception. Optimizing participation in voluntary programs requires clear and concise messaging, a customized strategy, and materials that maximize return on investment. Hazen will support agencies in developing effective messaging that influences program participation, focusing on project needs, and emphasizes project benefits to participating customers.

Proven Approach

Hazen will work with MWDOC Water Agencies to develop and implement a communications outreach campaign, for businesses, residents, and property owners. Hazen will work with Water Agencies to customize effective public education, outreach, and notification materials regarding inventory deployment as well as potential field investigation and replacement efforts. All customer communication and notification material will stored on the secure OC LCRR Water Agency Partnership website for acceptability. The campaign can include both broad and/or targeted communications.

Broad Community Communication. Hazen will work with the Water Agencies to develop a compelling, community-wide public education campaign that will inspire participation and align all the materials with a polished, professional appearance. Hazen will conduct a customer communication meeting with MWDOC and Water Agencies to explain regulatory requirements and options for public outreach to guide utilities in deciding which approach best fits their system. Additional communications and outreach support can be provided to systems as needed.

Targeted Communication. As needed, Hazen can work with the Water Agencies to design targeted communication materials to gain community support and participation in sampling and service line material identification efforts. These materials will distill complex technical concepts into concise, compelling messages. Hazen recommends a baseline set of materials (e.g., emails, program fact sheet.) for use throughout all systems, in addition to a collection of materials (door hangers, postcards, and transit and radio public service announcements) for use in targeted areas.

Hazen Advantage

Hazen will develop a communications plan that will outline required and recommended communications materials as well as a detailed schedule for implementation. Outreach efforts will be coordinated with ongoing LCRR compliance tasks to ensure that customers are well informed and aware of agency efforts to further protect public health. Strategically, the most important tactic is to use this messaging to shape a one-stop shop for customer-focused program information on the Agency's website. While some printed materials will need to communicate program information independently to audiences unlikely to visit the website, most other materials developed to support the program will drive traffic to the website for detailed information and visual explainers. By developing clear messaging and website navigation, this cost-effective approach will limit the need for agency staff to handle customer calls and inquiries.

Example LSL Identification and LSL Replacement Customer Communications Materials

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Deliverables

- Hazen will conduct a "communications outreach campaign" workshop to discuss LCRR-required and optional customer communication and outreach strategies and materials.
- Hazen will prepare educational training videos, as well as outreach materials and post them to the OC LCRR Water Agencies Partnership website for agencies to use in conducting both broad and targeted customer outreach. Prepare and launch "communications outreach campaign."
- If desired, Hazen will meet with the agency to develop a customized communications plan and implementation schedule.

Assumptions

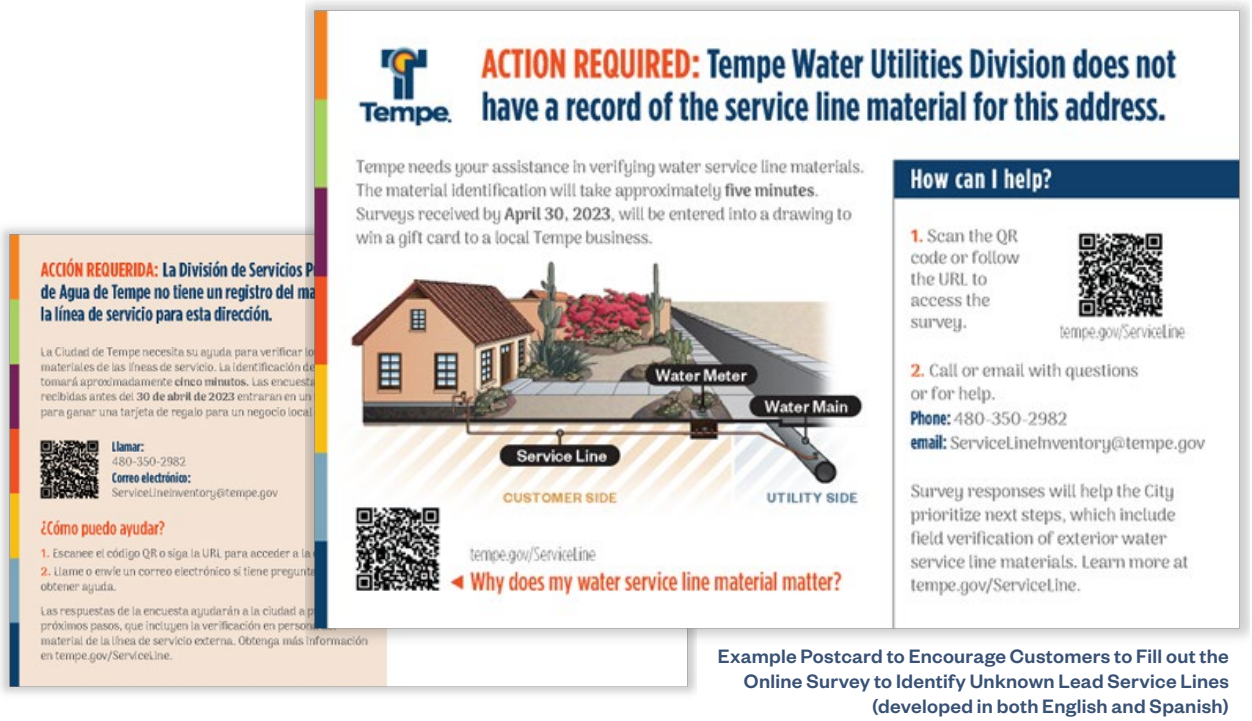
- Hazen will provide material templates and the Water Agency will be responsible for the printing of customer communications materials. The agency will coordinate with internal staff to execute communications plan and schedule.
- OC LCRR Water Agencies Partnership website will be used to schedule identified "gap" locations for private property owner self-verification and/or agency field verification.

PHASE 2 Task 8

Develop and Implement Private Property Owner Self-Verification

Proven Approach

Leveraging prior experience including currently publicly available self verification sites, Hazen will work with Water Agencies to develop a Customer Survey that includes a designed Postcard mailer following Water Agency standards, a draft Customer Survey series of questions and instructions, and the Customer Survey on the Survey123 platform which will be used to reduce the quantity of unknowns. An example of the Customer Survey via Survey123 that was prepared and managed by Hazen is available at tempe.gov/serviceline.



Example Postcard to Encourage Customers to Fill out the Online Survey to Identify Unknown Lead Service Lines (developed in both English and Spanish)

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During the self-verification process, it is likely that a subset of customers, e.g., <1%, will indicate that they have or have had a lead service line. This has been exhibited in prior Hazen survey efforts. For these cases, Hazen recommends a timely response of sending utility-staff, Hazen staff, or Blaine Tech to the site for a lead check swab that is US EPA verified. Furthermore, for potential GRR, DDW has previously approved approaches involving sequential sampling and review of home construction dates to move potential GRR into a non-lead category. Following regulatory coordination and approval, Hazen may assist in organizing special purpose sampling, e.g., sequential sampling, of select homes for this effort.

Hazen will design a Postcard mailer following Water Agency standards. An English and Spanish translation will be provided, as desired, and up to three (3) modifications to the Postcard will be included for development. An example of a mailer sent City-wide is available to the right.

Hazen Advantage

Hazen has a dedicated communications team that develops clear, concise materials for public outreach. Several examples that have been effective include QR codes and postcards sent to residents for self-verification.

Our team will manage the logistics of private property owner self-verification tests

Deliverables

- Customer Survey postcard (available in OC LCRR Service Line Inventories Hub):
  - Customer Survey questionnaire in Survey 123
  - Customer Survey QC Dashboard

Assumptions

- All Customer Survey materials will be hosted on the OC LCRR Service Line Inventories Hub. Data hosting costs will be the responsibility of MWDOC or the Water Agency.

PHASE 3 Task 9

Develop Lead Service Line Replacement Plan

An LSL Replacement Plan provides a structure for efficiently verifying and replacing pipes and is required if any unknown (i.e., could not be designated non-lead), lead, or GRR are present in the LSLI. Under these circumstances, the Hazen team will develop a customized LSL Replacement Plan in consultation with the Member Agency. In developing the plan, Hazen will take into account capital and time constraints, existing/ongoing replacement projects, and underserved / underrepresented neighborhoods, and include:

- Strategy for verifying material at locations with “lead status unknown”.
- Procedures for conducting a full LSL replacement.
- Recommend LSL replacement goal rate (Trigger Level Exceedance).
- Prioritization strategy.
- Procedure for customers to flush lines following replacements.
- Customer educational materials for a full or partial lead service line replacement.
- Funding strategy.

These initiatives will be supported by the SLI to provide agency staff and customers with replacement progress. Cost estimates for replacement and funding application efforts will also be provided for Capital Improvement Program (CIP) budgets.

Deliverables

- Lead Service Line Replacement plan

Assumptions

- Account for capital and time constraints, existing/ongoing replacement projects, and underserved/under-represented neighborhoods.
- Plan to be developed in consultation with the Water Agency.
- Water Agency will be responsible for evaluating legal strategies for accessing and replacing service lines on customer property.

If needed, Hazen will streamline LSL Replacements through integration with existing CIP projects, employing proven prioritization strategies to target LSL replacements in disadvantaged neighborhoods and sensitive populations.

Field Identification and Replacement of galvanized and lead service materials

PHASE 2 Task 10

Manage (Field) Inspections/ Test Pitting/ Meter Inspections

Proven Advantage

Mobile App: After deploying the ESRI Solutions Lead Service Line Inventory Database, Hazen will develop a customized ArcGIS Field Maps app to directly integrate field verification findings into the Lead Service Line Inventory Database. This Field Maps app will cover the required service line verification points as required by DDW. Service line sites may be assigned to Blaine Tech, as desired, within the app platform. Instructions for utilization of the Field Maps app will be included in Task 1's Training Materials that will be prepared for Blaine Tech.

Training Maerials: Hazen will prepare Training Materials for field verification methods describing the locations for service line field verification on the customer-side and utility-side, per DDW. Training Materials will further describe differences in service line materials, responses to field obstacles, and other pertinent information to ensure successful completion of the field work.

Identification Review: Hazen will coordinate with Blaine Tech to review Field Maps mobile app field verification submissions in the ArcGIS Online Field Maps QC platform. Each submission, as reviewed, will be designated as one of the following: inspected – submitted, inspected – completed, inspected – in progress, or inspected – rejected. Hazen will track Field Maps fields and high-level Blaine Tech progress in the Field Maps Dashboard. Hazen will provide field assistance as needed and as requested by the Water Agency.

Managing Customer Coordination: Throughout the field effort, customer education developed during Task 7 will be provided, as requested. Permission gathering may be coordinated early on during Task 8 with property owners through the Customer Survey. Otherwise, permission gathering is recommended at the agency-level involving existing Municipal Code review. Lastly, all customer data and activities will be captured in the mobile app following the customized app development process.

Hazen Advantage

The Hazen team has developed Field Maps apps for similarly sized water systems that have successfully streamlined field work. The customization of the Field Maps app further allows for DDW-specific and Water Agency-specific approaches to field work walking the Blaine Tech through the service line material verification process step by step. Additionally, Hazen will be prepare a dashboard for viewing the field work data real-time, determining the quantity of sites completed within a given time period, and tracking Blaine Tech success for approved submissions, avoidance of obstacles, and other metrics.

Deliverables

- Field Verification Mobile App.
- Field Verification QC Dashboard.
- Customer education, support, permission gathering or data capturing via OC LCRR Water Agencies Partnership website.

Assumptions

- The Field Verification Mobile App will be developed through ArcGIS Field Maps app available in the Apple and Google Play app stores. The field app can collect photos of service lines and tests conducted.
- Rate provided in Task 11 will be used to for site inspections. The number of site inspection to be determined.
- Costs associated with hosting all data in ESRI ArcGIS will be covered by MWDOC or the Water Agency.

Hazen team members were on-site with Utility staff to test out a utility-owned industrial vacuum truck prior to hiring a third party contractor.

PHASE 2 Task 11

Provide Field Inspection Personnel for Visual Verifications

Our approach to providing field verification personnel starts with engaging a firm dedicated solely to field services. Blaine Tech Services will be overseen by Hazen and will conduct the field inspection activities. Hazen has worked closely with Blaine Tech in the past, in projects where they have demonstrated their ability to quickly mobilize and support necessary field work in a cost-effective manner. Blaine Tech Services provide environmental sampling and field support services out of San Jose and has more than 30 years of experience in

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locally providing field support. Blaine Tech is focused on providing cost-effective, efficient field verification service for service line materials.

Hazen will coordinate closely with agencies and Blaine Tech to cover all critical areas for field verification including responses to obstacles, customer communications on-site, prioritization for strategic areas as local needs and challenges are present, step by step breakdown of the service areas, and more.

Hazen Advantage

Similarly to other aspects of LCRR program management, Hazen has the experience of managing multiple simultaneous field teams to swiftly and successfully complete service line material identification visually. Through this experience, we have noted that teams with industrial vacuum trucks and pressure washers for removing meter box debris are typically faster and more effective at meter box field verification. Our team, combined with Blaine Tech Services, will complete field verification with options included for with and without industrial vacuum trucks for all required sites seamlessly leveraging Hazen tools described in Task 10.

