CITY OF SANTA ROSA
PROFESSIONAL SERVICES AGREEMENT
WITH EKI ENVIRONMENT & WATER, INC.
AGREEMENT NUMBER _____

This "Agreement" is made as of this ____day of_____, 2024 by and between the City of Santa Rosa, a municipal corporation ("City"), and EKI Environment & Water Inc., a California Corporation ("Consultant").

R E C I T A L S

A. City desires to have updated water demand and conservation projections prepared for the following members of the Sonoma Marin Saving Water Partnership: Cities of Santa Rosa, Cotati, Rohnert Park, Petaluma, Sonoma, Town of Windsor, Marin Municipal Water District, North Marin Water District, and Valley of the Moon Water District (“Water Contractors”). The services generally include data review and analysis, development of demand projections, analysis of demand management measures and programs for each Water Contractor, and preparation of individual final reports suitable for including with each Water Contractor’s 2025 Urban Water Management Plan.

B. City desires to retain a qualified firm to conduct the services described above in accordance with the Scope of Services as more particularly set forth in Exhibit A to the Agreement.

C. Consultant represents to City that it is a firm composed of highly trained professionals and is fully qualified to conduct the services described above and render advice to City in connection with said services.

D. The parties have negotiated upon the terms pursuant to which Consultant will provide such services and have reduced such terms to writing.

AGREEMENT

NOW, THEREFORE, City and Consultant agree as follows:

1. SCOPE OF SERVICES

Consultant shall provide to City the services described in Exhibit A ("Scope of Services and Cost Estimate"). Consultant shall provide these services at the time, place, and in the manner specified in Exhibit A. Exhibit A is attached hereto for the purpose of defining the manner and scope of services to be provided by Consultant and is not intended to, and shall not be construed so as to, modify or expand the terms, conditions or provisions contained in this Agreement. In the event of any conflict between this Agreement and any terms or conditions of any document prepared or provided by Consultant and made a part of this Agreement, including without limitation any document relating to the scope of services or payment therefor, the terms of this Agreement shall control and prevail.

2. COMPENSATION

a. City shall pay Consultant for services rendered pursuant to this Agreement at the rates, times and in the manner set forth in Exhibit A. Consultant shall submit monthly statements to City which shall itemize the services performed as of the date of the statement and set forth a progress report, including work accomplished during the period, percent of each task completed, and planned effort for the next period. Invoices shall identify personnel who have worked on the services provided, the number of hours each worked during the period covered by the invoice, the hourly rate for each person, and the percent of the total project completed, consistent with the rates and amounts shown in Exhibit A.

b. The payments prescribed herein shall constitute all compensation to Consultant for all costs of services, including, but not limited to, direct costs of labor of employees engaged by Consultant, travel expenses, telephone charges, copying and reproduction, computer time, and any and all other costs, expenses and charges of Consultant, its agents and employees. In no event shall City be obligated to pay late fees or interest, whether or not such requirements are contained in Consultant's invoice.

c. Notwithstanding any other provision in this Agreement to the contrary, the total maximum compensation to be paid for the satisfactory accomplishment and completion of all services to be performed hereunder shall in no event exceed the sum of five hundred forty-six thousand eight hundred four dollars and no cents ($546,804.00). The City's Chief Financial Officer is authorized to pay all proper claims from Charge Number 55420

3. DOCUMENTATION; RETENTION OF MATERIALS

a. Consultant shall maintain adequate documentation to substantiate all charges as required under Section 2 of this Agreement.

b. Consultant shall keep and maintain full and complete documentation and accounting records concerning all extra or special services performed by it that are compensable by other than an hourly or flat rate and shall make such documents and records available to authorized representatives of City and Water Contractors for inspection at any reasonable time.

c. Consultant shall maintain the records and any other records related to the performance of this Agreement and shall allow City and Water Contractors access to such records during the performance of this Agreement and for a period of four (4) years after completion of all services hereunder.

4. INDEMNITY

a. Consultant shall, to the fullest extent permitted by law, indemnify, protect, defend and hold harmless City and Water Contractors, and their respective employees, officials and agents ("Indemnified Parties") from all claims, demands, costs or liability (including liability for claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, expenses or costs of any kind, interest, defense costs, and expert witness fees), that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of Consultant, its officers, employees, or

agents, in said performance of professional services under this Agreement, excepting only liability arising from the sole negligence, active negligence or intentional misconduct of City and Water Contractors.

b. The existence or acceptance by City of any of the insurance policies or coverages described in this Agreement shall not affect or limit any of City's or Water Contractor's rights under this Section 4, nor shall the limits of such insurance limit the liability of Consultant hereunder. This Section 4 shall not apply to any intellectual property claims, actions, lawsuits or other proceedings subject to the provisions of Section 17(b), below. The provisions of this Section 4 shall survive any expiration or termination of this Agreement.

5. INSURANCE

a. Consultant shall maintain in full force and effect all of the insurance coverage described in, and in accordance with, Attachment One, "Insurance Requirements." Maintenance of the insurance coverage set forth in Attachment One is a material element of this Agreement and a material part of the consideration provided by Consultant in exchange for City's agreement to make the payments prescribed hereunder. Failure by Consultant to (i) maintain or renew coverage, (ii) provide City notice of any changes, modifications, or reductions in coverage, or (iii) provide evidence of renewal, may be treated by City as a material breach of this Agreement by Consultant, whereupon City shall be entitled to all rights and remedies at law or in equity, including but not limited to immediate termination of this Agreement. Notwithstanding the foregoing, any failure by Consultant to maintain required insurance coverage shall not excuse or alleviate Consultant from any of its other duties or obligations under this Agreement. In the event Consultant, with approval of City pursuant to Section 6 below, retains or utilizes any subcontractors or subconsultants in the provision of any services to City under this Agreement, Consultant shall assure that any such subcontractor has first obtained, and shall maintain, all of the insurance coverages set forth in the Insurance Requirements in Attachment One.

b. Consultant agrees that any available insurance proceeds broader than or in excess of the coverages set forth in the Insurance Requirements in Attachment One shall be available to the additional insureds identified therein.

c. Consultant agrees that the insurance coverages and limits provided under this Agreement are the greater of: (i) the coverages and limits specified in Attachment One, or (ii) the broader coverages and maximum limits of coverage of any insurance policy or proceeds available to the name insureds.

6. ASSIGNMENT

Consultant shall not assign any rights or duties under this Agreement to a third party without the express prior written consent of City, in City's sole and absolute discretion. Consultant agrees that the City shall have the right to approve any and all subcontractors and subconsultants to be used by Consultant in the performance of this Agreement before Consultant contracts with or otherwise engages any such subcontractors or subconsultants.

7. NOTICES

Except as otherwise provided in this Agreement, any notice, submittal or communication required or permitted to be served on a party, shall be in writing and may be served by personal delivery to the person or the office of the person identified below. Service may also be made by mail, by placing first-class postage, and addressed as indicated below, and depositing in the United States mail to:

City Representative:	Consultant Representative:
Claire Nordlie Sustainability Coordinator 69 Stony Circle Santa Rosa, CA 95401 Desk Phone: 707-543-3962 Email: cnordlie@srcity.org	Tina Wang, PE Water Resources Engineer 2001 Junipero Serra Blvd., Suite 300 | Daly City, CA 94014 Desk Phone: 650-292-9100 Email: twang@ekiconsult.com

8. INDEPENDENT CONTRACTOR

a. It is understood and agreed that Consultant (including Consultant's employees) is an independent contractor and that no relationship of employer-employee exists between the parties hereto for any purpose whatsoever. Neither Consultant nor Consultant's assigned personnel shall be entitled to any benefits payable to employees of City. City is not required to make any deductions or withholdings from the compensation payable to Consultant under the provisions of this Agreement, and Consultant shall be issued a Form 1099 for its services hereunder. As an independent contractor, Consultant hereby agrees to indemnify and hold City harmless from any and all claims that may be made against City based upon any contention by any of Consultant's employees or by any third party, including but not limited to any state or federal agency, that an employer-employee relationship or a substitute therefor exists for any purpose whatsoever by reason of this Agreement or by reason of the nature and/or performance of any services under this Agreement.

b. It is further understood and agreed by the parties hereto that Consultant, in the performance of Consultant's obligations hereunder, is subject to the control and direction of City as to the designation of tasks to be performed and the results to be accomplished under this Agreement, but not as to the means, methods, or sequence used by Consultant for accomplishing such results. To the extent that Consultant obtains permission to, and does, use City facilities, space, equipment or support services in the performance of this Agreement, this use shall be at the Consultant's sole discretion based on the Consultant's determination that such use will promote Consultant's efficiency and effectiveness. Except as may be specifically provided elsewhere in this Agreement, the City does not require that Consultant use City facilities, equipment or support services or work in City locations in the performance of this Agreement.

c. If, in the performance of this Agreement, any third persons are employed by Consultant, such persons shall be entirely and exclusively under the direction, supervision, and control of Consultant. Except as may be specifically provided elsewhere in this Agreement, all terms of employment, including hours, wages, working conditions, discipline, hiring, and discharging, or any other

terms of employment or requirements of law, shall be determined by Consultant. It is further understood and agreed that Consultant shall issue W-2 or 1099 Forms for income and employment tax purposes, for all of Consultant's assigned personnel and subcontractors.

d. The provisions of this Section 8 shall survive any expiration or termination of this Agreement. Nothing in this Agreement shall be construed to create an exclusive relationship between City and Consultant. Consultant may represent, perform services for, or be employed by such additional persons or companies as Consultant sees fit.

9. ADDITIONAL SERVICES

Changes to the Scope of Services shall be by written amendment to this Agreement and shall be paid on an hourly basis at the rates set forth in Exhibit A, or paid as otherwise agreed upon by the parties in writing prior to the provision of any such additional services.

10. SUCCESSORS AND ASSIGNS

City and Consultant each binds itself, its partners, successors, legal representatives and assigns to the other party to this Agreement and to the partners, successors, legal representatives and assigns of such other party in respect of all promises and agreements contained herein.

11. TERM, SUSPENSION, TERMINATION

a. This Agreement shall become effective on the date that it is made, set forth on the first page of the Agreement, and shall continue in effect until both parties have fully performed their respective obligations under this Agreement, unless sooner terminated as provided herein.

b. City shall have the right at any time to temporarily suspend Consultant's performance hereunder, in whole or in part, by giving a written notice of suspension to Consultant. If City gives such notice of suspension, Consultant shall immediately suspend its activities under this Agreement, as specified in such notice.

c. City shall have the right to terminate this Agreement for convenience at any time by giving a written notice of termination to Consultant. Upon such termination, Consultant shall submit to City an itemized statement of services performed as of the date of termination in accordance with Section 2 of this Agreement. These services may include both completed work and work in progress at the time of termination. City shall pay Consultant for any services for which compensation is owed; provided, however, City shall not in any manner be liable for lost profits that might have been made by Consultant had the Agreement not been terminated or had Consultant completed the services required by this Agreement. Consultant shall promptly deliver to City all documents related to the performance of this Agreement in its possession or control. All such documents shall be the property of City without additional compensation to Consultant.

12. TIME OF PERFORMANCE

The services described herein shall be provided during the period, or in accordance with

the schedule, set forth in Exhibit A. Consultant shall complete all the required services and tasks and complete and tender all deliverables to the reasonable satisfaction of City, not later than January 31, 2026.

13. STANDARD OF PERFORMANCE

Consultant shall perform all services performed under this Agreement in the manner and according to the standards currently observed by a competent practitioner of Consultant's profession in California. All products of whatsoever nature that Consultant delivers to City shall be prepared in a professional manner and conform to the standards of quality normally observed by a person currently practicing in Consultant's profession, and shall be provided in accordance with any schedule of performance. Consultant shall assign only competent personnel to perform services under this Agreement. Consultant shall notify City in writing of any changes in Consultant's staff assigned to perform the services under this Agreement prior to any such performance. In the event that City, at any time, desires the removal of any person assigned by Consultant to perform services under this Agreement, because City, in its sole discretion, determines that such person is not performing in accordance with the standards required herein, Consultant shall remove such person immediately upon receiving notice from City of the desire of City for the removal of such person.

14. CONFLICTS OF INTEREST

Consultant covenants that neither it, nor any officer or principal of its firm, has or shall acquire any interest, directly or indirectly, that would conflict in any manner with the interests of City or that would in any way hinder Consultant's performance of services under this Agreement. Consultant further covenants that in the performance of this Agreement, no person having any such interest shall be employed by it as an officer, employee, agent or subcontractor, without the written consent of City. Consultant agrees to avoid conflicts of interest or the appearance of any conflicts of interest with the interests of City at all times during the performance of this Agreement.

15. CONFLICT OF INTEREST REQUIREMENTS

a. **Generally.** The City's Conflict of Interest Code requires that individuals who qualify as "consultants" under the Political Reform Act, California Government Code sections 87200 *et seq*., comply with the conflict of interest provisions of the Political Reform Act and the City's Conflict of Interest Code, which generally prohibit individuals from making or participating in the making of decisions that will have a material financial effect on their economic interests. The term "consultant" generally includes individuals who make governmental decisions or who serve in a staff capacity.

b. **Conflict of Interest Statements**. The individual(s) who will provide services or perform work pursuant to this Agreement are "consultants" within the meaning of the Political Reform Act and the City's Conflict of Interest Code:

____ yes __x_ no *(check one)*

If "yes" is checked by the City, Consultant shall cause the following to occur within 30 days after execution of this Agreement:

(1) Identify the individuals who will provide services or perform work under this Agreement as "consultants"; and

(2) Cause these individuals to file with the City Clerk the assuming office statements of economic interests required by the City's Conflict of Interest Code.

Thereafter, throughout the term of the Agreement, Consultant shall cause these individuals to file with the City Clerk annual statements of economic interests, and "leaving office" statements of economic interests, as required by the City's Conflict of Interest Code.

The above statements of economic interests are public records subject to public disclosure under the California Public Records Act. The City may withhold all or a portion of any payment due under this Agreement until all required statements are filed.

16. CONFIDENTIALITY OF CITY INFORMATION

During performance of this Agreement, Consultant may gain access to and use City and Water Contractor's information regarding inventions, machinery, products, prices, apparatus, costs, discounts, future plans, business affairs, governmental affairs, processes, trade secrets, technical matters, systems, facilities, customer lists, product design, copyright, data, and other vital information (hereafter collectively referred to as "City and Water Contractors Information") that are valuable, special and unique assets of the City or Water Contractors. Consultant agrees to protect all City and Water Contractors Information and treat it as strictly confidential, and further agrees that Consultant shall not at any time, either directly or indirectly, divulge, disclose or communicate in any manner any City and Water Contractors Information to any third party without the prior written consent of City. In addition, Consultant shall comply with all City policies governing the use of the City network and technology systems. A violation by Consultant of this Section 16 shall be a material violation of this Agreement and shall justify legal and/or equitable relief.

17. CONSULTANT INFORMATION

a. City and Water Contractors shall have full ownership and control, including ownership of any copyrights, of all information prepared, produced, or provided by Consultant pursuant to this Agreement. In this Agreement, the term "information" shall be construed to mean and include: any and all work product, submittals, reports, plans, specifications, and other deliverables consisting of documents, writings, handwritings, typewriting, printing, photostatting, photographing, computer models, and any other computerized data and every other means of recording any form of information, communications, or representation, including letters, works, pictures, drawings, sounds, or symbols, or any combination thereof. Consultant shall not be responsible for any unauthorized modification or use of such information for other than its intended purpose by City.

b. Consultant shall fully defend, indemnify and hold harmless City and Water Contractors, their respective officers and employees, and each and every one of them, from and against any and all claims, actions, lawsuits or other proceedings alleging that all or any part of the information

prepared, produced, or provided by Consultant pursuant to this Agreement infringes upon any third party's trademark, trade name, copyright, patent or other intellectual property rights. City and Water Contractors shall make reasonable efforts to notify Consultant not later than ten (10) days after City or Water Contractors are served with any such claim, action, lawsuit or other proceeding, provided that City or Water Contractor's failure to provide such notice within such time period shall not relieve Consultant of its obligations hereunder, which shall survive any termination or expiration of this Agreement.

c. All proprietary and other information received from Consultant by City or Water Contractors, whether received in connection with Consultant's proposal, will be disclosed upon receipt of a request for disclosure, pursuant to the California Public Records Act; provided, however, that, if any information is set apart and clearly marked "trade secret" when it is provided to City or Water Contractors, City shall give notice to Consultant of any request for the disclosure of such information. Consultant shall then have five (5) days from the date it receives such notice to enter into an agreement with the City, satisfactory to the City Attorney, providing for the defense of, and complete indemnification and reimbursement for all costs (including plaintiff's attorneys' fees) incurred by City in any legal action to compel the disclosure of such information under the California Public Records Act. Consultant shall have sole responsibility for defense of the actual "trade secret" designation of such information.

d. The parties understand and agree that any failure by Consultant to respond to the notice provided by City and/or to enter into an agreement with City, in accordance with the provisions of subsection c, above, shall constitute a complete waiver by Consultant of any rights regarding the information designated "trade secret" by Consultant, and such information shall be disclosed by City pursuant to applicable procedures required by the Public Records Act.

18. MISCELLANEOUS

a. Entire Agreement. This Agreement contains the entire agreement between the parties. Any and all verbal or written agreements made prior to the date of this Agreement are superseded by this Agreement and shall have no further effect.

b. Modification. No modification or change to the terms of this Agreement will be binding on a party unless in writing and signed by an authorized representative of that party.

c. Compliance with Laws. Consultant shall perform all services described herein in compliance with all applicable federal, state and local laws, rules, regulations, and ordinances, including but not limited to, (i) the Americans with Disabilities Act of 1990 (42 U.S.C. 12101, et seq.) ("ADA"), and any regulations and guidelines issued pursuant to the ADA; and (ii) Labor Code sections 1720, *et seq.*, which require prevailing wages (in accordance with DIR determinations at www.dir.ca.gov) be paid to any employee performing work covered by Labor Code sections 1720 *et seq*. Consultant shall pay to the City when due all business taxes payable by Consultant under the provisions of Chapter 6-04 of the Santa Rosa City Code. The City may deduct any delinquent business taxes, and any penalties and interest added to the delinquent taxes, from its payments to Consultant.

d. Discrimination Prohibited. With respect to the provision of services under this Agreement, Consultant agrees not to discriminate against any person because of the race, religious

creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status of that person.

e. Governing Law; Venue. This Agreement shall be governed, construed and enforced in accordance with the laws of the State of California. Venue of any litigation arising out of or connected with this Agreement shall lie exclusively in the state trial court in Sonoma County in the State of California, and the parties consent to jurisdiction over their persons and over the subject matter of any such litigation in such court, and consent to service of process issued by such court.

f. Waiver of Rights. Neither City acceptance of, or payment for, any service or performed by Consultant, nor any waiver by either party of any default, breach or condition precedent, shall be construed as a waiver of any provision of this Agreement, nor as a waiver of any other default, breach or condition precedent or any other right hereunder.

g. Incorporation of Attachments and Exhibits. The attachments and exhibits to this Agreement are incorporated and made part of this Agreement, subject to terms and provisions herein contained.

h. Third-Party Beneficiaries. City and Consultant intend for Water Contractors to be third-party beneficiaries with rights to benefit from and enforce the terms of this Agreement. Except for Water Contractors, this Agreement shall not create any right or interest in any other non-party or any member of the public as a third-paty beneficiary.

19. AUTHORITY; SIGNATURES REQUIRED FOR CORPORATIONS

Consultant hereby represents and warrants to City that it is (a) a duly organized and validly existing corporation formed and in good standing under the laws of the State of California (b) has the power and authority and the legal right to conduct the business in which it is currently engaged, and (c) has all requisite power and authority and the legal right to consummate the transactions contemplated in this Agreement. Consultant hereby further represents and warrants that this Agreement has been duly authorized, and when executed by the signatory or signatories listed below, shall constitute a valid agreement binding on Consultant in accordance with the terms hereof.

If this Agreement is entered into by a corporation, it shall be signed by two corporate officers, one from each of the following two groups: a) the chairman of the board, president or any vice-president; b) the secretary, any assistant secretary, chief financial officer, or any assistant treasurer. The title of the corporate officer shall be listed under the signature.

20. COUNTERPARTS AND ELECTRONIC SIGNATURES

This Agreement and future documents relating thereto may be executed in two or more counterparts, each of which will be deemed an original and all of which together constitute one Agreement. Counterparts and/or signatures delivered by facsimile, pdf or City-approved electronic means

have the same force and effect as the use of a manual signature. Both City and Consultant wish to permit this Agreement and future documents relating thereto to be electronically signed in accordance with applicable federal and California law. Either Party to this Agreement may revoke its permission to use electronic signatures at any time for future documents by providing notice pursuant to the Agreement. The Parties agree that electronic signatures, by their respective signatories are intended to authenticate such signatures and to give rise to a valid, enforceable, and fully effective Agreement. The City reserves the right to reject any signature that cannot be positively verified by the City as an authentic electronic signature.

Executed as of the day and year first above stated.

CONSULTANT:

Name of Firm: EKI Environment & Water, Inc., a California Corporation

TYPE OF BUSINESS ENTITY *(check one)*:

_____ Individual/Sole Proprietor
_____Partnership
__X__ Corporation
_____ Limited Liability Company
_____ Other (please specify: _____)

Signatures of Authorized Persons:

By: _____

Print Name: Michelle K. King

Title: CEO

By: _____

Print Name: John DeWitt

Title: Secretary

City of Santa Rosa Business Tax Cert. No.

06528616

CITY OF SANTA ROSA
a Municipal Corporation

By:_____

Print
Name:_____

Title:_____

APPROVED AS TO FORM:

_____
Office of the City Attorney

ATTEST:

_____
Recording Secretary

Attachments:
Attachment One - Insurance Requirements
Exhibit A - Scope of Services and Cost Estimate

Exhibit A

EKI C40180 | 23 July 2024

PROPOSAL FOR

2025 Urban Water Management Plan Water Demand Analysis and Water Conservation Measures Update for Retail Agencies of the Sonoma Marin Saving Water Partnership (PR# R166261)

City of Santa Rosa

eki environment & water

Est. 1989 35 Years Making an Impact

SONOMA - MARIN SAVING WATER PARTNERSHIP

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Corporate Office
2001 Junipero Serra Boulevard, Suite 300
Daly City, CA 94014
(650) 292-9100
ekiconsult.com

1. COVER LETTER

23 July 2024

Claire Nordlie, Senior Water Resources Planner
City of Santa Rosa, Santa Rosa Water
69 Stony Circle
Santa Rosa, CA 95401

Subject: Proposal for 2025 Urban Water Management Plan, Demand Analysis and Conservation Measures Update (EKI C40180.00)

Dear Ms. Nordlie:

EKI Environment & Water, Inc. (EKI) has assembled a highly qualified and experienced team to develop The *Water Demand Analysis and Water Conservation Measures Update* ("Demand and Conservation Update" or "2025 Update") for the Sonoma Marin Saving Water Partnership (City of Cotati, Marin Municipal Water District, North Marin Water District, City of Petaluma, City of Rohnert Park, City of Santa Rosa, City of Sonoma, Valley of the Moon Water District, and Town of Windsor; also collectively known as the "Water Contractors"). The EKI Team is uniquely qualified to support Sonoma Marin Saving Water Partnership (Partnership) in the following ways:

> "I'd like to take a moment to thank EKI … for the fantastic efforts and products you've produced across these 2 plus years. Valley Water's Water Conservation Strategic Plan has been an incredible asset. The supplemental materials you produced have already ensured the plan will not be a report on a shelf somewhere, but a living tool for us to reference, query, and analyze to meet our targets and to benefit our 2 million customers."
>
> *- Justin Burks, Valley Water*

Unique Ability to Leverage our Extensive and Relevant Experience. The EKI Team prepared the *2020 Demand and Conservation Update*, which included developing water demand projections and identifying water conservation opportunities for nine of the Water Contractors. We have also successfully conducted similar work efforts for other multi-party agencies such as California Water Service [Cal Water], Santa Clara Valley Water District [Valley Water], and the San Francisco Public Utilities Commission [SFPUC]). We will leverage this experience and knowledge to achieve coherence on demand and conservation projections to support local and regional planning efforts (e.g., the 2025 Urban Water Management Plans [UWMPs]) and the Partnership's long-term conservations goals. Consistent with the requirement of understanding the implications of the 'Making Conservation a California Way of Life' legislation, the EKI Team's efforts in 2020 evaluated the Partnership's performance relative to prior demand and conservation projections and supported effective planning for future conditions and needs. We continue to support multiple entities within and outside of the Partnership to assess their ability to comply with the newly-adopted water use objectives.

Ability to Support Efficiency and Coordination Across the Region. Having led the *2020 Demand and Conservation Update* and continuing to provide on-going assistance to several of the Partnership agencies with their planning, conservation and reliability goals, the EKI Team recognizes the interconnections between the 2025 Update and these other efforts, as well as the need for an efficient overall process for Partnership and Member Agency staff. The EKI Team has demonstrated our ability to provide a programmatic approach to managing these regional

efforts to maximize efficiencies in project management, minimize staff level of effort and reduce costs, while ensuring consistency across the nine Water Contractors. Some core elements to this approach include alignment of project schedules within agencies, coordination of data collection and workshops, consistency across key inputs and assumptions, and integration of demand and conservation modeling tools.

Strong Stakeholder Communication and Engagement Skills. The EKI Team is well known to the Partnership and the Water Contractors and has demonstrated the ability to effectively engage with them through surveys, meetings, and workshops. The EKI Team has successfully worked with other multi-agency entities to streamline processes and build consensus among their member agencies while taking care of each agency's specific needs for future planning (for example for the Bay Area Water Supply and Conservation Agency [BAWSCA]). We have also demonstrated our ability to present planning, engineering, and other technical information to staff, boards, public, and stakeholder groups in a comprehensive manner with well-written work products, compelling graphics and dynamic presentations.

The EKI Team understands the Partnership's desire to add value to the Water Contractors and to support planning to increase regional resilience and reliability and has the demonstrated capability to support the Partnership in its goal. The attached proposal includes our qualifications, approach, scope of work, schedule, and budget to successfully complete this project in the desired time-frame. Should you have any questions, please contact Anona Dutton at adutton@ekiconsult.com or Andree Lee at alee@ekiconsult.com.