Deliverables

N/A

Rate Assumptions

- Technician and vehicle rate included and all of its on-board re-usable equipment. This equipment includes, but is not limited to, hand tools and material testing kits. Technician and vehicle with industrial vacuum rate include its onboard re-usable equipment. Equipment includes truck or trailer mounted industrial grade vacuum, hand tools, and material testing kits.

PHASE 3 Task 12

DDW Inventory Template and Service Line Inventory Submission

Proven Approach

DDW inventory template includes the required information for water systems to meet the LCRR's initial SLI requirement. Hazen will utilize ESRI solutions to populate the inventory template which will be modified to the DDW inventory template.

Hazen Advantage

Hazen's proposed data management approach will streamline this submission process and provide a seamless generation of future regulatory submittals. Hazen is working closely with DDW on the development of neighboring utilities' SLI and is aware that the submission of the SLI to DDW will now require the population of the DDW material template.

Deliverables

- Preparation and submittal of the DDW inventory template to DDW.

Assumptions

- Inventories submitted to DDW may require an additional edits/modification, to account for additional time, therefore inventories will be submitted before October 1, 2024.
- Hazen will provide revisions to DDW within 30 days of receiving comments.

PHASE 1 Task 1-S

Integrate Service Line Inventory into Agency Asset Management System

In accordance with the RFP, this scope associated with this task will be negotiated between the agency and Hazen and executed under a separate agreement from the proposed multi-agency agreement.

At a high-level, Hazen proposes to review and consolidate data from the agency and integrate the SLI database with the asset management system. Source of information my include:

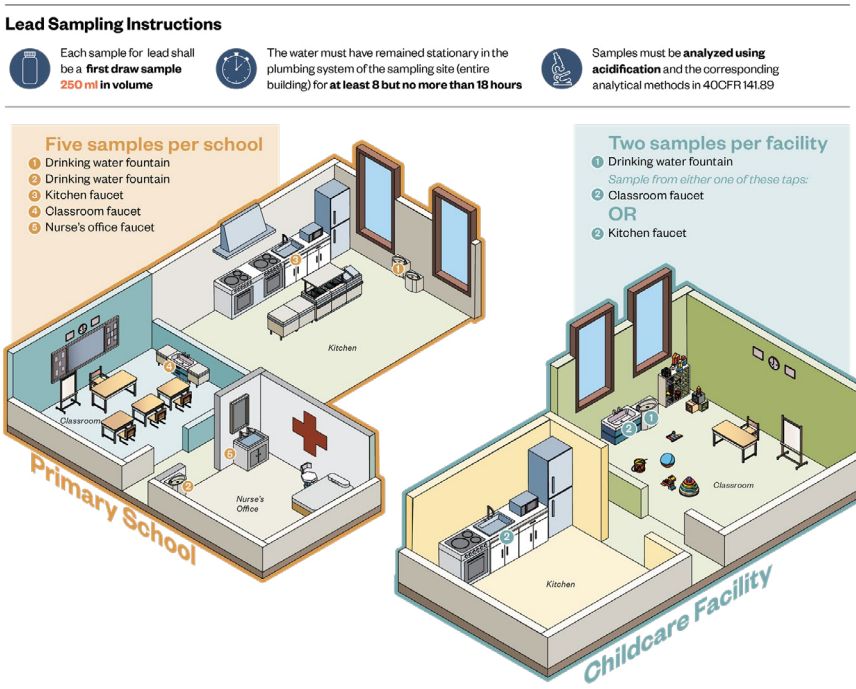
- GIS geodatabases and shapefiles
- Computerized maintenance management system (CMMS) asset data
- As-builts and design drawings
- Institutional staff knowledge
- Master plan documents

Once the data has been reviewed and consolidated, Hazen will identify gaps in the CMMS systems. Strategies will be developed and applied to address identified gaps, and relevant data utilized to update the integrated database. This data will then be linked to Esri ArcGIS tools such as ArcGIS Pro and ArcGIS Solutions to support LCRR work.

PHASE 3 Task 2-S

School/Childcare Facility Sample Site Selection and SOP

The LCRR introduce new requirements for sampling in schools and childcare facilities. Systems will be required to collect samples from at least 20% of primary schools and childcare facilities per year during the first five years and will be required to collect samples upon request. Systems will be required to conduct outreach to schools and childcare facilities about the sampling program and notify stakeholders of the results. Sampling requirements for schools and childcare facilities are illustrated in the next page. Schools and childcare facilities are considered as a type of Non-Transient/ Non-Community water systems. If present, the system will be responsible for coordinating sample collection reporting the results to the facilities and DDW. The LCRR will necessitate regular communications with schools and childcare facilities in the Water Agency Systems.



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Hazen will develop a sampling SOP to guide sampling and communication efforts.

In accordance with the RFP, if a Water Agency selects this task, the exact scope of this task will be negotiated between the agency and Hazen, with the scope of services to be agreed to in an agreement that is separate from this multi-agency agreement.

PHASE 3 Task 3-S

Compliance Site Selection and SOP

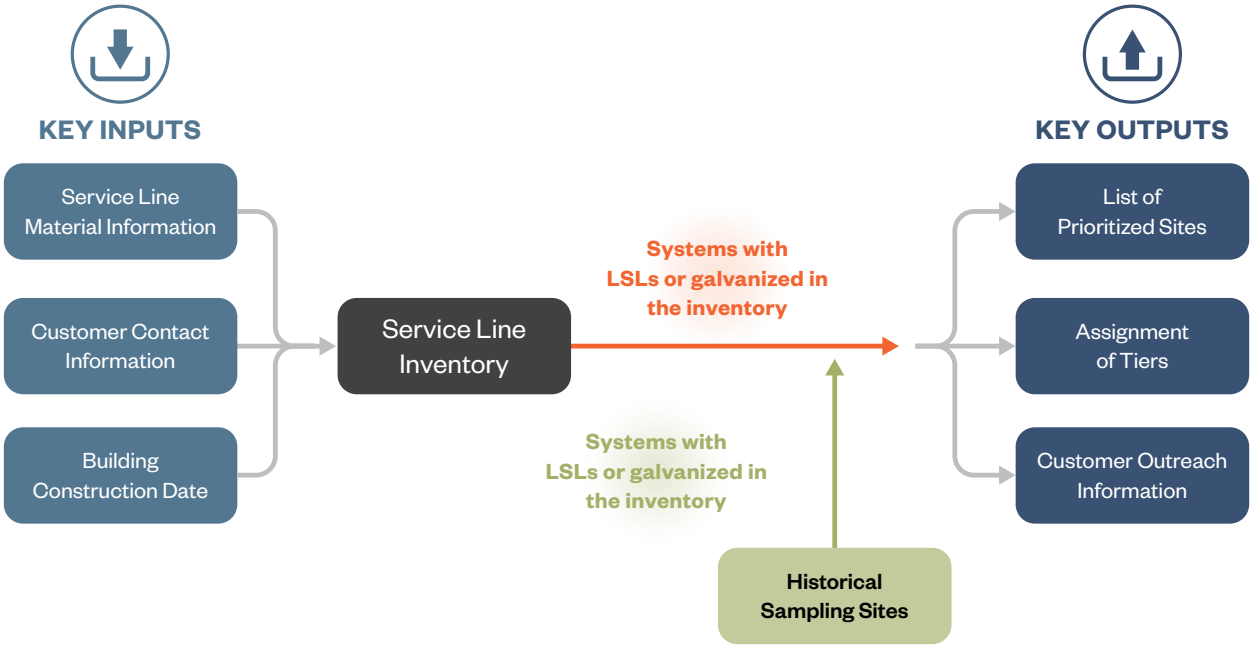
Proven Approach

The LCRR tier criteria will focus on sampling sites with LSLs and galvanized iron service lines. Using results from the LSLI, Hazen will provide recommendations for revising each community's LCR compliance sites to reflect the new LCRR tiered structure. Our proposed sample site identification process is illustrated in the figure below.

Hazen Advantage

Hazen will provide the following services:

- Evaluate existing LCR sample site list and prioritize historical sampling sites that meet updated tier criteria for sampling.
- Establish targets for the number of prioritized sampling sites in each system to provide contingent sites.
- Build upon the LSLI; identify a prioritized list of sampling sites meeting requirements for Tier 1-3 sites.
- Identify sampling sites as needed from historical sampling sites that are expected to meet Tier 4 or Tier 5 criteria when insufficient Tier 1-3 sites are available from the LSLI.
- Hold a virtual meeting with agencies to present the sample site identification process. Each agency will be provided their draft sample sites for review and comments. Input received from each agency will be addressed prior to finalizing the sample sites.



Proposed Sample Site Identification Process

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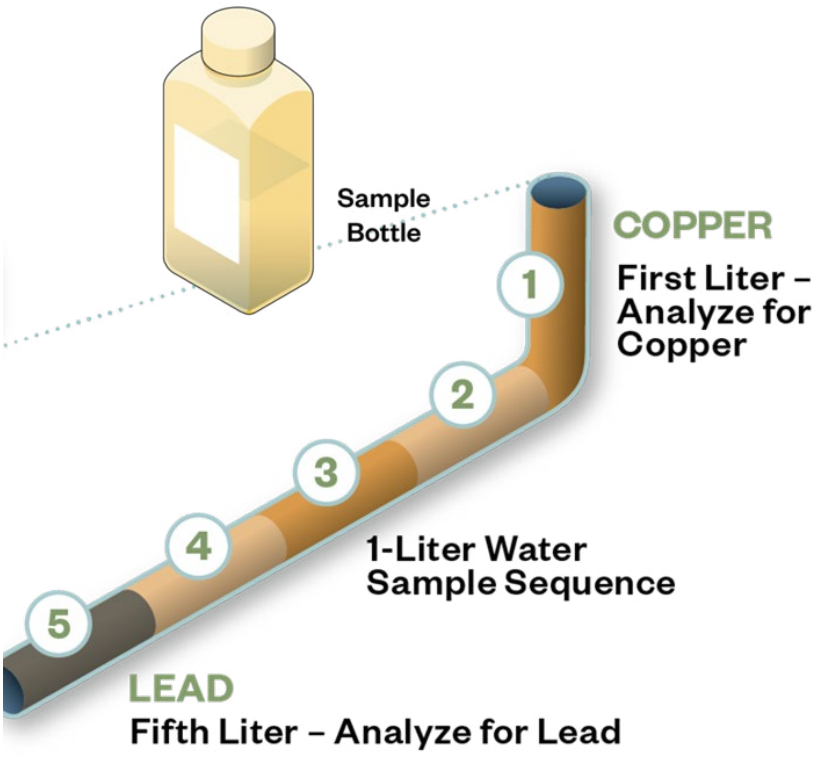
TIER 1 **Single-family homes with LSLs with 1st and 5th liter**
Use only these sites unless insufficient sites are present

TIER 2 **Other building with LSLs with 1st and 5th liter**

TIER 3 **Single-family homes with galvanized service lines downstream of a current or former LSL or lead connector**

TIER 4 **Single-family homes with copper and leaded solder**

TIER 5 **Representative sites**



CONTINUOUS TASK

Task 4-S

Hazen Recommended Additional Task: LCRR Funding Assessment / ApplicationDescription

While the USEPA's deadline for the completion of the LSLI and Replacement Plan is October 16, 2024, completing these tasks early will allow MWDOC to maximize its ability to leverage current funding opportunities, such as the $1.2 trillion Bipartisan Infrastructure Law (BIL). BIL will allow the EPA to inject significant additional funding into the California State Water Resources Control Board's (SWRCB) State Revolving Fund (SRF) and the Drinking Water State Resolving Fund (DWSRF) programs over the next 5 years. California is slated to receive $3.5 billion over the next five years for water infrastructure and eliminating lead pipes to be obligated through SRF, DWSRF and new competitive grant programs administered by SWRCB, the Department of Water Resources, the Bureau of Reclamation (I.e., WaterSmart) and the Federal Emergency Management Agency (I.e., Building Resilient Communities and Infrastructure (BRIC) and the Hazard Mitigation Grant Program (HMGP). In addition, the Department of Water Resources (DWR) is receiving substantial BIL funding dollars. Hazen will utilize existing close relationships with DWR staff to identify launch dates and eligibility requirements, including potential agency prioritization of Disadvantaged Communities, to ensure that both federal and state dollars are secured for this project.

Proven Approach

- Perform research of grant funding opportunities; develop additional funding resources for both current and proposed projects.
- Assist MWDOC in preparation of grant funding plans to determine strategy for funding applications in coordination with other planning documents.
- Participate and assist MWDOC in grant writing development and proposal process; assist in reviewing, researching, and identifying grant funding opportunities; ensure compliance of applicable standards and specifications.
- Complete grant proposals; monitor proposals and funding application requirements.