Very truly yours,

EKI ENVIRONMENT & WATER, INC.

Anona Dutton, PG, CHG
Director of Water Resources and Engineering/
Vice President

Andree Lee
Vice President/
Principal in Charge

2. INTRODUCTION

General Description of EKI's Services

EKI Environment & Water, Inc. (EKI) is an employee-owned company that has provided comprehensive water resources and engineering services to public and private sector clients for over 35 years. EKI has maintained steady growth and financial stability since our founding in 1989. Our staff of 120+ employees includes engineers, geologists, hydrogeologists, environmental scientists, computer-aided designers, geographic information system (GIS) specialists, and database specialists in offices throughout California and the United States.

Our headquarters are in Daly City and our core team for the Demand Analysis and Conservation Measures Update ("Demand and Conservation Update" or "2025 Update") is based in our Daly City office.

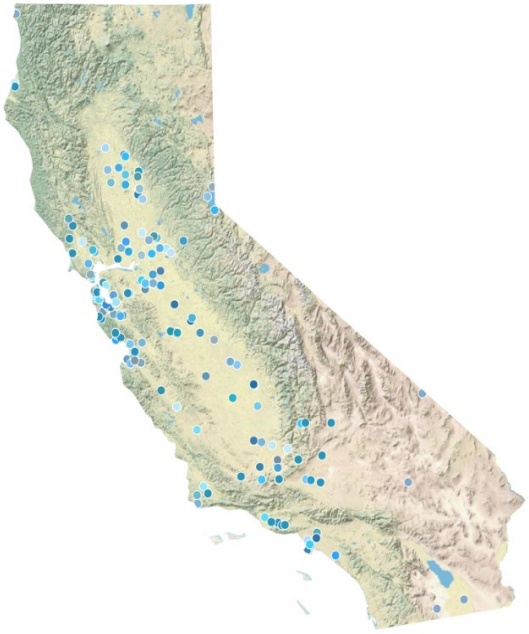
EKI's staff includes an effective mix of disciplines comprising water resources, engineering, environmental, and litigation support. This complementary mix is an asset to understanding and effectively resolving a wide variety of complex technical challenges. Our project managers form strong professional relationships with clients and work hard to understand each project's technical, financial, and regulatory constraints. Communication within EKI is facilitated by frequent team meetings and one-on-one check-ins with team members. Each project manager is supported by an officer of the firm and a team of highly skilled technical staff.

Company Philosophy

EKI takes a solution-oriented approach to projects that builds from a strong technical foundation and emphasizes proactive and effective communication. The size of our firm, the high level of experience and continuity of our multi-disciplinary staff, and our established credibility in our fields of expertise and with regulatory agencies allows us to effectively support our clients to meet their objectives across a variety of sectors and issues.

Client Loyalty

EKI takes pride in repeat business from satisfied clients. The low turnover of our staff permits the development of long-term working relationships with our clients and each other. Our project management team offers continuity, tenacious attention to detail, responsiveness, and quality service.



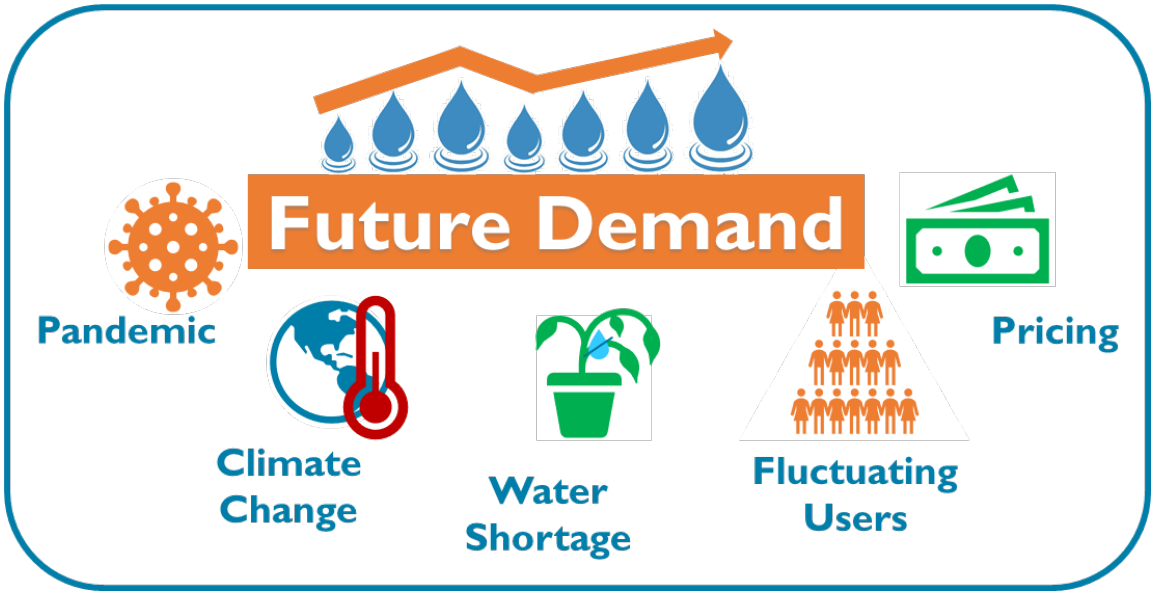
EKI has broad experience in water resources planning services across California.

Our Project Understanding

The Demand and Conservation Update has been a collective effort among nine of the water utility retail agencies of the Sonoma Marin Saving Water Partnership (City of Cotati, Marin Municipal Water District, North Marin Water District, City of Petaluma, City of Rohnert Park, City of Santa Rosa, City of Sonoma, Valley of the Moon Water District, and Town of Windsor; collectively known as the "Water Contractors") in support preparation of their individual Urban Water Management Plans (UWMPs). Specifically, the 2025 Update will include data review and analysis, development of demand projections, analysis of demand management measures (DMMs) and programs for each Water Contractor, and preparation of individual final reports (referred to herein as the "2025 UWMP Water Demand/Conservation Reports") suitable for inclusion in the Water Contractors' 2025 UWMPs, which are due to the Department of Water Resources (DWR) by July 1, 2026.

Since EKI's completion of the *2020 Demand and Conservation Update*, multiple uncertainties impacting the water demands of the Water Contractors have continued to evolve. EKI understands that the 2025 Update will require flexible and informative methods for developing water demand forecasts to address both traditional and emergent uncertainties that may influence future demands and planning decisions. Factors that must be considered and quantified in the 2025 Update include:

- **2021-22 drought period,** and the associated implementation of drought response measures (DRMs), and the subsequent return to a "new normal" impacted water demands by sector and spatially;
- **Climate change** and weather fluctuations pose additional uncertainties on seasonal demand patterns;
- **Frequency and severity of shortages,** and associated rationing actions, are impacting demand hardening and the rate and effectiveness of water efficiency measure implementation;
- **Uncertainty persists on growth rates and timing,** not only in terms of numbers of users (number and types of accounts), but also in terms of urban planning, densification/infill, commercial trends, and migratory patterns of jobs and people experienced by the Water Contractors; and,
- **Passive and active water efficiency,** including Water Contractor pricing strategies, continues to transform water use patterns. It is therefore important to understand impacts on demand patterns and to consider the impacts, and potential additional water efficiency actions needed to comply with, Assembly Bill (AB) 1668/Senate Bill (SB) 606 Urban Water Use Objectives (UWUO).



Through our experience preparing the *2020 Demand and Conservation Update* and supporting similar efforts across the state, the EKI Team also understands that there are several essential elements to an effective update for the Water Contractors for inclusion in their 2025 UWMP Water Demand/Conservation Reports. The UWMPs provide the basis for Water Supply Assessments (WSAs) to support local and regional environmental documents; as such, a defensible methodology that enables clear delineation of whether a proposed project is accounted for in demand projections is necessary. At the same time, there are differences among the Water Contractors in terms of current and projected land uses, demographics, level of detail for local projections, and data availability; therefore, the demand model used must also incorporate sufficient flexibility to accommodate unique local needs. Beyond the 2025 Update completion, the backbone information upon which demand projections are built – such as growth projections, land uses, and water efficiency standards – are continually evolving. To enable the Water Contractors to update their planning as new information becomes available, a broadly adopted, industry-standard model with a user-friendly interface is necessary to support independent updates by the Water Contractors.

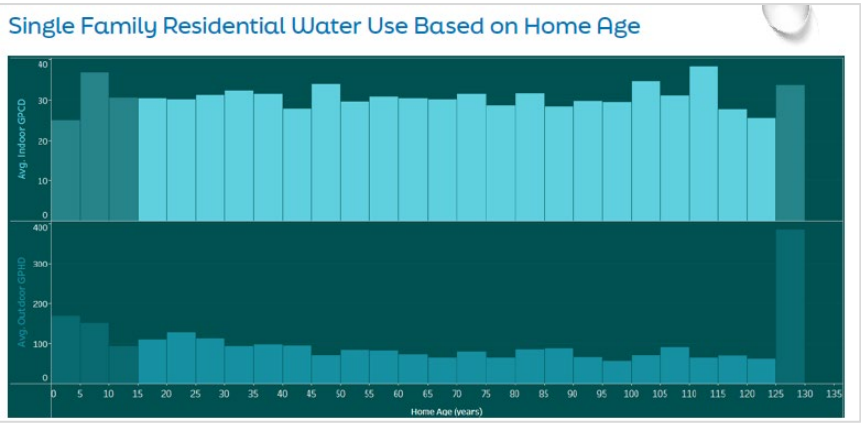
Our Approach to the Scope of Services

Our approach to the development of the 2025 Update is centered around three key strategies:

1. Implement a rigorous, data-driven approach to demand and conservation analysis to support compliance with State requirements

For the *2020 Demand and Conservation Update*, application of advanced analysis of geospatial, demographic, and property characteristic trends relative to demand growth and conservation program participation was a core component of the approach used by EKI. With the adoption of the State Water Resources Control Board (SWRCB) Making Conservation a California Way of Life (MCCWL) regulations, data-driven planning for water conservation has become even more critical, as each Water Contractor will need to understand its vulnerabilities under the regulation and develop a realistic and cost-effective plan for compliance. Building upon the successes of the *2020 Demand and Conservation Update*, EKI offers the option for in-depth analysis of past program participation and water use data to assess water savings, identify remaining areas of opportunity and underserved populations, establish realistic implementation rates for future projections, and consider opportunities to adjust program parameters and marketing strategies to improve outcomes.

Further, since the *2020 Demand and Conservation Update*, we understand that several of the Water Contractors have invested in tools that enhance the available data to inform the projections, such as advanced meter infrastructure (AMI) or Flume utility dashboards. Where available, such as the work we did for Marin Municipal Water District (MMWD) to develop their Water Conservation Strategic Plan, EKI will draw upon more granular water use data available from these new resources to refine the analysis of indoor and outdoor analysis and remaining conservation savings potential.

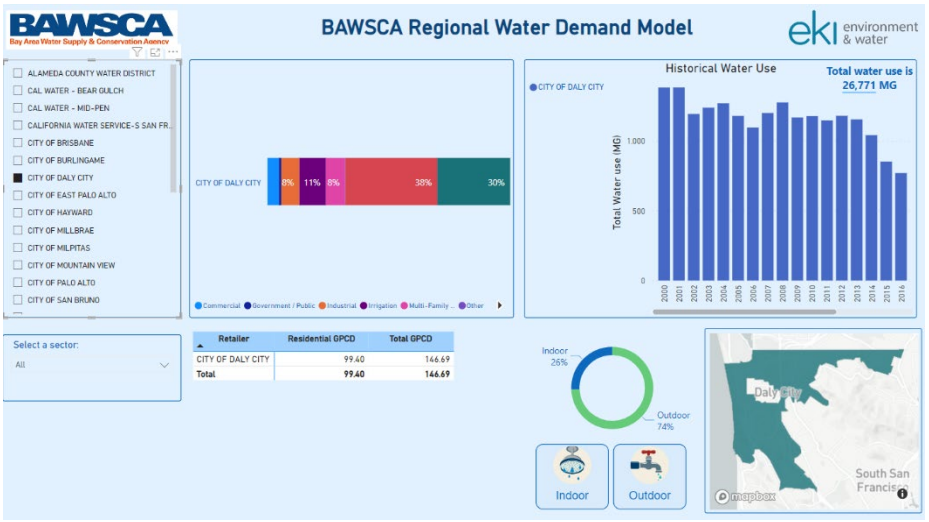


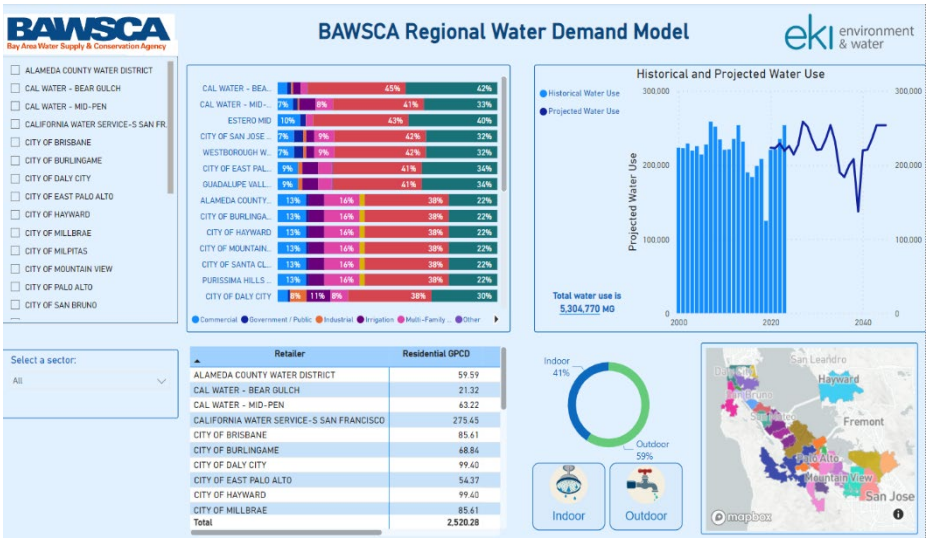
EKI recently completed an in-depth analysis of indoor and outdoor residential water use using Flume data for Marin Municipal Water District. This analysis provided insights into indoor and outdoor water use patterns across geographic and property characteristics and provided value insights to inform assessment of remaining water savings opportunities.

2. Develop Clear and Compelling Communication Materials Accessible to a Broad Audience

EKI is known for providing high-quality documents and presentations that effectively communicate technical information to decision-makers and stakeholders. As the 2025 Update represents a core element of the UWMPs, which will ultimately be brought to Water Contractor's boards or councils for adoption, it is important that the analytical methodology and results be documented in a manner accessible to this audience, as well as DWR reviewers. To that end, each deliverable (i.e., the Technical Memoranda and the 2025 UWMP Water Demand/Conservation Reports) will incorporate compelling maps, charts and graphics that will support visualization of the results and conclusions. Key data, including modeling details, will be provided in technical appendices to support technical review and inform future planning efforts.

3. Tailor Services to Address Unique Needs of Individual Water Contractors





EKI understands the importance of maximizing efficiency and value through the joint Demand and Conservation Update, while also addressing the unique needs of each Water Contractor. Our base scope of services provides each Water Contractor with a 2025 UWMP Demand/Conservation Report, building upon the work we performed in 2020 for an efficient and cost-effective update. For the 2020 Demand and Conservation Update, three of the Water Contractors opted for additional services beyond the base scope to support their unique needs. With the new MCCWL requirements and recent drought experience, we recognize that some Water Contractors may again desire additional support and analysis in the 2024 UWMP Water Demand Conservation Reports. To address these needs, our approach includes a **core set of services** to provide each Water Contractor with the UWMP demand and conservation projections, along with a **range of optional tasks** to address specific needs. For example, services available to each Water Contractor include: (1) in-depth analysis of water use patterns, leveraging AMI or Flume data, to refine evaluation of savings potential; (2) Demand and Conservation Dashboard development to support ongoing tracking of demands and water savings relative to each Water Contractor's UWUO or other established goals; and (3) comprehensive water efficiency program participation and water savings analysis.

3. SCOPE OF SERVICES

Significant effort by the Water Contractors has been put into development of a detailed Scope of Work for this project. As such, the tasks proposed below are largely consistent with those included in the Request for Proposals (RFP). In some instances, EKI has identified additional tasks that we believe will significantly enhance and customize the Water Contractor-specific demand and conservation estimates developed and presented pursuant to this work effort. These project innovations are indicated with the following symbol (). As described in our Approach to Services, our scope of work includes a **core set of services (Tasks 1 through 4)** to provide each Water Contractor with the UWMP demand and conservation projections. We have also provided two **optional tasks** to address specific needs: Task 5, which provides in-depth analysis of water use patterns, comprehensive water efficiency program and water savings analysis; and Task 6, which provides Demand and Conservation Dashboard development to support ongoing tracking of demands and water savings relative to each Water Contractor's UWUO or other established goals. Flowchart on the next page depicts the relationship between the Task 5 analysis and base tasks.

Task 1 – Preliminary Work and Project Management

Based on our experience with the *2020 Demand and Conservation Update* and similar efforts, EKI places high value on collaboration with, and input from, Water Contractor staff throughout the project development process. We have distinguished ourselves in our ability to develop open and lasting relationships with our clients that facilitate the efficient development of project components, and better ensure that the resultant work product meets or exceeds expectations. This task consists of initial preparatory work to set up and manage the project, with an emphasis on transparency and coordination. To streamline coordination efforts, we have assumed that there will be one main contact person designated for each Water Contractor.

Subtask 1.1 – Facilitate Kick-off and Data Needs Meeting

EKI will facilitate a joint, in-person project kickoff meeting with the City of Santa Rosa (City) and representatives from the Water Contractors to introduce key members of the project team and review the project scope, objectives, and data needs to support development of the 2025 Update. EKI will also provide an anticipated schedule for each task, which will be updated as needed to keep the Water Contractors adequately informed of project progress and status.

Subtask 1.2 – Develop Project Timeline

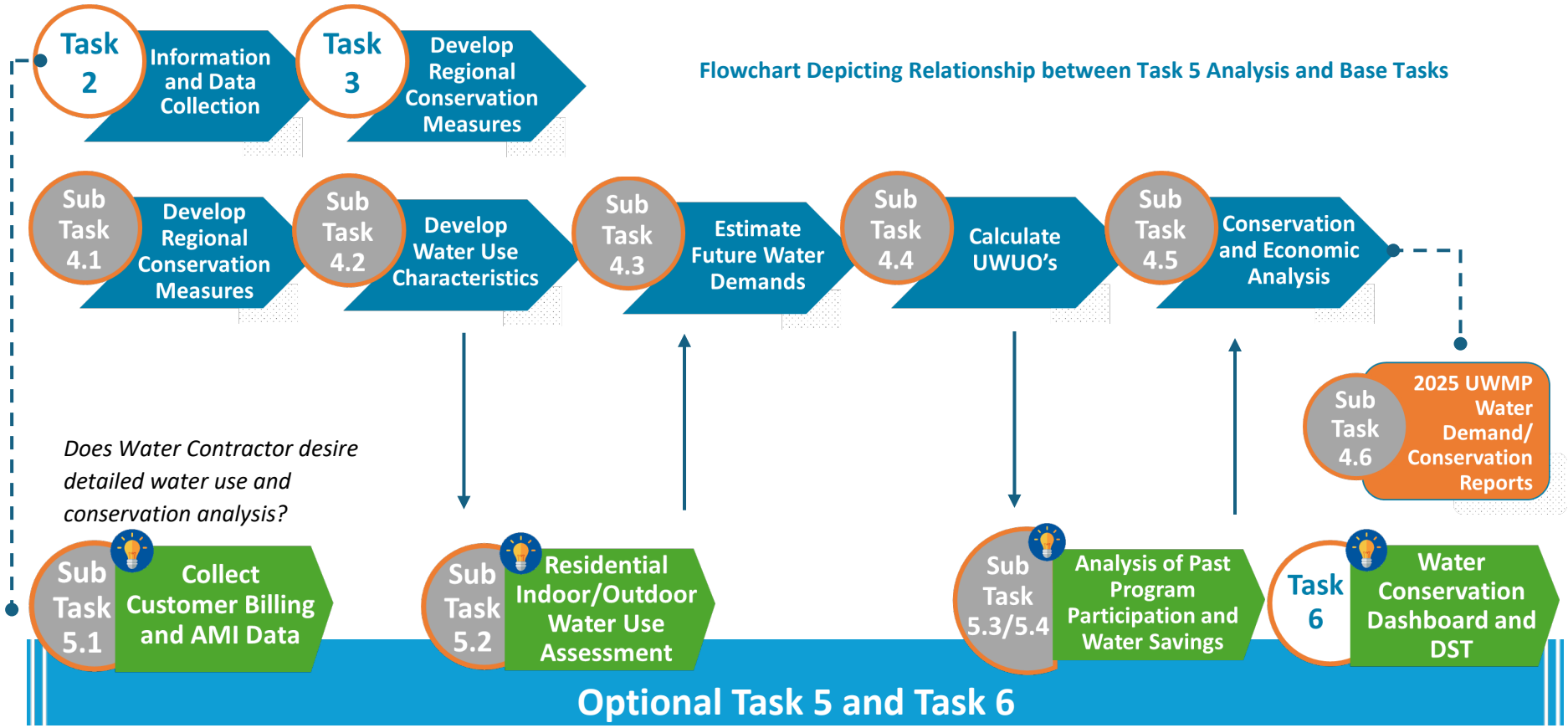
EKI will prepare a detailed project schedule that will include: (1) a timeline for Water Contractors to submit data; and (2) a detailed timeline for the preparation of the 2025 UWMP Water Demand/Conservation Reports, including project milestones, inclusive of the core and optional tasks selected by each Water Contractor. All project work is anticipated to be completed by December 31, 2025.

Subtask 1.3 – Project Management

A key means to ensure that Water Contractor staff input is incorporated throughout the process, and that the project schedule, budget, and expectations are well managed, is through frequent and organized communications. EKI will work with the City and designated Water Contractor staff to identify mutually beneficial means and frequency of communication. EKI will also provide monthly invoices to the City supported by progress status reports, which will be broken down by task and subtask as identified in this proposal. As part of this Subtask, EKI will also conduct routine communications and other project management tasks.

Task 1 Deliverables

- Project kick-off meeting, with agenda and meeting notes
- Task-based project schedule, updated as needed
- Monthly invoices and task-based progress status reports



Legend:

- Core Services
- Project Innovations (Included for Tasks 2.6 and 4.4 in the Scope of Work)
- Optional Tasks

Task 2 – Information and Data Collection

This task consists of collecting and reviewing relevant data. Pertinent information needed to prepare the 2025 Update, inclusive of the 2025 UWMP Water Demand/Conservation Reports shall be collected and reviewed.

Subtask 2.1 – Submit Data Request

EKI will submit a detailed data request to each of the Water Contractors immediately following the project kick-off meeting. The data request will consist of a standardized data workbook pre-populated with the data that was previously compiled during the *2020 Demand and Conservation Update* for the Water Contractors to review and update.

Subtask 2.2 – Review and Summarize Previous DWR Comments

DWR reviewed, and in some cases provided comments on the UWMPs prepared by the Water Contractors in 2020. To the extent applicable, EKI will compile and review DWR comments on the demand and conservation section of the 2020 UWMPs for each of the Water Contractors.

Subtask 2.3 – Summarize New DWR Requirements

EKI will review the new DWR requirements related to demand analysis and water conservation for the 2025 UWMPs and provide a summary of the new requirements that need to be addressed and any recommended changes to the scope of work for review by Water Contractors. EKI is well served to conduct this task as EKI staff are actively monitoring the 2025 UWMP Guidebook development progress and attending workshops to access DWR guidance early. EKI staff have also tracked the evolution of the MCCWL requirements and standards for the past few years through their recent adoption. Key requirements / evolving processes include:

Urban Water Use Objective Calculation Overview

- On July 3rd, 2024, the SWRCB adopted the MCCWL regulation. As part of this regulation, beginning on January 1, 2025, and every year thereafter, urban suppliers will be required to calculate and report their UWUO. By January 1, 2027, compliance with the UWUO will be enforced. These specific standards used to determine an agency's annual UWUOs will be critical with respect to the long-term water conservation and demand planning that must be described within the 2025 UWMP.
    - Residential indoor water use: Under this legislation, the residential indoor water use standard is 55 gallons per capita per day (gpcd) until the end of 2024, 47 gpcd beginning in 2025 through 2029, and 42 gpcd beginning in 2030 and beyond.
    - Residential outdoor water use: Under this legislation, the landscape efficiency factor (LEF) will become increasingly stringent over the next few years. The LEF is 0.80 through 2030, 0.63 through 2035, and 0.55 beginning in 2035 and beyond. DWR worked with a contractor to measure all of the landscape area across the state based on aerial imagery and provided urban water retailers with aggregate

measurements of residential irrigable landscape area. The result of these measurements and LEF is the basis for an agency's landscape water use component of the annual water use objectives.

  - Water loss: Under this legislation, the supplier's water loss standard is based on the SWRCB's Water Loss Performance Standards Economic Model.
  - Commercial, Industrial and Institutional (CII): Rather than developing a water volume-based standard for the CII sector, DWR developed a set of performance standards for CII users to increase water efficiency. These standards include detailed classification of all CII users by industry, conversion of CII landscapes with mixed meters to dedicated irrigation meters or utilizing in-lieu water management technologies, and employing Best Management Practices (BMPs) for applicable CII users.

- Assembly Bill (AB) 1572 was signed into law in October 2023 and took effect in January 2024 prohibiting the use of potable water for the irrigation of nonfunctional turf located on CII properties. While this is not a specific requirement that will be enforced by DWR, the implications of this new regulation will be critical with respect to the long-term water conservation and demand planning that must be described within the 2025 UWMPs.

Subtask 2.4 – Review Planning Documents

As part of the data request (Subtask 2.1), EKI will provide a summary list of the planning documents that are needed from the Water Contractors. We have assumed that the Water Contractors will provide EKI with the latest General Plans, where available, and relevant background reports and other planning documents (e.g., Specific Plans or WSAs) in the timeframe specified in the agreed-upon project schedule.