Hazen Advantage

Hazen will work closely with the MWDOC, OC Water Agencies, the California Department of Public Health ,and the SWRCB to identify potential funding opportunities and then evaluate the benefit of each feasible funding alternative while considering impacts on schedule and total project costs of additional State and Federal processes and compliance requirements. This step will include analysis of the total program cost (e.g., including any federal cross cutter requirements), cashflow modeling, and comparing changes to rates under various funding scenarios. If MWDOC's priorities shift over the course of the contract, this strategy will be revisited and revised, as needed to remain a relevant guide.

Funding Assistance Secured by Hazen over the Past 10 Years

$1.6 Billion+
Grant Funding Amount

$4.1 Billion+
Total Funding Amount

$2.5 Billion+
Loan Funding Amount

Deliverables

1. Funding strategy and implementation plan.
2. Produce successive drafts of the project narrative, budget, attachment, and forms.
3. If a funding agency issues a Request for Information, then information will be compiled and responded to in a timely manner.
4. Applications for eligible grant programs.

Hazen will help the OC Water Agency Maximize Available LSL Funding

Funding strategies and communication are important considerations for LSL replacement efforts, which may necessitate additional planning to develop a program that meets funding requirements.

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Section 3

Team's Record of Past Performance

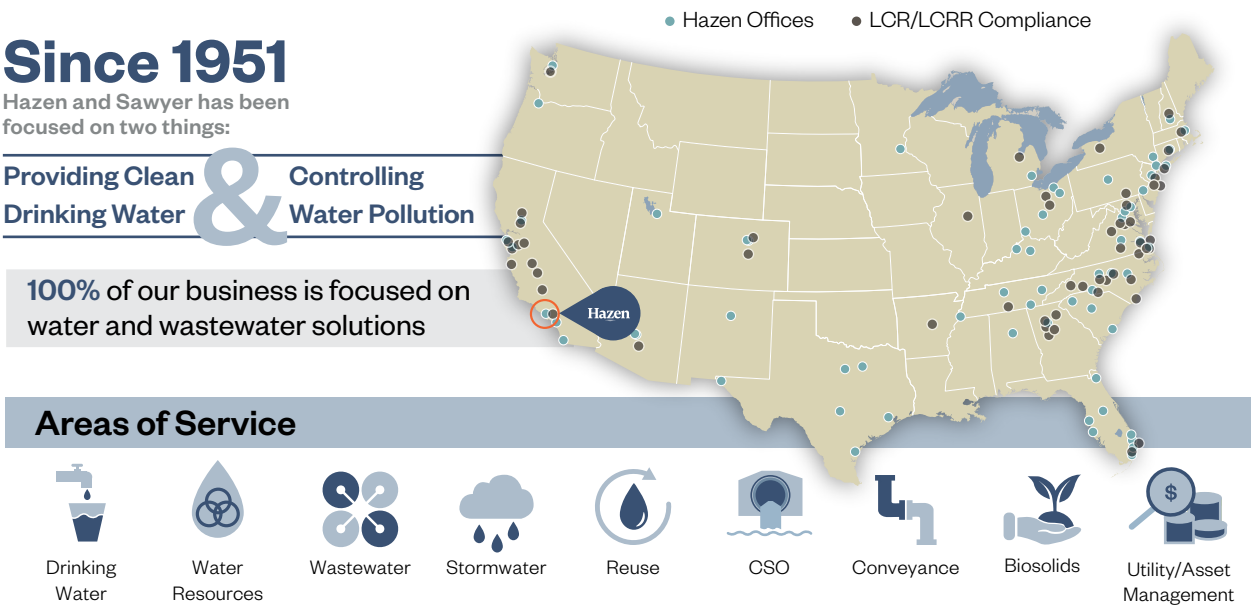
Section No. 3

Team's Record of Past Performance

Hazen has assisted clients with Lead and Copper Rule (LCR) compliance needs since the establishment of the LCR over 30 years ago and continues to support utilities with compliance with the LCRR.

The proposed Hazen team is providing similar LCRR technical assistance services to LADWP and Sweetwater Authority, and bring the skills and experience to support the participating OC Water Agencies in an flexible manner to achieve LCRR compliance.

Hazen is 100% focused on satisfying the needs of our clients. This includes delivering quality work, meeting schedules, and controlling project costs. The projects we feature in this section are examples of the Hazen team delivering on all of those committments. We encourage you to reach out to our project references to hear directly from them.



Technology Resources Sustain Hazen's LCRR Successes

Developed **20+** non-proprietary predictive models

Developed **125** dashboards for clients

Supported public LCRR communication programs for **20+** clients

35+ LCR compliance and program management projects completed

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Similar Project Experience

Our team brings demonstrated success in all elements to assist participating OC Water Agencies in the development and submittal of their LSLIs to DDW by the October 2024 deadline. A selection of our relevant experience is presented in the table below. Five of these comparable and successful projects that demonstrate the Hazen team's exact capabilities needed in the proposed project project are described in the subsequent page.

LCRR Project Experience

Client/Location	Customers	LCRR Compliance	LSL Inventory	LSL Identification	LSL Replacement Plan	Sampling and Monitoring	Customer Outreach	Funding Support	GIS and Program Tracking Dashboard	Geospatial LSL Likelihood Analysis Modeling or ML	Implementation Assistance	Multi-Year Program	Regulatory Coordination
Los Angeles Department of Water & Power, CA	**4,000,000**	■	■	■	■		■	■	■	■	■	■	■
Sweetwater Authority, CA	**200,000**	■	■	■	■		■	■	■				
City of Tempe, AZ	**185,000**	■	■	■		■	■	■		■		■	■
New Hampshire, NH	**99,000**	■	■	■		■	■		■	■		■	■
Baltimore, MD	**400,000**	■	■	■	■	■	■	■		■	■	■	■
Olympia, WA	60,000	■	■	■	■	■	■		■	■			■
City of Kingman, AZ	33,000	■	■								■		
Soldier Canyon, CO	65,000	■	■	■	■	■	■	■	■	■	■	■	■
City of Englewood, CO	49,000	■	■	■	■	■	■	■	■	■	■	■	■
City of Glendale, AZ	250,000	■	■	■		■	■	■		■		■	■
City of Peoria, AZ	200,000	■	■	■		■	■	■		■		■	■
Charles County, MD	75,000	■	■	■	■	■	■	■	■	■	■	■	■
Leesburg, VA	60,000	■	■	■	■	■	■	■	■	■	■	■	■
Washington Suburban Sanitary Commission, MD	1,800,000	■	■	■	■		■						■
Miami-Dade WASD, FL	2,300,000	■	■	■	■	■	■	■	■	■	■	■	
City of Chesapeake, VA	200,000	■	■	■	■			■	■	■	■	■	■
Connecticut Water, CT	105,000	■	■	■	■	■	■				■		
Miami Beach LCRR Program Assistance, FL	90,000	■	■	■	■	■	■	■	■	■	■	■	
City of Gainesville, GA	159,000	■	■	■		■	■		■	■	■		■
Clayton County, GA	275,000	■	■	■		■	■		■	■	■		■
City of Buffalo, NY	276,000	■				■	■				■	■	■
Cobb County-Marietta Water Authority, GA	950,000	■				■	■				■		■
Virginia Beach, VA	450,000	■	■	■					■	■	■	■	■
Spotsylvania County, VA	230,000	■	■	■					■	■	■		
City of Winchester, VA	30,000	■	■	■	■				■	■			■
Cape Fear Public Utility Authority, NC	190,000	■					■				■	■	■
Charlotte Water, NC	818,000	■									■		■
City of Greensboro, NC	290,000	■				■					■		■
City of Atlanta, GA	1,200,000	■				■					■		■
City of Fort Lauderdale, FL	220,000	■				■					■		■
Erie County Water Authority, NY	920,000	■				■			■		■	■	■
Chandler, AZ	260,000	■	■	■		■	■	■	■	■	■	■	■
Goodyear, AZ	102,000	■	■	■				■		■	■		■

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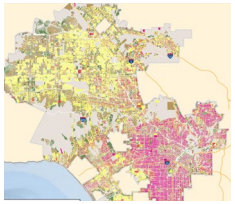
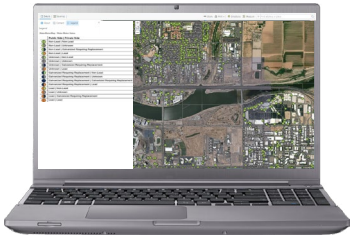
Relevant Projects

Team's Record of Past Performance

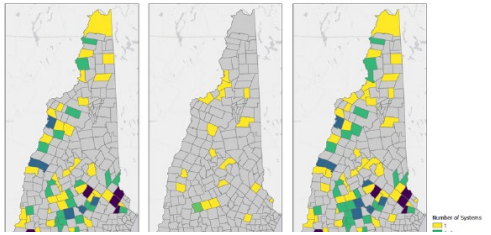


LADWP

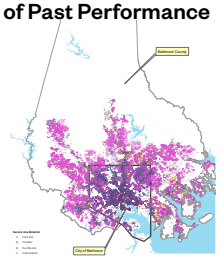
Sweetwater Authority



Tempe



New Hampshire



Baltimore

Client/Project	Description	Dates/Costs	Scope of Work	Key Staff	Reference
LADWP, CA LSL Historical Use and Predictive Modeling for Customer-Owned Service Lines	Hazen is developing LADWP's LCRR Compliance Plan that includes, but not limited to, a comprehensive review of historical LSL use in the service area and machine-learning predictive modeling to reduce the quantity of unknown service lines, an LSLI database, and funding strategy.	01/2023 - Ongoing **$290K**	✓ Developed Summary of LSL Use History ✓ Predictive Modeling Tool ✓ LSL Inventory Database ✓ Funding Applications	Nicole Blute Becki Rosenfeldt Cayla Cook Stephanie Botha Arthur Moncrieffe} Malia Turner Megan Watt Lisa Hulette Jared Eichmiller	**Oluwaseun Ogbeni** *Environmental Specialist/ Project Managerr* *LADWP* 111 N. Hope Street Los Angeles, CA 90012 (213) 367-3307 *oluwaseun.ogbeni@ladwp.com*
Sweetwater Authority, CA LCRR Compliance Implementation	Hazen is developing an LCRR Compliance Program for Sweetwater through the creation of an LSLI, a service line identification action plan, a compliance sampling program, and the identification sites and sampling protocols for testing of school and childcare facilities.	07/2022 - Ongoing **$127K**	✓ Geospatial LSLI using ESRI ArcGIS ✓ Evaluation of Historical Records ✓ Service Line Identification Action Plan Sampling Program ✓ School and Childcare Facilities Testing	Nicole Blute Becki Rosenfeldt Cayla Cook Stephanie Botha Arthur Moncrieffe Megan Watt Lisa Hulette	**Justin Brazil** *Director of Water Quality* *Sweetwater Authority* 505 Garrett Avenue Chula Vista, CA 91910 (619) 409-6802 *jbrazil@sweetwater.org*
City of Tempe, AZ LCRR Compliance Implementation	Hazen is working on Tempe's LCRR Compliance Implementation project, including developing an LSLI, regulatory coordination, establishing an LSL identification and replacement plan, updating the City's sampling program, and developing a streamlined communication plan.	02/2022 - Ongoing **$76K (Phase 1)**	✓ Interactive GIS Map ✓ Regulatory Coordination ✓ Field Verification ✓ Phased LSL Replacement, Sampling, and Communications Plan	Becki Rosenfeldt Cayla Cook Roger Arnold Emma Ressler Lisa Hulette Annisa Rafeh	**Jeremy Mikus** *Env. Services Manager* *City of Tempe* 1525 Baseline Road Tempe, AZ 85283 (480) 350-2852 *jeremy_mikus@tempe.gov*
New Hampshire Department of Environmental Services, NH LSL Inventory, Sampling Plan, and Replacement Plan	Hazen will aid over 200 Small Community Water public water systems in New Hampshire in compliance with the LCRR. This work includes the development of a community HUB site as a central location to manage LSLIs, training materials, data uploads, and recorded meetings. Work also includes preparation of Sampling Site Plans and the development of LSL Replacement Plans.	04/2023 - Ongoing **$2.9M**	✓ LSL Inventory Database ✓ Service Line Identification Action Plan ✓ Inventory Dashboard ✓ Training videos & webinars ✓ Sample Plan Development ✓ Customer Outreach ✓ Replacement Plans	Becki Rosenfeldt Roger Arnold Anissa Rafeh	**Jennifer Mates** *Drinking Water & Groundwater Bureau* 29 Hazen Drive Concord, NH 03302 (603) 559-0028 *Jennifer.S.Mates@des.nh.gov*
Baltimore City & County, MD Program Management. Support for LCRR Compliance	Hazen is assisting the City and County in proactively preparing for compliance with the LCRR. The project included a full, comprehensive compliance program including service line replacement, advanced data analytics, and machine learning to streamline identification and replacement efforts.	11/2022 - Ongoing **$250K**	✓ LSL Inventory Finalization ✓ LSL Replacement ✓ Sample Plan Development ✓ Customer Outreach ✓ Compliance-Support Services	Becki Rosenfeldt Malisa Turner	**Hernán Guadalupe** *Engineer II, Baltimore DPW* 200 Holliday Street, 600 Baltimore, MD 21202 (410) 396-8189 *hernan.guadalupe@baltimorecity.gov*

Section 4

Cost Control and Schedule

Section No. 4

Cost Control and Schedule

We understand schedule delivery is of critical importance to ensure LCRR compliance. As with other facets of project management, having a comprehensive and credible Work Breakdown Structure (WBS), schedule baseline, and budget baseline will allow Hazen to effectively coordinate activities of the team to move the project forward.