EKI will review the Water Contractors' planning documents to establish forecasted growth to 2050. If specific forecasts are not available for all Water Contractors, we will compile a list of alternate sources, such as Department of Finance and Association of Bay Area Governments (ABAG) projections, and will coordinate with the individual Water Contractor regarding use of an alternate source. Where Water Contractor boundaries do not align with outside planning data, EKI will conduct geospatial analysis of population and employment projection based on agency boundaries, consistent with DWR's approved methodology.

As part of this effort, EKI will verify that the planning documents and geospatial analyses align with the Regional Housing Needs Allocation (RHNA) Plan developed by the Councils of Governments, including ABAG, to accommodate future housing needs. EKI will compile RHNA Plan projections for each of the Water Contractor's service area and compare with the forecasted growth to 2050. If there are discrepancies between these projections, EKI will work with each of the Water Contractors to reconcile differences.

Subtask 2.5 – Conduct Data Review

EKI will collect and review the data received in response to the data request (Subtask 2.1), provided the data are received within the timeframe specified in the agreed-upon project schedule. To the extent that data are missing or not provided in a timely manner, EKI will contact the individual Water Contractors and seek direction regarding potential alternative data sources. If alternative data sources are not available, EKI will evaluate historical data and trends to fill data gaps. Any assumptions made during this process will be reviewed and validated by the Water Contractors.

Subtask 2.6 – Prepare Technical Memorandum #1

Following the review of the data provided by the Water Contractors, EKI will prepare a brief technical memorandum (TM) to document the data assimilation effort (TM #1). This memorandum will: (1) summarize the available historical demand and water conservation program data, (2) summarize the

relevant aspects of DWR's review and new requirements, and (3) document growth projections based on planning documents.

EKI will provide the draft TM #1 to the Water Contractors for review and comment. To the extent applicable, Water Contractor comments will be incorporated into the portions of draft TM #1 that will be included in the 2025 UWMP Water Demand/Conservation Reports, described under Task 4.

Task 2 Deliverables

- Detailed data request
- Draft TM #1: Summary of Available Data, Key Data Gaps, Potential Data Gap-Filling Approaches, and Summary of DWR Comments and New Requirements

Task 3 – Develop Updated Regional Conservation Measures

The goal of this task is to update the suite of common regional conservation measures that was developed by EKI and used by the Water Contractors as part of the *2020 Demand and Conservation Report* process and will be considered for implementation in the future.

The implementation of UWUOs starting in 2025 may require an increase in conservation programming by some Water Contractors. At the same time, demand hardening from prior active and passive conservation and drought response has yielded significant changes in the Water Contractors' water use, potentially limiting future reduction potential. To appropriately consider conservation savings in the 2025 Demand Update, it will be important to provide a realistic assessment of the remaining conservation savings potential, the effectiveness of specific conservation measures, and to identify innovative conservation program opportunities and to incorporate these expected effects into the demand projections. For example, in recent work for Valley Water, EKI identified nine conservation measures, including AMI leak alerts and home water reports, submetering, and leak assistance, as critical for achieving a conservation target of 18,000 AFY by 2050.

Subtask 3.1 - Regional Conservation Measures Workshop

EKI will work with the City to convene a workshop with representatives of the Water Contractors to review the current state of the industry and identify the conservation measures that have and could provide the most water savings value for the region, including conservation measures that will support compliance with MCCWL and identifying those measures that most likely will be phased out if they are redundant to requirements imbedded in building and plumbing codes and state law.

EKI will prepare an initial list of conservation measures building upon the list compiled for the *2020 Demand and Conservation Report* and updated with: (1) measures currently implemented by the Water Contractors, and (2) new practices, programs, and technology available since 2020. EKI will include higher performance technologies that are currently or likely available in the near-term (e.g., <1 gallon per flush toilets, new leak detection and water loss control technologies, etc.) as well as behavior-based measures (e.g., adjustment of irrigation watering schedules and timing, and use of membrane filtration cleaning for swimming pools in lieu of draining and refilling).

EKI will draw on our extensive experience in stakeholder engagement to facilitate the Water Contractors' discussion and ranking of potential water use efficiency (WUE) measures to create a regional suite of common conservation measures that can be combined to create locally appropriate programs that will achieve the water savings necessary to meet the Water Contractors' UWUOs and that are aligned with each agency's desired approach to water conservation.

Subtask 3.2 - Regional Conservation Measure Codification

Following the completion of the conservation measures workshop and measures ranking, EKI will prepare a draft TM to document the methods and results (TM #2). TM #2 will describe the regional ranking process and the cost and water savings associated with each conservation measure based on existing data and literature. TM #2 will include compelling maps, charts and graphics that will support visualization of the results and conclusions and make them accessible to a broad audience.

EKI will provide draft TM #2 to the Water Contractors for review and comment. To the extent applicable, Water Contractor comments will be incorporated into the portions of draft TM #2 that will be included in the 2025 UWMP Water Demand/Conservation Reports, described under Task 4.

Task 3 Deliverables

- Workshop agenda, slide deck, and other materials
- Draft TM #2: Water Conservation Program Ranking

Task 4 – Demand Analysis and Water Conservation Measures Update

This task consists of preparing updated water demand analyses through 2050 for the Water Contractors. The update shall reflect adopted General Plan population and employment and land use projections, changes in water use and/or demand hardening patterns, and savings from current and future water conservation measures.

Subtask 4.1 – Analyze Demographic Data

In response to the data request (Subtask 2.1) it is assumed that the Water Contractors will provide data on: (1) the number of historical and existing customers and associated water use over time broken down by customer category, and (2) the future connections, population, dwelling units, land use, and employment based on the most recently adopted applicable General Plans, or other appropriate source(s). This demographic and water use information shall serve as the basis for evaluating water use demands and trends. Changes since 2020 in the sphere of influence and proposed sphere of influence of each incorporated municipality and water district within the study area shall be identified. Each Water Contractor will also specify the demographic forecast to be used or concur with the analysis before work proceeds on the subsequent subtasks.

Subtask 4.2 – Develop Water Use Characteristics

Based on the data provided, the existing and historical water use within each Water Contractor's service area will be defined in terms of annual total production and consumption by user class (residential, commercial, industrial, institutional, parks, other, as per the billing systems of each Water Contractor). Unit water demands (gallons/account/day) for each major user class (residential, commercial/industrial, public), and estimated indoor and outdoor water use will be presented. Recent number of accounts and water demands by sector will be reviewed to determine appropriate water demand factors for the demand analysis. This review will include evaluating and selecting a baseline year that is comparable to current conditions, absent the influence of drought, economic recession, and other key drivers. Changes in water demand will be evaluated by sector over time to identify, evaluate and incorporate demand hardening into the selected water demand factors. By evaluating the changes in per account water use over time, demand hardening can be observed and incorporated into future water projections. Such an analysis of demand hardening will result in more future water demand factors.

Unit water use trends will be evaluated to define the different (higher or lower) unit water use factors to apply for future conditions. Therefore, if supported by the data, different water demand factors may be established for new construction.

Subtask 4.3 – Estimate Future Water Demands

In order to evaluate the potential for future water savings and programs, and to inform the conservation program scenarios described below, EKI proposes to evaluate current water use by customer sector for each Water Contractor. In addition to total water use, as described below, this evaluation will: (1) quantify indoor versus outdoor water use; (2) identify the maximum savings potential by customer sector; and (3) apply an industry-standard model to conduct the demand and conservation forecasting.

Indoor vs. Outdoor Water Use

Indoor versus outdoor water use will be quantified based on the method described in the text box to the right. Outdoor water use remains the biggest "knob" to be turned with respect to WUE. Identifying the percentage of water use that remains dedicated to landscape irrigation provides a focused target for the implementation of WUE programs and provides an estimate for water savings potential.

Indoor vs. Outdoor Water Use Estimation

For customer accounts without dedicated irrigation meters, the amount of water used indoors versus outdoors must be estimated. Water use varies seasonally due to increased irrigation needs in the summer, as compared to the more limited irrigation water use during the wetter and cooler winter months. Based on water use patterns, we can use the minimum average daily water use during winter months (December-March) to estimate the relative proportion of indoor and outdoor use for all non-irrigation customer sectors. This method conservatively errs on the side of estimating more indoor water use, so that the potential for outdoor water savings is not over-estimated.

Update the AWE Model

The Alliance for Water Efficiency (AWE) developed a model that is an industry standard for projecting the cost-benefit and potential savings associated with water conservation. The AWE model was used for the *2020 Water Demand and Conservation Report* to estimate future passive savings as well as savings associated with the implementation of conservation programs.

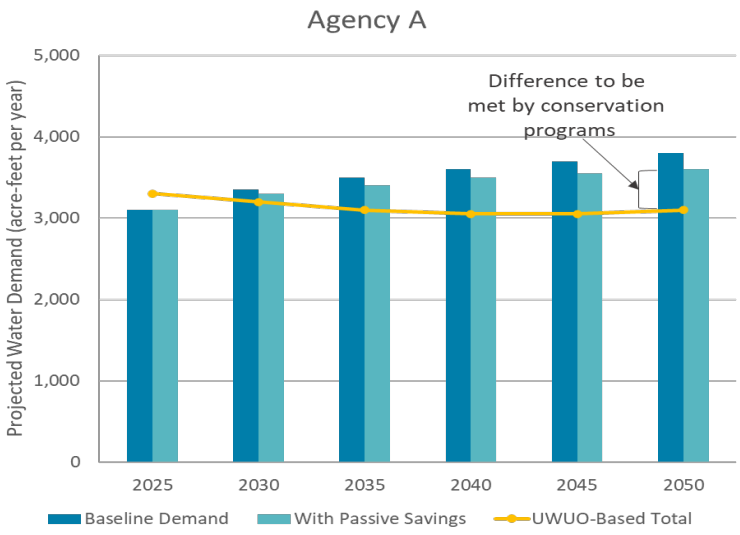
EKI will update each Water Contractor's AWE model to estimate the baseline demand projections through 2050 inclusive of: (1) water savings through 2025, (2) impacts of the current and future approved CALGreen Codes, and (3) appliance/fixture standards already in place.

The AWE model will then be applied to project water demands inclusive of post-2025 water savings estimates for programs analyzed under Subtask 4.5 and complying with the Water Contractors' UWUOs. EKI will provide each Water Contractor with their own model for future use.

Subtask 4.4 – Calculate UWUOs

The UWUO regulations were recently adopted by the SWRCB on July 3, 2024. Beginning January 1, 2025, urban water suppliers are required to calculate their UWUO and report their UWUO compliance.

EKI will use the *AWE Water Conservation Tracking Tool* California module to estimate future UWUOs for each Water Contractor. The estimated UWUOs will be calculated using agency-specific characteristics (e.g., population, landscape area) and the UWUO standards relevant to each of the UWUO components. The estimated UWUOs will then be compared to future water demands



Conservation Program Savings Needed to Meet UWUOs

inclusive of passive savings to determine the amount of water savings that needs to be met by conservation programs for complying to the UWUOs.

Subtask 4.5 - Water Conservation and Economic Analysis

As part of Subtask 2.1, EKI will work with the Water Contractors to collect data and update the costs and water savings of the various conservation measures/programs in each service area. Based on this information, EKI will conduct an economic evaluation of selected water conservation measures using the AWE model customized for each Water Contractor. Specifically, the costs of the water conservation measures shall be summarized and the dollar savings from reduced water demand shall be quantified yearly and based on avoided costs provided by each participating Water Contractor (which reflects their own individual options for obtaining additional water supply, if needed).

Water savings from each of the water conservation measures/requirements shall be estimated and expressed for each 5-year increment to 25 years.

EKI will evaluate each Water Contractor's existing conservation program and up to five program scenarios that include combinations of the selected water conservation measures and the effects of adopted code changes and legislation between January 2020 and December 2025. EKI preliminarily proposes to evaluate the conservation program implementation scenarios described below. EKI will work with the Water Contractors to define the specific measures to be included under each scenario.

- **Scenario 1** – Existing Conservation Program Model: This scenario will include the existing conservation program implemented by the Water Contractor.
- **Scenario 2** – Target UWUO Compliance Model: This scenario will include the minimal programs that are required to meet the Water Contractor's UWUOs. This approach will include a suite of cost-effective programs open to all customers on a voluntary basis, with the goal of being easily sustained with minimal to moderate staff resources. This scenario will include a mix of indoor and outdoor programs.
- **Scenario 3** – Outdoor Water Use Efficiency Only Model: This scenario will reflect a conservation program that focuses all efforts on outdoor water uses. Like the Target UWUO Compliance model, this scenario will focus on programs open to all customers on a voluntary basis and minimal to moderate staff resources.
- **Scenario 4** – Highly-Ranked Local Programs: This scenario will include the highly-ranked local programs identified under Task 3. This scenario will consider both indoor and outdoor programs and, based on consultation with the Water Contractors, may include programs that have eligibility limitations for participation.
- **Scenario 5** – Highly-Ranked Regional Programs: This scenario will include the highly-ranked regional programs identified under Task 3. This scenario will consider both indoor and outdoor programs and, based on consultation with the Water Contractors, may include programs that have eligibility limitations for participation.

Subtask 4.6 – Prepare Draft Reports

EKI will prepare one draft technical report (i.e., the 2025 UWMP Water Demand/Conservation Report) for each Water Contractor that can stand alone separately from their respective 2025 UWMPs or be formatted to serve as an appendix to the 2025 UWMP, at each Water Contractor's option. Each Water Contractor's report will have the same template with individualized tables and graphs. Each report will include, at a minimum, the following information:

a. Table of contents
b. Summary of demand analysis update results
c. Methodology and assumptions
d. Results and conclusions

e. Data and information collected for analysis
f. Detailed description of water conservation measures analysis
g. Demographics projections
h. Historical water use patterns
i. Water demand projections for the next twenty-five years in five-year increments
j. Additional (future) water savings from existing and additional conservation measures and legislative requirements
k. References and list of contacts

EKI prides itself on preparing succinct, well-written reports that are supporting with compelling figures and tables that present the information in a user-friendly and technically sound manner. The reports will incorporate information and feedback from TM #1 and TM #2 and the workshop, as appropriate.

Subtask 4.7 – Attend Review Meetings

EKI will attend up to a total of two (2) meetings with each Water Contractor, for a total of 18 separate meetings. EKI will schedule the meetings to accommodate meeting with each of the Water Contractors. Meetings are assumed to be held virtually but can be adjusted to be held in-person at the Water Contractor's preference.

The first set of individual meetings with each Water Contractor will be held to discuss the basis of the demand projections and the preliminary results, and the second set of individual meetings will be held to present the draft 2025 UWMP Water Demand/Conservation Report to each Water Contractor for comments.

Additional communication will occur as needed by email, video conference, telephone conference calls (up to three per Water Contractor).

EKI will provide each Water Contractor with a draft electronic copy of their respective 2025 UWMP Water Demand/Conservation Report. Based on the RFP, up to two (2) revisions of the demand projections and water conservation and economic analysis per Water Contractor may be made.

Subtask 4.8 – Prepare Final Reports

EKI will revise each 2025 UWMP Water Demand/Conservation Report one time based upon a single, compiled set of comments received from each Water Contractor in electronic (e.g., red-line) format. It is assumed that all comments will be resolved with changes to the report and no separate response to comments will be issued. One (1) hard copy and one (1) electronic copy in Word of the final report for each Water Contractor will be provided.

Task 4 Deliverables

- AWE Models for each Water Contractor
- Draft 2025 UWMP Water Demand/Conservation Reports
- Final 2025 UWMP Water Demand/Conservation Reports (one [1] hard copy and one [1] electronic copy)

Optional Task 5 – Detailed Water Use and Water Conservation Analysis

One of the highlights of the *2020 Demand and Conservation Report* was the comprehensive water efficiency program participation and water savings analysis. The analysis quantified: (1) rates of participation in past conservation program offerings and associated saturation; (2) water savings achieved through implementation of past programs; and (3) impacts of behavioral changes on water use as a result of education/messaging, etc. Further, based on our work in this region and elsewhere, we know that various conservation measures have had different rates of participation and different unit water savings for each Water Contractor, and that demand hardening from recent drought response actions is impacting the remaining water savings potential, with variability between service areas. By developing this information on a per-Water Contractor basis, it will allow Water Contractors to better understand conservation measure/program

performance, cost-effectiveness, and potential opportunity. This information, coupled with refined water demand projections disaggregating indoor and outdoor use, will improve Water Contractor demand forecasting and ability manage investments in water conservation – which is particularly important as Water Contractors plan for compliance with the UWUOs.

EKI understands that some Water Contractors may be interested in updating the analyses performed in 2020 with new data or extending the analyses to additional conservation measures, in particular to consider data from the recent drought. If requested by individual Water Contractors, EKI will provide additional support to update the 2020 program participation and water savings analysis scoped under this Optional Task 5 for the interested Water Contractors. Results of the updated analyses will be incorporated into the individual agencies' demand and water conservation analyses under Task 4, and charts and graphics illustrating the results will be incorporated into the 2025 UWMP Water Demand/Conservation Report.

Subtask 5.1 – Request Customer Billing and AMI Data

EKI built a working relational database in Microsoft Access to manage and mine program participation and account-level water use data for the *2020 Demand and Conservation Report*. If the Water Contractor elects to perform any of the optional assessment tasks below, EKI will use a similar approach to update its relational database.

Advanced Metering Infrastructure Data
Unlike the customer level billing data, which do not necessarily cover customers' water use from the first to the last day of the month, the AMI data reflects customers' real time water use for any given day. Thus, the AMI data provide more accurate estimates of the monthly water use for each customer.

As part of the data request under Subtask 2.1, EKI will request additional data (i.e., customer billing data and AMI data) to support the program participation and water savings analysis. Data will be requested in electronic format, such that it can be readily incorporated into the Water Contractor's project database. We note that the data request to the Water Contractors may include a request for information from other agencies, such as detailed property characteristics from the Marin and Sonoma County assessors' offices.

This project database and other files summarizing analytical results (Excel workbooks and GIS files) will be provided to the Water Contractors at the completion of the project.

Subtask 5.2 – Residential Indoor/Outdoor Water Use Assessment

Under Subtask 5.2, EKI will estimate the amount of water used indoors and outdoors by the Water Contractor and assess the current water use patterns against the residential components of the Water Contractor's UWUOs. This analysis will also provide important insights into high water use areas and sectors and provide a stronger data foundation for the estimate of future water demands described under Subtask 4.3 and the analyses described under Subtasks 5.3 and 5.4.

Refined Indoor and Outdoor Water Use Estimate

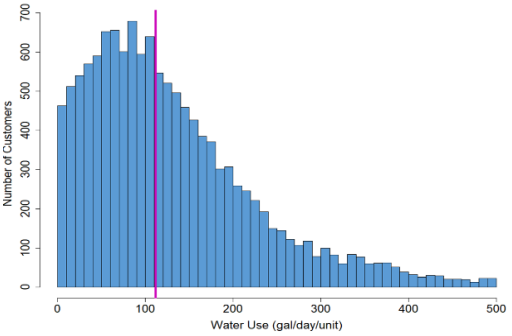
Most customer water use is metered using mixed meters (i.e., indoor and outdoor water use tracked by one meter). In order to estimate the amount of water used indoors versus outdoors, EKI will apply a "scaling factor method" described further below. It is assumed that this method will be applied to both residential and non-residential accounts and refines the estimate described under Subtask 4.3.

For accounts with mixed meters, the amount of water used indoors versus outdoors cannot be known precisely but may be estimated based on the best available information. In warm arid climates such as the Water Contractors' service areas, landscaping is typically irrigated year-round, and therefore the common "simple

method" of assuming that the lowest water use during the year (i.e., winter use) is 100% indoor use, is less accurate than it is in cooler, wetter climates. EKI has developed a modified version of this method, using annual irrigation peaking factor (i.e., scaling factor) to adjust the winter water use estimates. An irrigation scaling factor is calculated for each year based on water use by dedicated irrigation accounts and/or recycled water accounts, and therefore reflects climate variability between years. That scaling factor is then applied to mixed use meter data to estimate the indoor and outdoor water use is then applied to mixed use meter data to estimate the indoor and outdoor water use for each mixed meter account.

Statistical and Spatial Analysis of Water Use Patterns

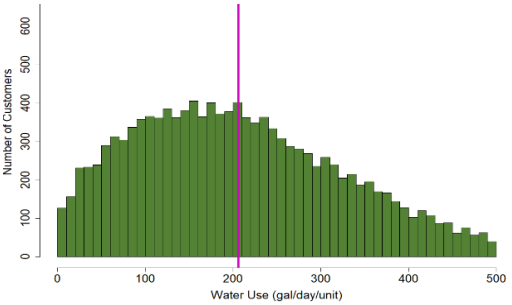
Indoor and outdoor water use will be estimated on an account-level basis, to the extent data allow, as well as aggregated on a sector-by-sector basis for water use from 2015 through 2024. In order to understand further water use patterns within each of the water use sectors, EKI will perform a statistical analysis of the most current water use data and prepare maps to show the spatial distribution of residential water use in different portions of the Water Contractor's service area as shown in the map below.



Statistical analysis of indoor and outdoor water use prepared for the City of Burbank's Indoor/Outdoor Water Use Assessment

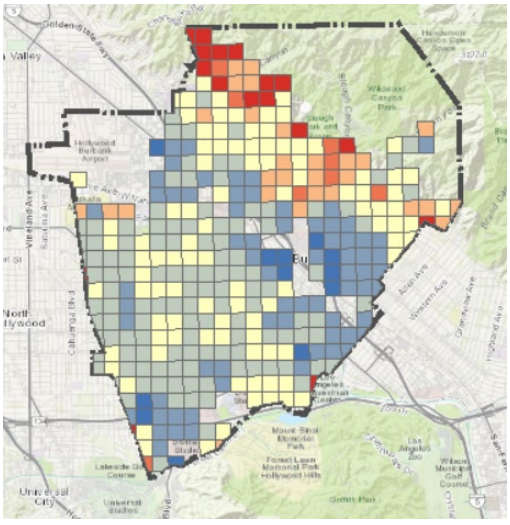
Comparison with Residential Water Use Standards

To compare the Water Contractor's water use to the residential indoor water use standards, EKI will estimate total residential indoor water use on a per capita basis. EKI will use U.S. Census Bureau American Community Survey population estimate to estimate per capita water use on a Census Block Group-level. The average residential indoor R-GPCD and estimated outdoor water use will be compared to the State's water use efficiency standards.



Subtask 5.3 – Analysis of Past Program Participation

As part of the basis for estimating the remaining potential for future conservation programs and savings, EKI will summarize historical participation in all conservation program offerings through 2025. In addition, EKI will: (1) update the evaluation of past customer participation for the five (5) signature conservation programs selected in the 2020 Demand and Conservation Study and/or (2) perform detailed evaluation on additional selected programs. The results of these analyses will help the Water Contractor better understand which customers are participating in which conservation measures/programs and will accordingly inform strategic design, selection, and marketing of future programs and services. Each of the sets of analyses described herein will include the development of compelling maps, charts and graphics that will support visualization of the results and conclusions and make them accessible to a broad audience.

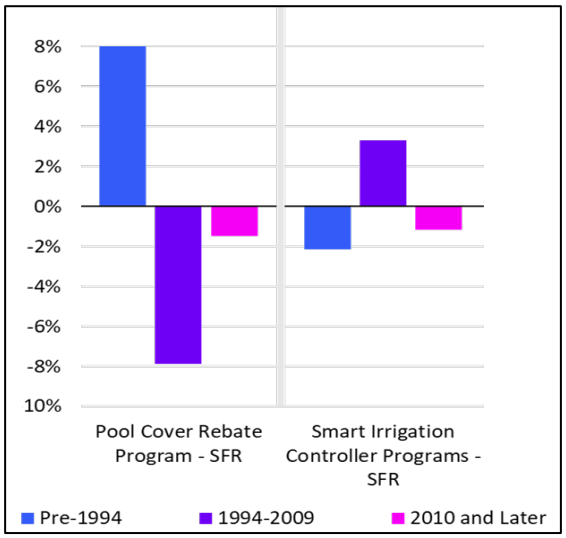


Location of high and low outdoor water users prepared for the City of Burbank's Indoor/Outdoor Water Use Assessment

Past Program Participation

EKI will summarize the total participation and device distribution from past program participation for the programs of interest within each Water Contractor's service area, based on the data provided in Task 2.1 and 5.1. Participation will be evaluated relative to key geographic, property, and customer demographic characteristics. More specifically, program participation will include breakdown and comparisons by:

- Neighborhood-level median household income, rate of home-ownership vs. rentership, and household member age, based on Census data (for residential programs);
- Age of building stock based on County Assessor parcel data (for residential and CII programs, as appropriate);
- Building, lot, and or irrigated area size, based on County Assessor parcel or other information made available (for residential and CII programs, as appropriate); and
- Distance customers travel to attend educational classes (as applicable).



Analysis of Program Participation by Property Age Prepared for MMWD's Water Efficiency Master Plan

This analysis will also look at temporal trends in conservation measure/program participation, with a particular focus on changes in program participation before, during, and following the last drought and in connection with specific marketing and outreach campaigns. This approach can be utilized for both intervention-based programs, and also for more education-based programs (e.g., workshop attendance), and as shown in Figure above, can provide important insights into reasons for program performance or lack thereof.

Geospatial Participation Density Analysis

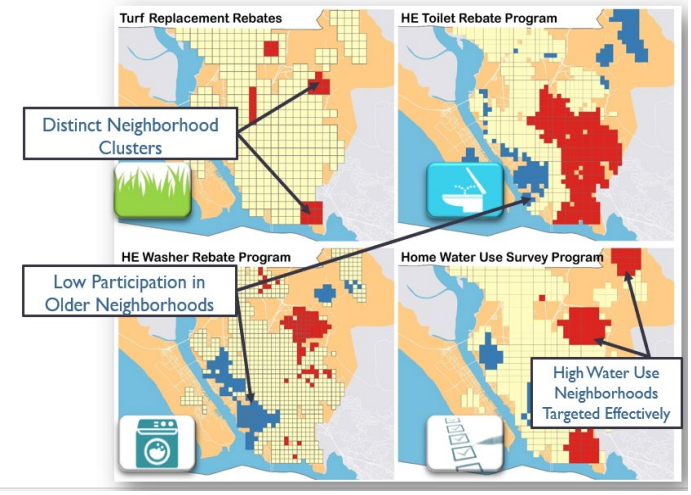
EKI will perform geospatial analyses of program participation to identify program participation density for the identified programs within each Water Contractor's service area. This analysis will be used to identify statistically significant areas of high and low participation density (participation "hot" and "cold" spots) for residential conservation programs. These results will be summarized and presented by Water Contractor which: (1) will allow for a comparison of the relative program saturation between Water Contractors; and (2) can be used to inform future program targeting and marketing efforts. Maps will be produced showing hot and cold spots based on Water Contractor service areas, for each program and customer type. These data can also be provided to the Water Contractor as GIS files.