Hazen's Deltek Vision accounting system provides real-time monitoring of work hour usage and costs to track total expenditures for tasks.

Hazen will use the following tools and strategies tp deliver this project on schedule and within budget:

- MS Project: Establish critical path and communicate progress
- Deltek Vision: Track project costs in real time for clarity on budget performance
- Risk Register: Develop and updaterisk register regularly to mitigate project risks
- Decision Log: Track project decisions to provide clarity on path forward
- Regular Project Manager Check-Ins: Track hot scope items

The following schedule provides a breakdown of tasks outlined within the Hazen Work Plan, including key milestones driving the project timeline.

Year	2023			2024											
Month	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
APPROVAL OF PROJECT	◆														
CONTINUOUS TASK(S)															
• RFP Task 1: Project Administration and Progress Reporting															
• RFP Task 4-S: *Optional Task* - LCRR Funding Assessment / Application / Implementation															
PHASE 1															
• RFP Task 2: Assistance with Data Gathering, Records Review, and Historical Code Review															
• RFP Task 3: Develop Service Line Inventory Database and Initial Inventory															
• RFP Task 4: Develop a DDW Approved Approach for Alternative Material Verification Methods															
• RFP Task 5: Apply DDW Approved Alternative Verification Methods															
• RFP Task 6: Assistance with Data Analysis															
• RFP Task 1-S: *Optional Task* - Integrate Service Line Inventory into Agency Asset Management System															
PHASE 2															
• RFP Task 7: Customer Communications															
• RFP Task 8: Develop and Implement Private Property Owner Self-Verification															
• RFP Task 10: Manage (Field) Inspections / Test Pitting / Meter Inspections															
• RFP Task 11: Provide Field Inspection Personnel to Assist with Physical Visual Verification															
PHASE 3															
• RFP Task 2S: *Optional Task* - School / Children Facility Sample Site Selection and SOP															
• RFP Task 3S: *Optional Task* - Compliance Site Selection and SOP															
• RFP Task 9: Develop Lead Service Line Replacement Plan															
• RFP Task 12: Population of DDW Inventory Template and Service Line Inventory Submission													◆		

Section 5

Budget Summary Proposal

Section No. 5

Budget Summary Proposal

In accordance with the requirements of the RFP, this submittal includes the budget summary information in the format requested. In addition, tables presenting the breakdown of the fee by task, project team members, subcontractors, and other direct costs.

Cost Per Category of Service

Category	Level of Effort		Cost Savings (Per Agency) for 12+ Agency Agreements
1. Project Administration and Progress Reporting (Required Task for all Agencies)	$51,780	High	40%
	$39,950	Med	
	$26,830	Low	
2. Assistance with Data Gathering, Records Review, and Historical Code Review	$31,000	High	20%
	$22,475	Med	
	$13,950	Low	
3. Develop Lead Service Line Inventory Database and Initial Inventory	$51,410	High	20%
	$36,510	Med	
	$21,610	Low	
4. Develop Approach for Alternative Material Verification Methods and submit to Division of Drinking Water (DDW) for Approval	$40,350	High	25%
	$26,900	Med	
	$16,640	Low	
5. Apply Division of Drinking Water (DDW) Approved Alternative Verification Methods	$9,590	High	0%
	$7,695	Med	
	$5,800	Low	
6. Assistance with Data Analysis	$9,640	High	10%
	$8,060	Med	
	$6,480	Low	
7. Customer Communications	$14,000	High	40%
	$11,440	Med	
	$8,880	Low	
8. Develop and Implement Private Property Owner Self-Verifications	$46,770	High	30%
	$38,980	Med	
	$31,190	Low	
9. Develop Lead Service Line Replacement Plan	$36,020	High	50%
	$36,020	Med	
	$36,020	Low	
10. Manage (Field) Inspections/Test Pitting/Meter Inspections	$76,630	High	25%
	$63,840	Med	
	$51,050	Low	

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Cost Per Category of Service

Category	Level of Effort		Cost Savings (Per Agency) for 12+ Agency Agreements
11. Provide field inspection personnel to assist with physical visual verifications	-	High	0%
	-	Med	
	-	Low	
12. Population of DDW Inventory Template and Service Line Inventory Submission	$4,870	High	0%
	$4,870	Med	
	$4,870	Low	

Additional Services	
1. Integrate Service Line Inventory into Agency Asset Management System	Separate Agreement
2. School/Childcare Facility Sample Site Selection and SOP	Separate Agreement
3. Compliance Site Selection and SOP	Separate Agreement
4. Funding	Separate Agreement

Level of Effort Assumptions

Task 1: Project Administration and Progress Reporting - Level of Effort Considerations:

- Low level of effort: 3 x MWDOC & Water Agencies Group (collective) meetings (1 x kick-off, 2 x progress), and 3 x individual Water Agency/Hazen only meetings (1x level of effort agreement, 1 x institutional knowledge transfer, and 1 x final SLI preparation).
- Medium level of effort: 6 x individual meetings: 1 x kick-off, 1x level of effort agreement, 2 x progress, 1 x institutional knowledge transfer, and 1 x final SLI preparation.
- High level of effort: 12 x individual meetings: 1 x kick-off, 1x level of effort agreement, 6 x progress, 1 x institutional knowledge transfer, 1 x final SLI preparation, 1 x meeting to discuss Task 2 outcomes, 1 x meeting to discuss outcomes of Task 4.

Task 2: Assistance with Data Gathering, Records Review, and Historical Code Review - Level of Effort Considerations:

- Low level of effort: 20 records
- Medium level of effort: 200 records
- High level of effort: 300 records

Task 3: Develop Lead Service Line Inventory Database and Initial Inventory - Level of Effort Considerations:

- Low level of effort: No. of Service Connections = 1-20,000, GIS data available
- Medium level of effort: No. of Service Connections = 20,001-40,000, GIS data available
- High level of effort: No. of Service Connections = 40,001+, GIS data not available

Task 4: Develop Approach for Alternative Material Verification Methods and Submit to Division of Drinking Water (DDW) for Approval - Level of Effort Considerations:

- Low level of effort: Geospatial Statistical Analysis
- Medium level of effort: Geospatial Statistical Analysis
- High level of effort: Predictive Model

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Task 5: Apply Division of Drinking Water (DDW) Approved Alternative Verification Methods - Level of Effort Considerations:

- All levels of effort equivalent.

Task 6: Assistance with Data Analysis - Level of Effort Considerations:

- Low level of effort: No. of Service Connections = 1-20,000
- Medium level of effort: No. of Service Connections = 20,001-40,000
- High level of effort: No. of Service Connections = 40,001+

Task 7: Customer Communication - Level of Effort Considerations:

- Low level of effort: No. of Service Connections = 1-20,000
- Medium level of effort: No. of Service Connections = 20,001-40,000
- High level of effort: No. of Service Connections = 40,001+

Task 8: Develop and Implement Private Property Owner Self-Verifications - Level of Effort Considerations:

- Low level of effort: No. of Service Connections = 1-20,000
- Medium level of effort: No. of Service Connections = 20,001-40,000
- High level of effort: No. of Service Connections = 40,001+

Task 9: Develop Lead Service Line Replacement Plan - Level of Effort Considerations:

- Low level of effort: No. of Service Connections = 1-20,000
- Medium level of effort: No. of Service Connections = 20,001-40,000
- High level of effort: No. of Service Connections = 40,001+

Task 10: Manage (Field) Inspections/Test Pitting/Meter Inspections - Level of Effort Considerations:

- Low level of effort: No. of Service Connections = 1-20,000
- Medium level of effort: No. of Service Connections = 20,001-40,000
- High level of effort: No. of Service Connections = 40,001+

Task 11: Provide Field Inspection Personnel to Assist with Physical Visual Verification - Level of Effort Considerations:

- No requirement for level of effort considerations, as only an hourly rate was requested in the RFP. However, two rates are proposed for consideration. Field person, truck, and hand tools = $95/hr., and field person, truck, and vac truck = $135/hr. (includes vac truck).

Task 12: Population of DDW Inventory Template and Service Line Inventory Submission - Level of Effort Considerations:

- All levels of effort equivalent.

Low Level of Effort Estimate

	Program Director	Program Manager	Technical Advisor	Project Engineer	GIS/IT	Data Analyst	Assistant Engineer II	Assistant Engineer I	Hazen			
									Labor Hours	"Labor Cost"	ODCs	Subtotal
	$385	$385	$355	$250	$175	$200	$170	$150				
RFP Task 1: Project Administration and Progress Reporting	4	24	16	20	14	0	10	32	120	$30,410	$-	$30,410
RFP Task 2: Assistance with Data Gathering, Records Review, and Historical Code Review	0	2	2	10	10	6	16	32	78	$14,450	$-	$14,450
RFP Task 3: Develop Lead Service Line Inventory Database and Initial Inventory	0	4	4	14	12	6	24	60	124	$22,840	$-	$22,840
RFP Task 4: Develop Approach for Alternative Material Verification Methods and Submit to DDW for Approval	0	2	8	12	8	2	24	28	84	$16,690	$-	$16,690
RFP Task 5: Apply Division of DDW Approved Alternative Verification Methods	0	0	0	4	0	0	12	12	28	$4,840	$-	$4,840
RFP Task 6: Assistance with Data Analysis	0	0	2	10	0	0	0	12	24	$5,010	$-	$5,010
RFP Task 7: Customer Communications	0	0	8	16	0	0	0	20	44	$9,840	$-	$9,840
RFP Task 8: Develop and Implement Private Property Owner Self-Verification	0	6	4	20	28	0	32	92	182	$32,870	$-	$32,870
RFP 9: Develop LSL Replacement Plan	0	16	4	40	0	0	40	110	210	$40,880	$-	$40,880
RFP Task 10: Manage (Field) Inspections/ Test Pitting/ Meter Inspections	0	12	4	28	32	0	112	112	300	$54,480	$-	$54,480
RFP Task 11: Provide Field Inspection Personnel to Assist with Physical Visual Verifications (Hourly Rate)	0	0	0	0	0	0	0	0	0	$-	$-	$-
RFP Task 12: Population of DDW Inventory Template and SLI Submission	0	0	2	4	10	0	0	0	16	$3,460	$-	$3,460
TOTAL FEE (LOW LEVEL OF EFFORT)	**4**	**66**	**54**	**178**	**114**	**14**	**270**	**510**	**1210**	**$235,770**	**$-**	**$235,770**

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Medium Level of Effort Estimate

	Program Director	Program Manager	Technical Advisor	Project Engineer	GIS/IT	Data Analyst	Assistant Engineer II	Assistant Engineer I	Hazen			
									Labor Hours	"Labor Cost"	ODCs	Subtotal
	$385	$385	$355	$250	$175	$200	$170	$150				
RFP Task 1: Project Administration and Progress Reporting	6	36	24	30	20	0	16	48	180	$45,610	$-	$45,610
RFP Task 2: Assistance with Data Gathering, Records Review, and Historical Code Review	0	4	4	16	15	10	24	50	123	$23,165	$-	$23,165
RFP Task 3: Develop Lead Service Line Inventory Database and Initial Inventory	0	8	8	24	20	10	40	100	210	$39,220	$-	$39,220
RFP Task 4: Develop Approach for Alternative Material Verification Methods and Submit to DDW for Approval	0	4	12	20	12	4	40	48	140	$27,700	$-	$27,700
RFP Task 5: Apply Division of DDW Approved Alternative Verification Methods	0	1	1	4	0	0	16	16	38	$6,860	$-	$6,860
RFP Task 6: Assistance with Data Analysis	0	0	2	12	0	0	0	16	30	$6,110	$-	$6,110
RFP Task 7: Customer Communications	0	0	10	20	0	0	0	24	54	$12,150	$-	$12,150
RFP Task 8: Develop and Implement Private Property Owner Self-Verification	0	8	4	24	36	0	40	115	227	$40,850	$-	$40,850
RFP 9: Develop LSL Replacement Plan	0	16	4	40	0	0	40	110	210	$40,880	$-	$40,880
RFP Task 10: Manage (Field) Inspections/ Test Pitting/ Meter Inspections	0	16	6	36	40	0	140	140	378	$69,090	$-	$69,090
RFP Task 11: Provide Field Inspection Personnel to Assist with Physical Visual Verifications (Hourly Rate)	0	0	0	0	0	0	0	0	0	$-	$-	$-
RFP Task 12: Population of DDW Inventory Template and SLI Submission	0	0	2	4	10	0	0	0	16	$3,460	$-	$3,460
TOTAL FEE (MEDIUM LEVEL OF EFFORT)	**6**	**93**	**77**	**230**	**153**	**24**	**356**	**667**	**1606**	**$315,095**	**$-**	**$315,095**