Subtask 5.4 – Analyze and Quantify Water Savings Achieved by Past Programs

In order to analyze and quantify actual water savings achieved due to past program participation, EKI will utilize a "cohort analysis method" to measure program-specific water savings at the account-level based on billing history and program participation data.

To quantify water savings achieved by a given conservation measure/program, EKI will compare water use before and after implementation of a given intervention for program participants to the water use at geographically-stratified cohort accounts who have not participated in the same or other programs in the given time frame. The incremental volume of water saved by program participants compared to that of the cohort can then be attributed to program participation, as all other factors are normalized.

Specifically, for residential water users, comparing the change in participating account water use to a non-participating cohort located in the same geographic area (e.g., Census Block Group) effectively controls for factors that can influence water use including, climate, house and yard size, general socio-economic factors, etc. As with the above analyses, programs will be grouped to limit the overall number of analyses to those that are most meaningful for planning purposes (e.g., by fixture or educational outreach type). This type of measure-specific analysis has led to very meaningful insights in other areas - for example, that weather-based irrigation controllers (WBICs) are resulting in an increase in water use at accounts, rather than a savings, for certain water agencies.

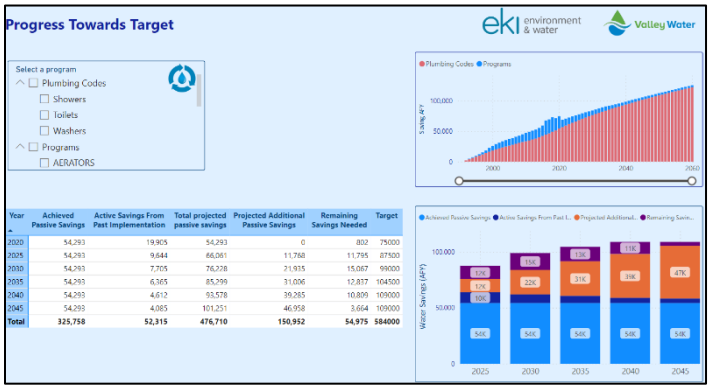


Geospatial analysis conducted for MMWD's 2020 Water Demand Analysis and Water Conservation Measure Update

Findings from this subtask will be incorporated into Subtask 4.5 - Water Conservation and Economic Analysis, to further refine water savings estimates and participation assumptions. Additionally, maps, charts, and graphics that support visualization of the results and conclusions and make them accessible to a broad audience will be incorporated into the 2025 UWMP Water Demand/Conservation Reports, described under Task 4.

Optional Task 6 – Water Conservation Dashboard and Decision Support Tool

To support implementation of the 2025 UWMP Water Demand/Conservation Reports, EKI can build a Water Conservation Dashboard for each of the Water Contractors to enable tracking of existing and projected water demands, conservation program activity, water savings from existing and additional conservation measures and legislative requirements, and progress towards meeting their UWUO.



Example Water Conservation Dashboard Developed for Santa Clara Valley Water District

EKI can also design and develop a Decision Support Tool (DST) for each of the Water Contractors to support conservation planning and decision making to meet their UWUO. The DST is a dynamic tool that can be designed to connect to the same data sources identified for the Water Conservation Dashboard but can provide further capability to adjust assumptions and scenarios.

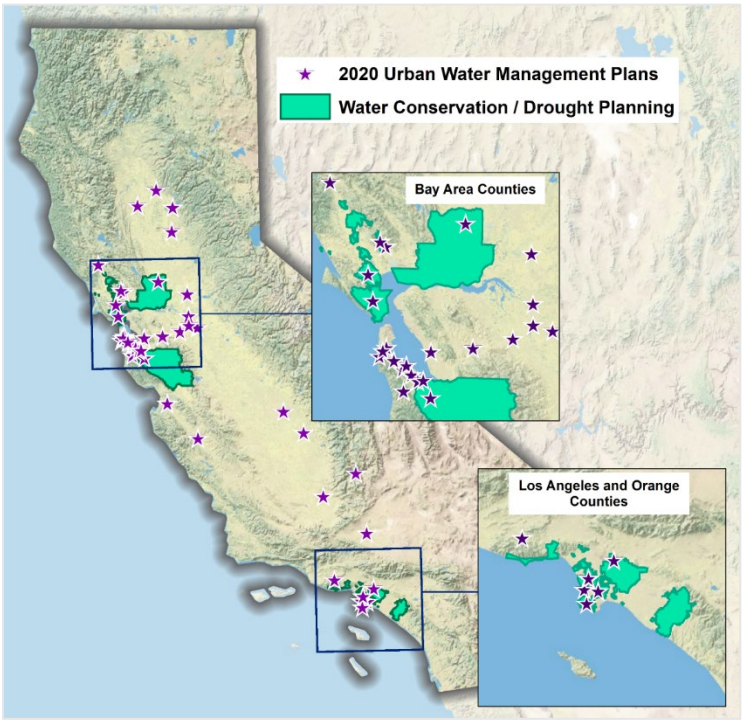
Task 6 Deliverables

- Water Conservation Dashboard
- Decision Support Tool

4. PERSONNEL

Firm Expertise

Our multidisciplinary team brings experience in a wide range of water resources planning and assessment services including preparation of water demand and conservation assessments, including for the Partnership and several of the Water Contractors. Specifically, EKI's water resources planning services for that have supported the development of related efforts include:



- Water resource planning, including integrated water resources/"One Water" plans, water demand forecasting, water efficiency strategic plans (including development and application of the AWE Model, UWMPs, Water Shortage Contingency Plans (WSCPs), Annual Water Supply and Demand Assessments (AWSDAs); Drought Response Plans, Water Supply Assessments (WSAs), and Water/Wastewater/Recycled Water Master Plans;
- Assessment and development of groundwater supplies, including basin safe yield assessments, aquifer testing, groundwater quality assessments, and numerical groundwater modeling;
- Water supply portfolio development and management and feasibility assessments, including water transfers, aquifer storage and recovery (ASR) projects, and water bank siting and development;
- Evaluation of managed aquifer recharge, including with recycled water for direct or indirect potable reuse (IPR/DPR) purposes;
- Strategic and technical support for Sustainable Groundwater Management Act (SGMA) compliance;
- Water supply system planning, design, and construction management;
- Grant tracking, procurement, and administration;
- Stakeholder engagement; and,
- Litigation support and local and state regulatory and permit support.

EKI applies principles of data science and analytics to conduct and present quantitative analyses of demand and conservation potential by customer type and sector. In our past projects we have used conservation program saturation and effectiveness analysis to support strategic planning for, and development of, informed, targeted and cost-effective conservation measures.

EKI recognizes that there are multiple potential factors that could impact differences in water use among contractor service areas. These factors may include: (1) current and projected land uses, (2) demographics, (3) timing and level of conservation, (4) implementation and effectiveness of Drought Response Measures (DRMs), and (5) pricing strategies.

At EKI we use flexible and informative methods for developing water demand forecasts to address both traditional and emergent uncertainties that may influence future demands and planning decisions and at the same time we evaluate the potential for future water savings and programs to inform the conservation program scenarios.

Our proposed Team is knowledgeable at evaluating current water use by customer sector for each Water Contractor. In addition to total water use, our evaluations will include: (1) quantification of indoor versus outdoor water use; (2) identification of the maximum savings potential by customer sector; and (3) application to industry-standard model to conduct the demand and conservation forecasting.

Since EKI's completion of the *2020 Demand and Conservation Update*, multiple uncertainties impacting the water demands of the Water Contractors have continued to evolve. EKI understands that the 2025 Update will require Factors that must be considered and quantified in the 2025 Update include:

Requested Services ⇨ EKI's Relevant Experiences ⇩	Water Conservation Plan	Demand Projections	Evaluation of Conservation Alternatives	Water Conservation Tool	DRMs/ Drought Planning/ Resiliency Planning
Bay Area Water Supply and Conservation Agency	✓				✓
Valley Water	✓	✓	✓	✓	✓
Cal Water	✓	✓		✓	
Sonoma-Marin Water Saving Partnership	✓	✓	✓	✓	
Marin Municipal Water District	✓	✓	✓	✓	✓
Valley of the Moon Water District	✓	✓	✓	✓	✓
Solano County Water Agency	✓		✓		
West Basin Municipal Water District	✓				
Irvine Ranch Water District	✓		✓		

Sonoma-Marin Water Savings Partnership, Sonoma and Marin County Water Agencies Experience

EKI developed water demand projections and evaluated water conservation opportunities for nine of the Sonoma-Marin Saving Water Partnership agencies (i.e., Valley of the Moon Water District [VOMWD], MMWD, North Marin Water District [NMWD], and the Cities of Santa Rosa, Petaluma, Rohnert Park, Cotati, Sonoma, and Windsor). This effort included working with each agency to develop robust water demand projections that accounted for historical and projected conservation efforts and the demand hardening experienced since the historic 2014-2016 drought and captured the evolving land use changes across the two-county region.

Sonoma-Marin Saving Water Partnership wins WaterSense Partner of the Year, Sustained Excellence awards

The evaluation appraised the water conservation program opportunities using the AWE Model that considered implications of the MCCWL legislation and provided recommendations on future conservation program offerings. Prior conservation modeling efforts in the region had relied on the DSS Model, so a key part of this effort included seamless migration of relevant data sets from the DSS Model platform to the AWE Model. EKI also expanded this effort with MMWD, NMWD, and the City of Santa Rosa to conduct program participation density (i.e., "hotspot" analysis) and evaluate the residential water use distribution and estimated actual program water savings using the "Difference-in-Differences Method". These findings were used to guide the prioritization of future programs.

EKI also successfully prepared the 2020 UWMPs for several of these same agencies, as well as several WSAs and AWSDAs, and recently completed MMWD's Water Conservation Staregic Plan.

Proposed Project Team Qualifications and Experience

At EKI, we understand that successful completion of a project is founded on the performance of key individuals. We are aware of the importance our clients place on the selection of a capable Project Manager supported by technical specialists to effectively guide their projects to completion. For the Partnership in particular, we are aware that a project management team that understands the Water Contractor's needs, processes, and interrelated efforts is essential to the success of this project. To meet this project need, EKI has assembled a well-rounded team of dedicated and specialized professionals that are proficient in all aspects of demand modeling, water efficiency strategic planning, and urban water management planning, and capable of providing consistent leadership across all aspects of the project.

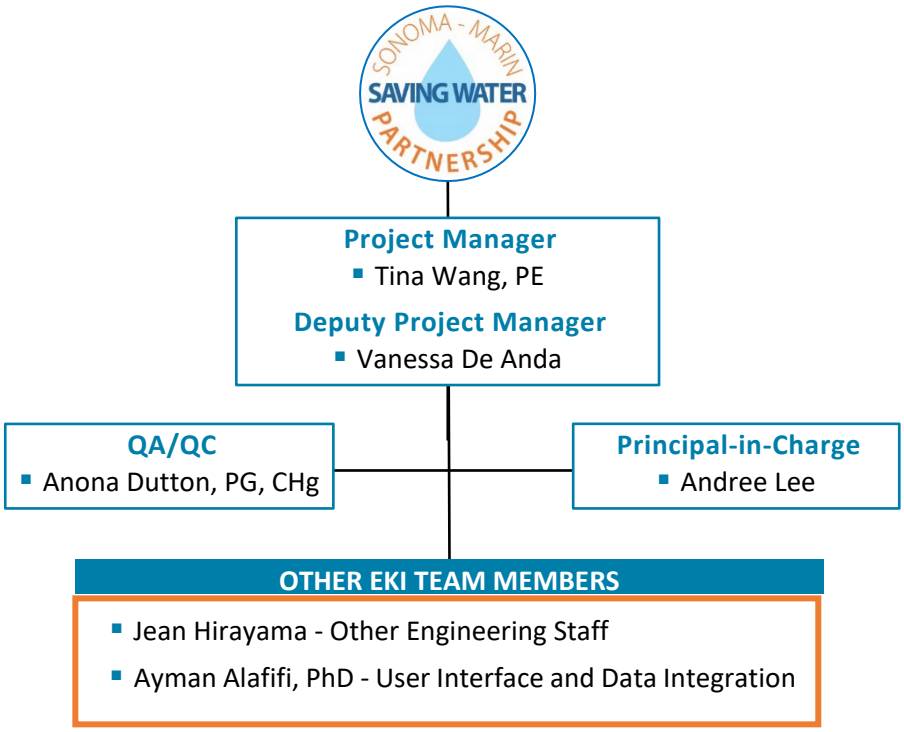
Project Manager, Tina Wang, PE, will work closely the City and each of the Water Contractors to implement the project, drawing from efficiencies across other similar efforts she is leading for agencies in California. **Principal in Charge, Andree Lee**, will provide overall leadership for our team and ensure staffing resources are available to meet all project commitments. **Ms. Wang and Ms. Lee** both bring extensive experience in managing complex water resources planning processes for other multi-agency clients throughout California. Understanding the need for robust demand and conservation projections while maintaining uniformity and avoiding discrepancies for the Member Agencies with complimentary planning efforts, our team is well positioned to provide the detailed analyses required to conduct transparent and defensible demand and conservation modeling that incorporates unique characteristics of each Water Contractor. Application of the AWE model for this project will ensure transparency and consistency with industry standards.