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High Level of Effort Estimate

	Program Director	Program Manager	Technical Advisor	Project Engineer	GIS/IT	Data Analyst	Assistant Engineer II	Assistant Engineer I	Hazen			
									Labor Hours	"Labor Cost"	ODCs	Subtotal
	$385	$385	$355	$250	$175	$200	$170	$150				
RFP Task 1: Project Administration and Progress Reporting	8	46	32	40	26	0	20	62	234	$59,400	$-	$59,400
RFP Task 2: Assistance with Data Gathering, Records Review, and Historical Code Review	0	6	6	22	20	14	32	68	168	$31,880	$-	$31,880
RFP Task 3: Develop Lead Service Line Inventory Database and Initial Inventory	0	12	12	34	28	14	56	140	296	$55,600	$-	$55,600
RFP Task 4: Develop Approach for Alternative Material Verification Methods and Submit to DDW for Approval	0	6	18	30	18	6	60	72	210	$41,550	$-	$41,550
RFP Task 5: Apply Division of DDW Approved Alternative Verification Methods	0	2	2	4	0	0	20	20	48	$8,880	$-	$8,880
RFP Task 6: Assistance with Data Analysis	0	0	2	14	0	0	0	20	36	$7,210	$-	$7,210
RFP Task 7: Customer Communications	0	0	12	24	0	0	0	28	64	$14,460	$-	$14,460
RFP Task 8: Develop and Implement Private Property Owner Self-Verification	0	10	4	28	44	0	48	138	272	$48,830	$-	$48,830
RFP 9: Develop LSL Replacement Plan	0	16	4	40	0	0	40	110	210	$40,880	$-	$40,880
RFP Task 10: Manage (Field) Inspections/ Test Pitting/ Meter Inspections	0	20	8	44	48	0	168	168	456	$83,700	$-	$83,700
RFP Task 11: Provide Field Inspection Personnel to Assist with Physical Visual Verifications (Hourly Rate)	0	0	0	0	0	0	0	0	0	$-	$-	$-
RFP Task 12: Population of DDW Inventory Template and SLI Submission	0	0	2	4	10	0	0	0	16	$3,460	$-	$3,460
TOTAL FEE (HIGH LEVEL OF EFFORT)	**8**	**118**	**102**	**284**	**194**	**34**	**444**	**826**	**2010**	**$395,850**	**$-**	**$395,850**

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Section 6

Time and Materials Labor Rate Schedule

Section No. 6

Time and Materials Labor Rate Schedule

A table of hourly billing rates for Hazen personnel by title is provided below as required per the RFP. The billing rates are for the 2023-2024 billing year, starting July 1, 2023. Not all labor categories shown below will be used on this project.

Hazen Title	Hourly Rate
Vice President	$325
Assoc Vice President	$315
Sr Associate 2	$300
Sr Associate	$290
Associate 2	$275
Associate	$250
Sr Principal Engineer 2	$240
Sr Principal Engineer	$220
Principal Engineer 2	$200
Engineer/Principal Engineer	$185
Assistant Engineer 2	$170
Assistant Engineer	$150
Sr. CAD Designer/GIS	$175
CAD Designer/GIS	$145
Technician	$130
Sr Administrator	$140
Administrator	$120

If required, Hazen will utilize the General Services Administration per diem rates for Orange County, and mileage reimbursement rates published by the Internal Revenue Service.

Appendix A

Resumes

Nicole Blute, PhD, PE

Program Manager

Dr. Blute will lead the project with over 20 years of lead and copper rule and corrosion control experience. She is a skilled hands-on PM on complex projects with tight schedules, leveraging her team's deep experience to achieve different agency needs.

Education

PhD, Environmental Engineering, Massachusetts Institute of Technology

BS, Environmental Science, University of Rochester, NY, 1996

BA, Chemistry, University of Rochester, NY

Certification/License

Professional Engineer

Areas of Expertise

- Corrosion control and stabilization
- Project management
- Groundwater treatment
- Decision analysis
- Advanced treatment
- Source water integration
- Distribution system water quality
- Bench, pilot, and demonstration testing

Professional Activities

American Water Works Association

- Research Division Trustee
- Inorganic Contaminants Committee Chair

Society of Women Engineers

California Nevada AWWA

Recycled Water Committee Secretary

Lead and Copper Rule Revisions, Los Angeles Department of Water and Power, Los Angeles CA

Dr. Blute is the Project Manager for LADWP's evaluation of historical lead service line use and code reviews, development of an LSL inventory in GIS, use of alternative verification methods (predictive modeling and geospatial statistical analysis), funding assistance, and communications with DDW.

Lead and Copper Rule Revisions, Sweetwater Authority, San Diego, CA

Dr. Blute was a Technical Advisor on Sweetwater Authority's LCRR Compliance Program, involving creation of an LSL Inventory, LSL identification action plan, compliance sampling plan, and development of sampling protocols for schools and childcare facilities.

Lead and Copper Rule Compliance, California Water Service Company, San Jose, CA

Dr. Blute was the Technical Advisor on a series of 3 projects for Cal Water that developed prequalified pools of tiered customers for LCR sampling at 25 districts. The project involved providing regulatory guidance, developing educational and training materials, and developing cost assessments of project expansion to Cal Water's remaining districts.

Lead and Copper Rule Compliance, City of La Verne, La Verne, CA

Dr. Blute was the Project Manager who led a study of factors causing La Verne to exceed the Lead Action Level. She advised utility staff in water quality testing (field and laboratory), performed modeling exercises of corrosivity, provided recommendations, and worked with staff to implement operations. The project successfully resulted in subsequent sampling round below the Action Level.

Corrosion Control Testing of Alternate Water Supplies, Metropolitan Water District of Southern California

Dr. Blute was the Principal Investigator and Project Manager on a WRF project to evaluate corrosion control strategies for successful introduction of new water supplies (advanced treated water and desalinated water) into distribution systems. Pipe loops (iron, copper with lead solder, and brass) were used to evaluate corrosion mitigation strategies.

Hazen

Becki Rosenfeldt, PE

Program Advisor/Regulatory Communication

Becki has extensive experience guiding many of Hazen's clients to LCRR compliance.

Serves as a Program Manger, QA/QC, and various technical expert roles for the development of LSLIs including the design and implementation of machine learning models. Her nationally recognized expertise includes providing guidance to regulatory agencies and co-presenting with DDW on the LCRR.

Education

MS, Environmental Engineering, Virginia Tech

BS, Civil Engineering, Bucknell University

Certification/License

Professional Engineer

Areas of Expertise

- Lead and Copper Rule
- Lead and Copper Rule Revisions
- Corrosion control
- Lead service line identification and replacement

Professional Activities

American Water Works

LCRR Compliance, LADWP, Los Angeles, CA
Program Advisor. Completed an evaluation of historical LSL use and code reviews and developed an LSLI in GIS. Assisted in material verification and replacement efforts, alternative verification methods (predictive modeling and geospatial statistical analysis), and developed a communications plan.

LCRR Compliance, Sweetwater Authority, San Diego, CA
Program Manager. Developed the Authority's LCRR Compliance Program, including the development of an LSLI, LSL identification action plan, compliance sampling plan, and protocols LCRR compliance sampling. She works closely with DDW to develop a cost-effective material verification strategy using statistical analysis and geospatial interpolation.

LSL Inventory, Sampling Plan, and Replacement Plan, New Hampshire Department of Environmental Services, NH
Program Advisor. Assisting over 200 Small and Medium public water systems in compliance with the LCRR. She is also assisting with the development of a community website and data HUB to serve as a central location to manage compliance programs, LSLI, and customer outreach materials. Work also includes preparation of Sampling Site and LSL Replacement Plans.

Program Management Support for LCRR Compliance, Baltimore City & Baltimore County, MD
Technical Advisor. Through a combination of LSLI finalization, LSL replacement, sample plan development, customer outreach and compliance support services, the City and County proactively prepare for compliance with the LCRR. She is supporting the development of advanced GIS analytics, etc.

LCRR Compliance Program, City of Tempe, AZ
Program Advisor and Technical Expert. Leading a comprehensive implementation that includes LSLI, sampling, and communications program development A centralized dashboard was developed to monitor program progress and track communications, service line identification, and replacement efforts.

Hazen

Cayla Cook, PE

Project Engineer

Cayla Cook has served as the Project Engineer, Task Manager, and Assistant Project Manager on several key LCRR efforts including LSL Inventories within Arizona and California lending to a robust background and knowledge of the unique challenges utilities face associated with the LCRR. This experience lends to a Deputy Project Manager that has successfully completed multiple similar efforts and is ready to hit the ground running.

Education

MS, Civil and Environmental Engineering, Arizona State University

BS, Civil Engineering, Mississippi State University

Certification/License

Professional Engineer

Areas of Expertise

- Lead and copper regulations
- Water quality and compliance
- Emerging contaminants
- Water, wastewater, and reclaimed water planning

Professional Activities

Water Environment Federation

- Microplastics Task Force Co-Chair

AZ Water Research Committee

California Association of Sanitation Agencies

- Microplastics Subgroup
- Ad Hoc Expert Panel

Lead and Copper Rule Revisions (LCRR) Evaluation, Sweetwater Authority, CA

Task Manager. Hazen is leading Phase 1 of the LCRR Compliance Program to develop an LCRR Service Line Identification Action Plan and LSL Inventory framework. Utilizing the latest EPA Guidance, Hazen will prioritize field verification sites and align various areas of the compliance program such as funding and sample site selection to streamline the process for the Authority.

Lead Service Line History and Predictive Model, Los Angeles Department of Water and Power, CA

Deputy Project Manager. Hazen led the development of DWP's LSL Inventory framework and Predictive Model including the utility-side and customer-side of over 700,000 service lines. Through collaboration with multiple departments including the Distribution System and Water Quality departments, Hazen built consensus on the Department of Drinking Water (DDW) approved methodologies' application with industry-leading technologies approaches for minimizing the quantity of sites for field verification and providing a unique lead likelihood status for each individual service line.

Lead and Copper Rule Revisions (LCRR) Compliance Implementation, Tempe, AZ

Assistant Project Manager. Hazen is developing the City's LSL inventory, which will serve as the foundation for the remaining LCRR compliance requirements. The Hazen team is utilizing a variety of industry-leading approaches to complete a robust, cost-efficient service line inventory including a mobile app for rapidly collecting and storing service line data in the field and an online customer survey for service line material identification. In addition to developing the inventory framework, Hazen will establish and coordinate a Field Verification Plan for amending the inventory in real time.

Hazen

Stephanie Botha

Groundwater Data Evaluation

Ms. Botha has 16 years professional experience working in planning, approvals, permitting, regulatory compliance, and project management on behalf of private and public clients across a broad range of industry including infrastructure, environment, water, contaminated land, decommissioning and restoration, transportation, oil and gas, waste management, marine geoscience, and mining.

Education

M.Sc., Hydrogeology, University of Birmingham, U.K.

B.Sc., Geology, University College London, U.K.

Areas of Expertise

- Hydrogeological investigation and water quality characterization
- Permitting of extremely impaired sources for direct potable use (DDW 97-005 Policy)
- Development and management of groundwater monitoring programs
- Environmental approvals
- Remedial investigation

Technical Publications:

EnerGeo Alliance. 2022. Guidance for Estimating and Reporting Greenhouse Gas (GHG) Emissions - Marine Geoscience Survey Activities. August 9.

Lead and Copper Rule Revisions, Los Angeles Department of Water and Power, Los Angeles CA

Ms. Botha is a Technical Advisor on LADWP's evaluation of historical lead service line use and code reviews, development of an LSL inventory in GIS, and use of alternative verification methods (predictive modeling and geospatial statistical analysis).

Lead and Copper Rule Revisions, Sweetwater Authority, San Diego, CA

Ms. Botha is a Technical Advisor on Sweetwater Authority's LCRR Compliance Program, providing input on data management for the lead service line inventory.

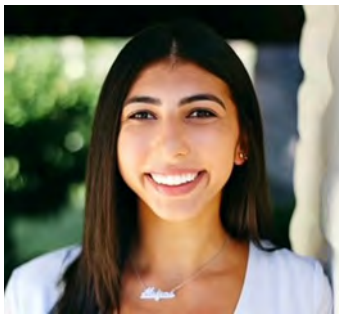
San Fernando Basin (SFB) Groundwater Remediation Project – Division of Drinking Water (DDW) 97-005 Permitting, Los Angeles Department of Water & Power (LADWP), Los Angeles, CA

Ms. Botha is the Technical Lead and Task Manager for delivering various components required for the application to permit the use of an extremely impaired source for domestic use for three major LADWP well fields in the SFB. She is responsible for ensuring the deliverables required for the 97-005 permit application comply with the updated DDW 97-005 Process Memo which included the addition of new evaluations, such as the MCL-equivalent methodology developed by DDW to assess the cumulative risk posed by multiple contaminants.

Water Quality Evaluation in Master Planning, Santa Clarita Valley Water Agency

Ms. Botha is leading the team in evaluating over 800,000 water quality records to develop a master plan for SCVWA. The effort included working with our GIS resources to build the database, dashboard, maps, and develop data interpretations for planning.

Hazen



Melene Agakanian, EIT

Records Research and Gap Analysis

Ms. Agakanian is an Assistant Engineer with Hazen. She has experience in recycled and purified water, water quality analysis and supply management, and drinking water treatment, with a foundation in Civil and Environmental Engineering. She has a strong attention to detail and organization that will be critical to the records research for this project.

Education

M.S., Civil/Environmental Engineering, San Jose State University, San Jose, CA

B.S., Civil Engineering, Santa Clara University, Santa Clara, CA

Certification/License

Engineer-in-Training

Areas of Expertise

- Drinking Water Treatment
- Recycled & Purified Water
- Water Quality Analysis & Supply Management

Professional Affiliations

ASCE

Database Management, Santa Clara Valley Water District (Valley Water), Santa Clara, CA

Water Tracker: Led efforts to develop a user-friendly, comprehensive water resources database used by all units to track water use throughout Santa Clara County. Responsible for importing monthly recycled water use from five major recycled water producers in the County into this larger database.

ROCM Sampling Data & Analysis: Responsible for importing monthly sampling data from multiple labs into the ROCM MS Access database and ensuring all data was in proper format. Provided analysis of data, including graphs and trendlines, when requested.

Owner's Agent for Hyperion Advanced Water Treatment, Los Angeles Department of Water and Power, Los Angeles, CA

Assistant Process Engineer. Melene has provided treatment sizing, capital and life cycle costs, and site layouts to LADWP in the evaluation of treatment options for the Hyperion Advanced Water Treatment Facility. She has helped prepare technical memorandums summarizing the design information and providing recommendations on implementation of the design. Melene is also part of the team providing support to LADWP on the Donald C. Tillman Advanced Water Treatment Facility Project in conjunction with Los Angeles Sanitation.

Eastside Water Treatment Facility Expansion Design, City of Chino, Chino, CA

Provide support when needed for review and response of construction submittals and request for information documents for a 3,500-gpm treatment expansion for the City of Chino at their Eastside Facility. Construction includes installation of new GAC vessels for 1,2,3-TCP treatment and a new Ion Exchange system for nitrate treatment, pipelines, buildings, and control systems.

Hazen

Cole Graham

Service Verification Program

Mr. Graham is a recent graduate with a background in dual disciplines of environmental chemistry and environmental engineering. He is now an Assistant Engineer in Hazen's Wastewater Group.

Education

MS, Environmental Engineering, Arizona State University

BS, Chemistry (Environmental), Arizona State University

Areas of Expertise

- Environmental Chemistry
- Water Treatment Via Anion Exchange Resins
- PFAS Removal Strategies

Lead and Copper Rule Revisions Compliance Implementation, Tempe, AZ

Assistant Engineer. Hazen is developing the City's LSL inventory, which will serve as the foundation for the remaining LCRR compliance requirements. The Hazen team is utilizing a variety of industry-leading approaches to complete a robust, cost-efficient service line inventory including a mobile app for rapidly collecting and storing service line data in the field and an online customer survey for service line material identification. In addition to developing the inventory framework, Hazen will establish and coordinate a Field Verification Plan for amending the inventory in real time. Following the development of the service line inventory, Hazen will prepare the LSL Replacement Plan including procedures for flushing service lines and premise plumbing, prioritization strategies, and the replacement protocols. Hazen will further support the city through legal strategies and funding sources for full service line replacement and integrate with the City's currently planned Capital Improvement Program while developing the communication tools and a sampling plan.

Integrated Water Resources Master Plan, Town of Gilbert, AZ

Assistant Engineer. Updated the Town's Integrated Water Resources Master Plan, which comprised of a water resources portfolio, existing and buildout scenarios of water, wastewater, and reclaimed water system modeling, water quality, water age analyses and CIP development. Worked specifically on dashboard implementation.

Experience Prior to Hazen

ASU School of Sustainable Engineering and the Built Environment, Tempe, AZ

Graduate Researcher. Laboratory chemist and engineer developing new methods to regenerate spent anion exchange resin with novel evacuant solutions.

Hazen

Jared Eichmiller

Service Line Inventory/GIS

Mr. Eichmiller serves as Hazen's GIS Analyst in the Irvine Office. He has over 2 years of experience in helping local governments and organizations achieve their infrastructure and assessment goals through using GIS tools. He is experienced in cartography for print along with developing web applications, dashboards, and story maps. Mr. Eichmiller is also skilled in developing field collection tools through Survey123 to conduct field assessments.

Project Role

Data Management and Planning

GIS Mapping and Analysis

Investigations and Condition Assessment

Education

BA, Geography, Indiana University

Areas of Expertise

- Geographic Information Systems
- Asset Management

Lead and Copper Rule Revisions, Los Angeles Department of Water and Power, Los Angeles CA

Mr. Eichmiller is GIS Analyst for LADWP's evaluation of historical lead service line use and code reviews, development of an LSL inventory in GIS, use of alternative verification methods (predictive modeling and geospatial statistical analysis), funding assistance, and communications with DDW.

NapaSan Master Plan, Napa CA

GIS Analyst. Mr. Eichmiller is utilizing StoryMaps to create a visual, electronic submittal of Napa Sanitation's Capital Improvement Plan. as part of the Master Plan Project. The District selected Hazen to develop the Soscol Water Recycling Facility (SWRF) to provide NapaSan with strategic planning guidance and in-depth analysis of key focus areas. NapaSan intends to produce an actionable and strategic master plan that supports decision making over the next five-to-ten years while maintaining a 20-year planning horizon. the master Plan included key areas such as condition assessment, nutrients, biosolids, recycled water, capacity analysis.The Master Plan also includes an evaluation of vulnerabilities as well as susceptibility to climate change factors such as flood, wildfire risk and public safety power shutoffs.

Trabuco Canyon Water District Master Plan and Condition Assessment, Trabuco Canyon, CA

GIS Analyst. Mr. Eichmiller developed deliverables for this project which involves field and desktop condition assessment data for several lift stations, pump stations, water and wastewater treatment plants.

Hazen

Max Sugarman

Statistical Learning/Machine Learning

Mr. Sugarman serves as a Data and GIS Analyst in Hazen and Sawyer's Los Angeles Office. He has over 10 years of experience working in the civic, environmental, scientific, GIS, and education areas. Proficient in Python, GIS software, and Power BI visualization tools, he excels in delivering accurate technical research and analysis. He has worked on applied spatial machine projects to address homelessness in Los Angeles County, support mapping for autonomous vehicles, and develop analysis and asset management dashboards for local water agencies.

Education

M.S., Geographic Information Science, California State University Long Beach, Long Beach, CA

M.S., Science Education, Fordham University, New York, NY

B.S., Environmental Science and Resource Management, University of Washington, Seattle, WA

Areas of Expertise

- GIS
- Data Analysis

Professional Activities

URISA (Urban and Regional Information Systems Association)

Master Plan, Santa Clarity Valley Water, Santa Clarita, CA
Mr. Sugarman was a GIS and Data Analyst for the Santa Clarita Valley's master plan. The project involved the development of a maps, spatial analyses, and Power BI dashboards for asset management and water quality within the master plan. He supported the cleaning and processing of asset data, the mapping of assets and forced mains, the spatial analysis of pipelines in InfoAssetPlanner and ArcGIS Pro and developed a Power BI Dashboard for asset management. He also developed a custom Power BI Dashboard to visualize and summarize the water quality for the agency.

Experience Prior to Hazen

Locating Vulnerable Populations, Los Angeles County; Los Angeles, CA
Worked with Los Angeles County and Vexcel Imaging to identify encampments in high-risk disaster areas using GIS and machine learning techniques. Used Numpy, OpenCV, GDAL, Rasterio, and Matplotlib libraries in Python and Deep Learning in ArcGIS Pro to analyze aerial imagery, perform spectral analysis, and identify over 100 encampment locations. Tested model with Vexcel's Python API and ArcPy to reach a greater than 80% accuracy rate.

Tori Yokoyama, PE

Field Inspection Program

Mr. Yokoyama has extensive experience developing hydraulic models, performing hydraulic analyses, and preparing master plan reports for various public sector clients.

Education

BS, Civil Engineering, California State Polytechnic University, San Luis Obispo

Certification/License

Professional Engineer

Areas of Expertise

- Pipelines
- Pump Stations
- Reservoirs
- Master Plans
- Hydraulic Modeling

Professional Activities

CA-NV AWWA

OCWA

ASCE

Trabuco Canyon Water District Water Master Plan
Project Manager. The 2022 System-wide Master Plan Update and Condition Assessment provides comprehensive documentation, analysis, and recommendations for the water system, non-domestic water system, and sewer system including a calibrated GIS-based hydraulic model for each system. The Master Plan developed a Capital Improvement Program (CIP) that identifies the recommended projects needed to ensure that the District continues to provide safe, reliable, and efficient water, non-domestic water, and sewer service to its customers.

Leakage Reduction Project for American Water/California Energy Commission, California American Water, Los Angeles, San Diego, and Ventura, California Service Areas
Project Manager of the $1.5M project funded by California Energy Commission called "Demonstrating Innovative Leakage Reduction Strategies: Correlating Continuous Acoustic Monitoring, Satellite Imagery and Flow Sensitive Pressure Reducing Valve Systems." The project deployed multiple leak detection and leak prevention technologies in California American Water systems in Los Angeles, San Diego, and Ventura. Technologies were deployed over a 12-month duration. Tasks included coordinating field work conducted by vendors and California American operations staff, logging and maintaining field results, developing a graphical user interface to track technologies and leak reporting, working with vendors to improve technologies, and preparing a final report.

Chino Hills Water and Recycled Water Master Plan, Chino Hills, CA
Project Manager. Hazen and Sawyer completed the City's Water and Recycled Water Master Plan Update. The City's goal was to create a comprehensive updated Citywide water and recycled water master plan complete with a new GIS-based hydraulic model and mapping tools. The document and the new modeling system is a guide for planning, operating, and maintaining the City's water and recycled water systems and infrastructure. The proposed CIP evaluated the City's water and recycled water system and identified recommended projects through year 2045. Major scope elements included hydraulic model development and calibration (InfoWater), system analysis, condition assessment of high priority facilities, Urban Water Management Plan, Water Shortage Contingency Plan, Master Plan final report, and a prioritized Capital Improvement Program.

Hazen

Arthur Moncrieffe, Jr., EIT

Statistical Analysis/Machine Learning

Mr. Moncrieffe specializes in GIS geoprocessing, model building, and data analysis.

He has extensive experience in data modeling with Power BI, coding and scripting. He leveraged these skills to update an RO system data model for the Sweetwater Authority and is currently working on the development of a LSL Inventory for Sweetwater Authority, CA.

Lead and Copper Rule Revisions, Los Angeles Department of Water and Power, Los Angeles CA
Records Research & Gap Analysis and Service Line Inventory/GIS for LADWP's evaluation of historical lead service line use and code reviews, development of an LSL inventory in GIS, use of alternative verification methods (predictive modeling and geospatial statistical analysis), funding assistance, and communications with DDW.

Lead and Copper Rule Revisions, Sweetwater Authority, San Diego, CA
Service Line Inventory/GIS on Sweetwater Authority's LCRR Compliance Program, involving creation of an LSL Inventory, LSL identification action plan, compliance sampling plan, and development of sampling protocols for schools and childcare facilities.

Water Master Plan Update and GIS Conversion Project, City of Chino, Chino, San Bernardino County, CA
Assistant Engineer. Key components of this project include the creation of a GIS geodatabase of the City's potable water distribution system, preparation of a Water Master Plan Report, and completion of a Risk and Resiliency Assessment for compliance with America's Water Infrastructure Act requirements.

Facility Planning Services - Task 1 2nd Aqueduct Diversion Complex and Operations Planning Study, San Diego County Water Authority, CA
Arthur created GIS figures for final report. This included detailed site maps of the Diversion Complex, environmental figures to be used in CEQA analyses of project alternatives, site layouts delineating footprint, piping alignments, property acquisition, construction and final facility access, and construction details to facilitate detailed alternatives analyses and cost estimates.

Facility Planning Services - Task 2 First Aqueduct Bifurcations Study, San Diego County Water Authority, CA
Arthur created GIS figures of bifurcation locations, GIS site visit figures and GIS construction access figures. Arthur assist in the bifurcation rehabilitation alternatives evaluation by establishment of criteria, coordination weighting with the client, and computing weighted scores on the prioritization of bifurcation projects.

Education

MS, Environmental Engineering, University of Pittsburgh

Certification/License

Engineer-in-Training

NASSCO Certified: PACP, LACP, and MACP

Areas of Expertise

- Water/Wastewater Pipeline Design
- Sewer Rehabilitation/Asset Management
- AutoCAD
- GIS
- Primavera P6
- PowerBI
- InfoWater

Professional Activities

American Society of Civil Engineers

Water Environment Federation

Hazen

Malia Turner

Statistical Analysis/Machine Learning

Ms. Turner is a principal business analyst at Hazen. After finishing her master's degree in analytics, she is now working with the asset management group conducting data analysis and creating data visualization solutions for our clients.

Education

MS in Analytics, North Carolina State University

BS- International Economics and Spanish, University of Kentucky

Technical Publications

Turner, M. *"Future Pensions to Diminish – Bank of Spain Assessment Sparks Backlash."* U.S. Embassy Madrid, Madrid, Spain, July 2015

Turner, M., Hagan, H., Wood, R., McCarthy, B., Yong, K. *"Putin' All Your Eggs in One Basket"* An assessment of Russia's economy as a rising power. University of Kentucky, Lexington, KY, May 2016

Turner, M., Woldorff, C., Dean, A., Boozer, C. "*Raleigh Water Sewer Main Failure Prediction and Analysis."* North Carolina State University, Raleigh, NC, April 2021

Lead and Copper Rule Revisions, Los Angeles Department of Water and Power, Los Angeles CA

Ms. Turner performed Predictive Modeling for LADWP's evaluation of historical lead service line use and code reviews, development of an LSL inventory in GIS, use of alternative verification methods (predictive modeling and geospatial statistical analysis), funding assistance, and communications with DDW.

Raleigh Water Sewer Main Failure Prediction and Analysis, Raleigh, NC

Practicum Team Lead. Led a team of 3 other graduate students at the Institute for Advanced Analytics at North Carolina State University through an 8-month practicum project partnering with Raleigh Water. The project centered on 4 objectives relating to sewer pipeline assessment and predicting the condition of 1,800 miles of existing sewer pipes. The primary objective was to assign failure probabilities to all uninspected sewer mains within Raleigh Water's system based on GIS pipe attributes and sewer main inspection data. Advanced data inference algorithms were used to clean and infer missing data allowing for more accurate machine learning model predictions. Machine learning algorithms were used to identify key variables in sewer main failure. The models were also ensembled to assign predicted probabilities of sewer main failure to all existing sewer pipes. The predictive model will aid Raleigh Water in more quickly identifying failing sewer mains to prevent major disruptions to sewer service in the Raleigh area. An interactive Power BI Dashboard presents the predictive model results giving Raleigh Water the ability to view sewer pipeline metrics and inspection status.

Phase 1: Lead Service Line Replacement Plan and Inventory Assistance, Miami-Dade County Water and Sewer Department, FL

Business Analyst. Miami-Dade County is one of the largest public utilities in the United States, serving 2.3 million residents. Hazen is assisting the County with developing a Lead Service Line (LSL) Inventory and Replacement Plan. This includes the development of a service line identification strategy using a likelihood analysis, extensive collaboration with the County to develop identification criteria, and the establishment of a detailed replacement strategy.

Opportunity Number

Hazen

Anissa Rafeh

Customer Communications

Ms. Rafeh is a versatile, deadline-focused communications strategist who specializes in creating and disseminating important and technical environmental information to varying audiences through a variety of digital and print channels.

She has led numerous outreach campaigns at the local and national level on a wide range of environmental topics, including PFAS, Lead and Copper Rule Revisions, harmful algal blooms, and updated water quality criteria, to name a few.

Lead and Copper Rule Revision Outreach, City of Tempe, AZ
Communications Lead. Coordinated with the Hazen Drinking Water team to develop outreach materials for the City of Tempe in Arizona. Outreach materials drafted and reviewed included a two-page educational handout on the health effects of lead and a step-by-step guide on how to reduce exposure. A survey on service line materials was drafted and a postcard created to send to residents explaining the survey's intent, with a QR code that leads straight to the online survey. A three-page sampling instruction handout was written for digital and print use. Worked with the graphic design team to develop a graphic of a Tempe home to facilitate service line identification as well as a graphic to help explain the sampling procedure.

Virginia PFAS Task Force, Commonwealth of Virginia, VA
Lead Public Information Officer. Primary communications lead for the task force, which consisted of the Virginia Department of Environmental Quality (DEQ), the Virginia Department of Health (VDH), and Henrico County. Communications materials included a detailed, interactive story map that pinpointed all the locations of PFAS exceedances in the state, putting the numbers in context so the general public could understand, and also included definitions of the various types of PFAS. A comprehensive PFAS webpage was published, which hosted all outreach materials, including a digital information handout, an infographic detailing the sources of PFAS, an FAQ document, and links to webinars hosted by members of the task force. Coordinated all media inquiries, drafted news releases, social media posts and email campaigns as needed or required.

Education

MA, Political Studies and Public Administration, American University of Beirut

BA, Political Science, University of Richmond

Areas of Expertise

- Campaign strategy
- Writing and editing outreach materials
- Social media strategy and content development
- Web content development

Professional Affiliations

Public Relations Society of America (PRSA) of Richmond: 2017-2022

Hazen

Megan Watt, EIT

LSL Replacement Plan

Ms. Watt serves as an Assistant Engineer II for Hazen and Sawyer's Los Angeles Office. With 4 years of civil engineering experience, Ms. Watt has assisted in a wide range of water, wastewater, and environmental projects.

Education

B.S., Civil and Environmental Engineering, Rutgers University, New Brunswick, NJ

Certification/License

Engineer in Training

Professional Affiliations

ASCE LA YMF – Community Service Chair

Ms. Watt has experience in water supply, lead service line impacts and PFAS and Perchlorate emerging contaminants. She has been involved in major complex local, state, and federal projects. Her exceptional ArcGIS and computer skills have been critical in many engineering tasks.

Lead and Copper Rule Revisions, Los Angeles Department of Water and Power, Los Angeles CA
Ms. Watt served as Service Line Inventory/GIS for LADWP's evaluation of historical lead service line use and code reviews, development of an LSL inventory in GIS, use of alternative verification methods (predictive modeling and geospatial statistical analysis), funding assistance, and communications with DDW.

Lead and Copper Rule Revisions, Sweetwater Authority, San Diego, CA
Ms. Watt developed the Identification Action Plan and Sampling Plan for Sweetwater Authority's LCRR Compliance Program, involving creation of an LSL Inventory, LSL identification action plan, compliance sampling plan, and development of sampling protocols for schools and childcare facilities.

Lead Service Line Replacement Program, City of Newark, Newark, NJ
Ms. Watt provided engineering support for City of Newark's $185 million Lead Service Line Replacement (LSLR) Program the goal of the program is to remove 24,000+ lead service lines throughout the city, replacing them with copper pipes to ensure clean, safe and reliable drinking water at no cost to all Newark residents. Ms. Watt managed applications to the program, contacted residents, reviewed eligible homes, and conducted monthly sampling at designated homes. The original 8-year program began in May 2018 and was accelerated in September 2019 to be completed within 24 to 30 months.

Hazen

Melanie Warren, PE

Sampling Plans

Ms. Warren is a registered professional engineer in Colorado and her professional background includes consulting as well as positions at public utilities in their treatment engineering and water quality departments.

With over 4 years of experience, she has held roles in program management and project engineering roles for lead service line replacement programs, lift stations, treatment plants, water resources conveyance infrastructure, and storm drain, sewer collection, and water distribution systems.

Denver Water Lead Reduction Program, Denver Water, Denver, CO
Ms. Warren served as the Project Element Manager leading the water quality element for Denver Water's 15-year, $12 million dollar per year lead service line replacement program. Her responsibilities extended across all five key components of the program, necessitating collaboration with the various teams: pH adjustment and optimized corrosion control treatment, lead service line inventory development and management, lead service line replacement, the filter program, and customer communications, outreach, and engagement.

Throughout Years 1 to 3, Ms. Warren played a fundamental role in program start-up and implementation, overseeing a $3.7 million dollar contract between Denver Water and its Subcontractors. Her expertise spans a range of areas, including developing Request for Proposal (RFP) documents for water quality distribution and analysis, establishing key element workflows and processes, using results from lead levels ininvestigative water quality samples to make informed decisions about service line materials, and ensuring effective customer communications.

As an element lead, she was responsible for drafting program contracts, change orders, and addendums, maintaining the element's budget and fee, calculating program metrics for dashboards and reporting, developing and managing water quality kit distribution schedules, developing and performing quality assurance / quality control procedures on water quality data transfer, and preparing program management plans, technical memorandum, and regulatory reports for Colorado Department of Public Health and Environment (CDPHE) and the Environmental Protection Agency (EPA).

Education

M.S., Environmental Engineering, University of Colorado Boulder, Boulder, CO

B.S., Environmental Engineering, University of Colorado Boulder, Boulder, CO

Minor in Business, University of Colorado Boulder, Boulder, CO

Certificate in Water Engineering & Management, University of Colorado Boulder, Boulder, CO

Certificate in Global Engineering, University of Colorado Boulder, Boulder, CO

Certification/License

Professional Engineer

Areas of Expertise

- Drinking Water Treatment
- Wastewater Treatment
- Lift Station Design
- Sewer and Storm Drain Collection Systems
- Water Distribution Systems
- Condition Assessment
- Services During Construction
- Database Management
- Water Quality and Corrosion Research

Professional Activities

WEF

California Water Environment Association (CWEA)

WateReuse California

AWWA

WateReuse Colorado (previous)

Engineers Without Borders

Hazen

Lisa Hulette, PMP

Funding

Ms. Hulette serves as Hazen's Western Region's Funding Lead. She brings more than 20 years of experience leveraging public and private funding for multi-benefit programs and successfully fostering collaborations between diverse stakeholders.

Education

MBA, Sonoma State University, Rohnert Park, CA

BS, Environmental Science, Sonoma State University, Rohnert Park, CA

Certification/License

PMP

Areas of Expertise

- Grant development and proposal writing
- Program development
- Project Managemen

Prior to joining Hazen, Lisa was the Grant Manager for the County of Sonoma and led a team that successfully secured a $37 Million grant from FEMA's Building Resilience Infrastructure and Communities Grant Program, which was one of thirteen awarded through this funding and announced by President Biden as a model project to mitigate regional hazards in the western United States.

Sweetwater Authority, CA
State Revolving Fund Loan for Lead Service Line Inventory and Replacement

Los Angeles Department of Water and Power, CA
State Revolving Fund Loan for Lead Service Line Inventory and Replacement

Indio Water Authority, CA
Developing a funding strategy (i.e., loans and grants) to address emerging contaminants (i.e., PFAS and Chromium6)

Water Replenishment District, CA
State Revolving Fund Loan and U.S. Bureau of Reclamation Desalination Construction Grant

Union Sanitary District, CA
Developed a grant funding strategy and wrote and submitted a successful grant application to the U.S. Environmental Protection EPA's San Francisco Bay Water Quality Improvement Program for USD Enhanced Treatment and Site Upgrade project.

County of Napa, CA
Led a multi-department team at the County of Napa and in coordination with the Napa County Firewise Foundation to request $50 M from FEMA's Building Resilient Infrastructure and Communities (BRIC) grant program with the goal of reducing risk from wildfire and flooding by hardening infrastructure and reducing hazardous fuel loads.

City of Sebastopol, CA
Developing a funding strategy (i.e., loans and grants) to increase the City's water storage capacity to meet the demand of an expanding local population.

San Francisco Public Utilities Commission
Leading a team to identify appropriate and available funding opportunities for the PUC's highest priority capital projects.

Hazen

Appendix B

Professional Services Agreement Acknowledgement

Hazen has reviewed the sample copy of MWDOC's professional services agreement provided as an attachment to the RFP and is willing to accept the agreement terms and conditions, with the following modifications respectfully requested. Should Hazen be selected for this project, we would negotiate final contract language with MWDOC.

I. PURPOSE AND SCOPE OF WORK

Paragraph B, Independent Contractor

Revise second paragraph to read, "**CONSULTANT** shall conduct backgrounds checks if required by **DISTRICT**."

V. TERMINATION

Revise paragraph as follows:

Each PARTY may terminate this AGREEMENT at any time upon thirty (30) days written notice to the other PARTY, except as provided otherwise in Exhibit "B." In the event of termination: (1) all work product prepared by or in custody of **CONSULTANT** shall be promptly delivered to **DISTRICT**; (2) **DISTRICT** shall pay **CONSULTANT** all payments for services performed and due under this AGREEMENT on the effective date of termination; (3) **CONSULTANT** shall promptly submit a final invoice to the **DISTRICT**, which shall include any and all non-cancelable obligations owed by **CONSULTANT** at the time of termination, (4) neither PARTY waives any claim of any nature whatsoever against the other for any breach of this AGREEMENT; and; (6) **DISTRICT** and **CONSULTANT** agree to exert their best efforts to expeditiously resolve any dispute between the PARTIES.

VI. INSURANCE REQUIREMENTS

Paragraph C, Other Insurance

Revise paragraph to include the word "NEGLIGENT" as follows:

CONSULTANT will file with **DISTRICT**, before beginning professional SERVICES, ACORD certificates of insurance, or other certificates of insurance satisfactory to **DISTRICT**, evidencing general liability coverage of not less than $1,000,000 per occurrence for bodily injury, personal injury and property damage; automobile liability (owned, scheduled, non-owned or hired) of at least $1,000,000 for bodily injury and property damage each accident limit; workers' compensation (statutory limits) and employer's liability ($1,000,000) (if applicable); requiring 30 days (10 days for non payment of premium) notice of cancellation to **DISTRICT**. For the coverage required under this paragraph, the insurer(s) shall waive all rights of subrogation against **DISTRICT**, and its directors, officers, agents, employees, attorneys, consultants or volunteers. **CONSULTANT**'s insurance coverage shall be primary insurance as respects **DISTRICT**, its directors, officers, agents, employees, attorneys, consultants and volunteers for all liability arising out of the NEGLIGENT activities performed by or on behalf of the **CONSULTANT**. Any insurance pool coverage, or self-insurance maintained by **DISTRICT**, and its directors, officers, agents, employees, attorneys, consultants or volunteers shall be excess of the **CONSULTANT**'s insurance and shall not contribute to it.

VII. INDEMNIFICATION

Revise this section as follows:

To the fullest extent permitted by applicable law Civil Code Section 2782.8, **CONSULTANT** shall indemnify and hold harmless **DISTRICT**, its officers, Directors and employees and authorized volunteers from and against claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of **CONSULTANT** and shall not exceed **CONSULTANT**'s proportionate percentage of fault.

XII. OWNERSHIP OF DOCUMENTS AND DISPLAYS

Add the following sentence at the end of first paragraph: "Reuse of documents by **DISTRICT** or others on extensions or modifications of this Project or on other sites or use by others on this Project, shall be at the user's sole risk, without liability to **CONSULTANT**."

XVI. ATTORNEYS' FEES

Revise paragraph as follows:

In any action at law or in equity to enforce any of the provisions or rights under this AGREEMENT, the prevailing PARTY shall be entitled to recover from the unsuccessful PARTY all costs, expenses and reasonable attorney's fees incurred therein by the prevailing PARTY as determined by a court of competent jurisdiction.

Hazen

Hazen and Sawyer
800 West 6th Street, Suite 400 • Los Angeles, CA 90015

Proposal Amendment

Assistance with Completion and Submission of Lead and Copper Rule Revisions Service Line Inventories for a Number of Orange County Agencies

RFP ENG. 2023-01 | September 13, 2023

Hazen

Section No. 2

Project Work Plan

The information presented in this document supersedes the Task 10 - Manage (Field) Inspections/ Test Pitting/ Meter Inspections description and associated cost estimates presented in the original proposal submitted by Hazen and Sawyer (Hazen) on July 26, 2023, in response to RFP ENG. 2023-01. At the request of MWDOC, Task 10 has been divided into three separate task options to provide greater flexibility to the Agencies. The three tasks include:

- **Task 10A:** Manage (Field) Inspections/ Test Pitting/ Meter Inspections.
- **Task 10B:** Field Inspection App Development and Training.
- **Task 10C:** Field Inspection App Development and Training, and Data Integration.

Task 10A

PHASE 2 Manage (Field) Inspections/ Test Pitting/ Meter Inspections

Mobile App: After deploying the ESRI Solutions Lead Service Line Inventory Database, Hazen will develop a customized ArcGIS Field Maps app (Field App) to directly integrate field verification findings into the Lead Service Line Inventory Database. This Field App will cover the required service line verification points as required by DDW. Service line sites may be assigned to Blaine Tech, as desired, within the app platform. Instructions for utilization of the Field App will be included in Task 1's Training Materials that will be prepared for Blaine Tech.

Training Materials: Hazen will prepare Training Materials for field verification methods describing the locations for service line field verification on the customer-side and utility-side, per DDW. Training Materials will further describe differences in service line materials, responses to field obstacles, and other pertinent information to ensure successful completion of the field work.

Identification Review: Hazen will coordinate with Blaine Tech to review Field App verification submissions in the ArcGIS Online Field Maps QC platform. Each submission, as reviewed, will be designated as one of the following: inspected – submitted, inspected – completed, inspected – in progress, or inspected – rejected. Hazen will track Field App fields and high-level Blaine Tech progress in the Field Maps Dashboard. Hazen will provide field assistance as needed and as requested by the Agency.

Managing Customer Coordination: Throughout the field effort, customer education developed during Task 7 will be provided, as requested. Permission gathering may be coordinated early on during Task 8 with property owners through the Customer Survey. Otherwise, permission gathering is recommended at the agency-level involving existing Municipal Code review. Lastly, all customer data and activities will be captured in the Field App following the customized app development process.

Deliverables

- Mobile Field App.
- Field Verification QC Dashboard.
- Customer education, support, permission gathering or data capturing via OC LCRR Water Agencies Partnership website.

Assumptions

- The Field App will be developed through ArcGIS Field Maps app available in the Apple and Google Play app stores. The field app can collect photos of service lines and tests conducted.
- The rate provided in Task 11 will be used for site inspections. The number of site inspections to be determined.
- Costs associated with hosting all data in ESRI ArcGIS will be covered by MWDOC or the Water Agency.

PHASE 2 Task 10B

Field App Development and Training

Mobile App: After deploying the ESRI Solutions Lead Service Line Inventory Database, Hazen will develop a customized ArcGIS Field Maps app to directly integrate field verification findings into the Lead Service Line Inventory Database. This Field Maps app will cover the required service line verification points as required by DDW.

Training Materials: Hazen will prepare Training Materials for field verification methods describing the locations for service line field verification on the customer-side and utility-side, per DDW. Training Materials will further describe differences in service line materials, responses to field obstacles, and other pertinent information to ensure successful completion of the field work.

Deliverables

- Mobile Field App.
- Training Materials.

Assumptions

- The Field App will be developed through ArcGIS Field Maps app available in the Apple and Google Play app stores. The field app can collect photos of service lines and tests conducted.
- Costs associated with hosting all data in ESRI ArcGIS will be covered by MWDOC or the Water Agency.
- Customer engagement is not included in this task.
- Field program management services are not included in this task.
- Field inspections are not included in this task.

PHASE 2 Task 10C

Field App Development, Training, and Data Integration

Mobile App: After deploying the ESRI Solutions Lead Service Line Inventory Database, Hazen will develop a customized ArcGIS Field Maps app to directly integrate field verification findings into the Lead Service Line Inventory Database. This Field Maps app will cover the required service line verification points as required by DDW.

Training Materials: Hazen will prepare Training Materials for field verification methods describing the locations for service line field verification on the customer-side and utility-side, per DDW. Training Materials will further describe differences in service line materials, responses to field obstacles, and other pertinent information to ensure successful completion of the field work.

Data Integration: Hazen will provide scripting to automatically extract data from ESRI ArcGIS in the agency's own format to be readily integrated into the Hazen developed database and inventory.

Deliverables

- Mobile Field App.
- Training Materials.
- Scripting.

Assumptions

- The Field App will be developed through ArcGIS Field Maps app available in the Apple and Google Play app stores. The field app can collect photos of service lines and tests conducted.
- Costs associated with hosting all data in ESRI ArcGIS will be covered by MWDOC or the Water Agency.
- Customer engagement is not included in this task.
- Field program management services are not included in this task.
- Field inspections are not included in this task.

Tasks 10A – 10C Budget Summary Proposal

Category	Level of Effort		Cost Savings (Per Agency) for 10+ Agency Agreements
10a. Manage (Field) Inspections/Test Pitting/Meter Inspections	$76,630	High	25%
	$63,840	Med	
	$51,050	Low	
10b. Field App Development and Training	$38,060	High	15%
	$31,270	Med	
	$24,490	Low	
10c. Field App Development, Training, and Data Integration	$46,820	High	10%
	$38,640	Med	
	$30,460	Low	

Level of Effort Assumptions

Tasks 10A - 10C: Level of Effort Considerations:

- Low level of effort: No. of Service Connections = 1-20,000
- Medium level of effort: No. of Service Connections = 20,001-40,000
- High level of effort: No. of Service Connections = 40,001+

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Tasks 10A – 10C Cost Estimate Breakdown

Hazen	Program Manager	Technical Advisor	Project Engineer	GIS/IT	Assistant Engineer II	Assistant Engineer I	Hazen			
							Labor Hours	Labor Cost	ODCs	TOTAL FEE (LOW LEVEL OF EFFORT)
	$325	$290	$200	$175	$170	$150				
Task 10A: Manage (Field) Inspections / Test Pitting / Meter Inspections	10	4	26	32	112	112	296	$ 51,050	$ -	**$51,050**
Task 10B: Field App Development and Training	4	2	12	16	60	48	142	$ 24,480	$ -	**$24,480**
Task 10C: Field App Development, Training, and Data Integration	6	12	12	26	64	48	168	$ 30,460	$ -	**$30,460**

Hazen	Program Manager	Technical Advisor	Project Engineer	GIS/IT	Assistant Engineer II	Assistant Engineer I	Hazen			
							Labor Hours	Labor Cost	ODCs	TOTAL FEE (MEDIUM LEVEL OF EFFORT)
	$325	$290	$200	$175	$170	$150				
Task 10A: Manage (Field) Inspections / Test Pitting / Meter Inspections	12	6	32	40	140	140	370	$ 63,840	$ -	**$63,840**
Task 10B: Field App Development and Training	6	3	16	20	75	60	180	$ 31,270	$ -	**$31,270**
Task 10C: Field App Development, Training, and Data Integration	8	16	16	32	80	60	212	$ 38,640	$ -	**$38,640**

Hazen	Program Manager	Technical Advisor	Project Engineer	GIS/IT	Assistant Engineer II	Assistant Engineer I	Hazen			
							Labor Hours	Labor Cost	ODCs	TOTAL FEE (HIGH LEVEL OF EFFORT)
	$325	$290	$200	$175	$170	$150				
Task 10A: Manage (Field) Inspections / Test Pitting / Meter Inspections	14	8	38	48	168	168	444	$ 76,630	$ -	**$76,630**
Task 10B: Field App Development and Training	8	4	20	24	90	72	218	$ 38,060	$ -	**$38,060**
Task 10C: Field App Development, Training, and Data Integration	10	20	20	38	96	72	256	$ 46,820	$ -	**$46,820**

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Hazen

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Exhibit C

List of Participating Agencies[1]

MWDOC Choice Shared Services Program for Lead and Copper Rule Revision Service Line Inventory Development

	Agency
1	Anaheim, City
2	El Toro Water District
3	Fountain Valley, City
4	Fullerton, City
5	Garden Grove, City
6	La Habra, City
7	La Palma, City
8	Orange, City
9	San Clemente, City
10	Seal Beach, City
11	South Coast Water District
12	Westminster, City
13	Yorba Linda Water District

[1] The list of PARTICIPATING AGENCIES is subject to modification by addendum executed by the PARTIES.

Exhibit B

Exhibit B – Participating Agency Task Selections and Costs

Project Name: Lead and Copper Rule Revisions Service Line Inventories **Agency:** Garden Grove **Date:** 10/30/2023 Hazen	**Selection**	**Subtotal**	**Sbutotal Cost Savings**	**Total**
Task 1: Project Administration and Progress Reporting	Task 1 Low	$ 26,830	$ 10,732	$ 16,098
Task 2: Assistance with Data Gathering, Records Review, and Historical Code Review		$ -	$ -	$ -
Task 3: Develop Lead Service Line Inventory Database and Initial Inventory	Task 3 Medium	$ 36,510	$ 7,302	$ 29,208
Task 4: Develop Approach for Alternative Material Verification Methods and Submit to DDW for Approval	Task 4 Medium	$ 26,900	$ 6,725	$ 20,175
Task 5: Apply Division of DDW Approved Alternative Verification Methods	Task 5 Medium	$ 7,695	$ -	$ 7,695
Task 6: Assistance with Data Analysis	Task 6 Medium	$ 8,060	$ 806	$ 7,254
Task 7: Customer Communications	Task 7 Medium	$ 11,440	$ -	$ 11,440
Task 8: Develop and Implement Private Property Owner Self-Verification	Task 8 Medium	$ 38,980	$ -	$ 38,980
Task 9: Develop LSL Replacement Plan	Task 9 Medium	$ 36,020	$ -	$ 36,020
Task 10A: Manage (Field) Inspections/ Test Pitting/ Meter Inspections	Task 10A Medium	$ 63,840	$ -	$ 63,840
Task 11: Provide Field Inspection Personnel to Assist with Physical Visual Verifications (Hourly Rate)	Task 11 Medium	$ -	$ -	$ -
Task 12: Population of DDW Inventory Template and SLI Submission	Task 12 Low	$ 4,870	$ -	$ 4,870
Total Fee		**$ 261,145**	**$ 25,565**	**$ 235,580**