In-House Firm Capacity and Ability to Commit Resources

EKI understands that continuity of key personnel assigned to a project is a key factor in project success. Both Ms. Wang and Ms. Lee, our proposed Project Manager and Principal in Charge, are in senior roles at EKI. Ms. Lee leads the One Water practice area of the company and Ms. Wang is the Technical Leader for water demand and conservation planning. Both Ms. Wang and Ms. Lee have been helping agencies shape water conservation related decisions throughout California. Our proposed team is dedicated and has the availability and capacity to complete tasks and deliverables as identified in this project's scope of services, within schedule and on time. As in the past, our staff will continue to work as extension of Partnership staff with minimal assistance and keep you informed about the progress of each milestone.

Team Organization

An organizational chart indicating the primary roles and responsibilities of each key EKI Team member is provided here. It is followed by short bios of the key personnel. Detailed resumes with the summary of qualifications and experience of each team member identified in the organization chart are included as **Appendix A**.



Tina Wang, PE – Project Manager

- M.S., Civil and Environmental Engineering, Stanford University, 2014
- B.S., Environmental Engineering, Economics, Northwestern University, 2012
- Professional Civil Engineer in California (#85789)

Ms. Wang has over 10 years of experience working in water resources and engineering. She has supported multiple agency clients with water resources planning, including demand and conservation assessments and the development of UWMPs, WSCPs, drought response plans, WSAs, and AWSDAs. She has also been involved in hydraulic modeling for several water and sewer master plans, which has also included demand and conservation forecasting. She has also provided technical support on water system permitting, water right evaluations, water transfers, and SGMA implementation.

Ms. Wang managed the development of numerous UWMPs across California and their associated water demand assessments. She and her team evaluated historical water use patterns, processed and analyzed account-level water data, developed water use factors for a

Project Manager
Tina Wang
Water Resources Engineer
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Suite 300, Daly City, CA 94014
TWang@ekiconsult.com
T: (650) 292-9100

Relevant Experience Highlights

- Demand and Conservation
- Drought Planning and Management
- Urban Water Management Planning
- Senate Bill 610-compliant Water Supply Assessments
- Water Use Efficiency Planning and Implementation
- Water Strategy and Supply Management
- Integrated Water Resources Master Planning
- Stakeholder Engagement and Workshops
- GIS-integrated Hydraulic Modeling

variety of land uses, and performed demand modeling. She is currently leading development of BAWSCA's 2021-23 Drought Report and uses statistical and geospatial methods to assess water savings from various drought response measures and conservation measures. In addition, Ms. Wang supported development of successful grant proposals and served as the grant and project manager for multi-year grant-funded projects. She will be leading EKI's efforts to develop the 2025 Update, having completed and leading projects of similar scope and effort, she brings firsthand knowledge of working with multi-agency and stakeholder engagement to synergize this project.

As Project Manager, Ms. Wang will serve as the primary Client contact, coordinate the team's work on a daily basis, track budget and overall project schedule, and develop project goals and technical approaches.

Andree (Johnson) Lee – Principal in Charge

- B.A., Geography/Environmental Studies, University of California, Los Angeles, 2006

Ms. Lee, Vice President and One Water Practice Area Lead at EKI, has over 17 years of experience supporting agencies and public sector clients with water resources projects. She specializes in working across entities to achieve collaborative solutions to complex water supply challenges. She has managed significant regional water planning efforts throughout California.

Ms. Lee led the development of a water efficiency potential study for Marin Municipal Water District. This study included detailed analysis of customer-level water use history, trends, and responses to implementation of water efficiency programs and practices. She evaluated the demographic and geospatial trends in past program participation, analyzed water efficient device saturation and passive savings, and developed and modeled several potential water efficiency program approaches. Ms. Lee has also led the development of BAWSCA's 2013 Regional Demand and Conservation Projections and served as a senior advisor for BAWSCA's 2021 Regional Demand and Conservation Projections, the Regional Demand and Conservations Projections Project, Conservation Strategic Plan, Los Vaqueros Expansion Project participation, and Regional Water Supply Reliability Model implementation. In addition, Ms. Lee is working closely with Valley Water on water shortage contingency planning, water conservation planning and implementation, water supply and demand forecasting, and water transfers. She also provides statewide water policy leadership as the Chair of the Urban Water Institute.

Principal In Charge
Andree Lee
Vice President
ALee@ekiconsult.com
T: (650) 292-9100

Relevant Experience Highlights

- Demand Forecasting
- Water Use Efficiency Planning and Implementation
- Conservation and Drought Planning and Management
- Water Supply Assessment, Planning, and Development
- Water Transfer Strategic Services
- Water Supply Resilience Planning
- Integrated Resources and One Water Planning
- Stakeholder Engagement
- Strategic and Technical Support for Water Agencies
- Federal & State grant funds, Facilitated more than $50m

As Principal in Charge, Ms. Lee will provide strategic and technical direction, support communication and coordination efforts, and ensure appropriate staff resources are made available to meet project needs.

Anona Dutton, PG, CHg – QA/QC

- Professional Geologist in California (#7683)
- Certified Hydrogeologist in California (#841)
- M.S., Hydrogeology, Stanford University, 2000
- B.S., Environmental Sciences, Stanford University, 1998

Ms. Dutton, Vice President and Director of the Water Resources and Engineering Practice at EKI, has over 20 years of experience managing water resources projects. Ms. Dutton has worked closely with Sonoma-Marin Water Saving Partnership while she led the development of the *2020 Water Demand and Conservation Report*. The team led by Ms. Dutton assessed the water conservation program opportunities using the AWE Model that considered regulatory implications of SB-606, '*Making Conservation a California Way of Life'* and provided recommendations on future conservation program offerings. Consequently, under Ms. Dutton's leadership EKI also prepared the 2020 UWMPs for several of these same agencies, as well as several WSAs, and developed MMWD's Water Conservation Strategic Plan.

QA/QC
Anona L. Dutton, PG, CHg
Vice President
ADutton@ekiconsult.com
T: (650) 292-9100

Relevant Experience Highlights

- Demand and Conservation Planning and studies
- Integrated Water Planning and Management
- Comprehensive Supply Reliability Studies
- UWMPs and WSAs
- Water Use Efficiency Planning and Implementation
- Water Resilience Planning
- SGMA and groundwater expertise
- Stakeholder engagement
- Grant Funding

Ms. Dutton has also led several other multi-agency water resources planning and development projects, like BAWSCA and its member agencies. These efforts have consequently led to related UWMPs and WSCPs; WSAs; groundwater, recycled water and surface water development; Water Supply Reliability Modeling; and drought response. She is deeply involved in water resources evaluations throughout the State and is recognized as an expert in her field. She has worked widely in the Bay Area and California and managed the development of multiple water demand and conservation studies, including for Cal Water, Valley Water, Solano County Water Agency, and Irvine Ranch Water District. Ms. Dutton also supports agencies and public sector clients with groundwater supply development, water transfers, and SGMA compliance. Ms. Dutton has also led the successful development of grant proposals that have secured millions of dollars for her clients.

In QAQC, Ms. Dutton will provide strategic and technical direction, support communication and coordination efforts, and ensure appropriate staff resources are made available to meet project needs.

Vanessa De Anda – Deputy Project Manager

- M.S., Environmental Science & Management, University of California-Santa Barbara, 2017
- B.S., Environmental Science, University of California-Los Angeles, 2014

Ms. De Anda has more than seven years of experience providing integrated water resources management services to water districts and municipalities throughout California. She supports clients in preparing for compliance with the MCCWL requirements by developing long-term water demand projections, evaluating water supplies, and developing tailored strategies to improve water use efficiency and supply reliability under varying hydrologic and regulatory conditions. Ms. De Anda has also collaborated closely with clients to develop UWUO reports, WSCPs,

Deputy Project Manager
Vanessa De Anda
Water Resources Planner

Relevant Experience Highlights

- Demand Forecasting
- Strategic and technical support for agencies
- Integrated Regional Water Planning and Management
- Comprehensive Supply Reliability Studies
- UWMPs and WSAs
- Water Use Efficiency Planning
- Water Resilience Planning
- Stakeholder Engagement

UWMPs, AWSDAs, WSAs, and other regulatory planning documents related to water resources planning and implementation.

As Deputy Project Manager, Ms. De Anda will assist Ms. Wang to coordinate the team's work on a daily basis, coordinate with Sonoma-Marin Agencies, track budget, and maintain project schedule.

Ayman Alafifi, PE, PhD – Dashboard and DST Lead

- Ph.D., Water Resources Engineering, Utah State University, 2017
- M.S., Environmental Strategy and Sustainable Development, University of Surrey, 2010
- B.S., Civil Engineering, The Islamic University of Gaza, 2008

Dashboard and DST Lead
Ayman Alafifi, PE, PhD
Data Integration Lead

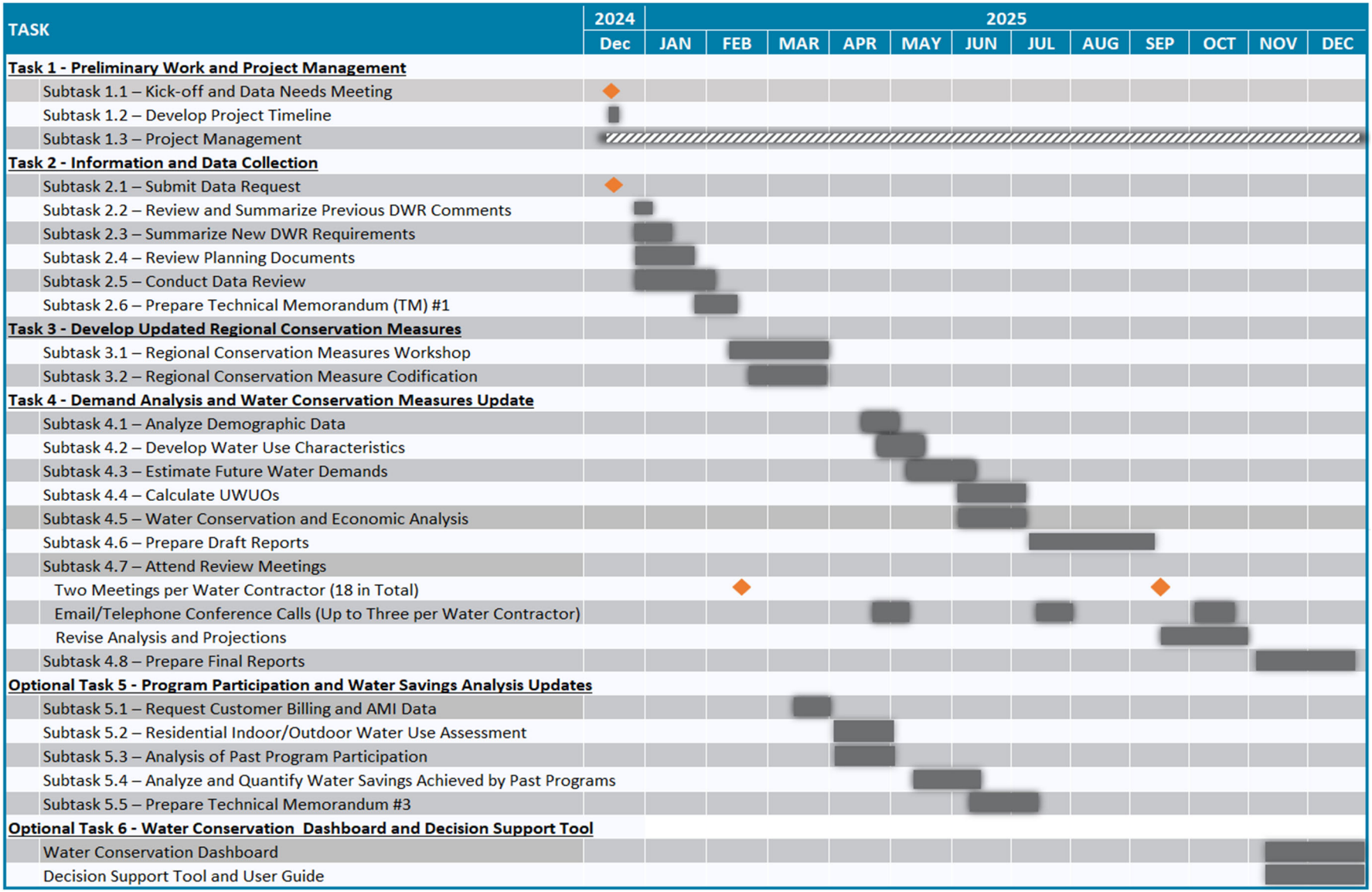
Relevant Experience Highlights
- Interactive Dashboards for and Decision Support Tools
- Water Supply and Demand Forecasting
- Scenario Development and Alternatives Assessment
- Urban Water Resources Planning and Management
- Water Supply Evaluation Tool Development

Dr. Alafifi has over 14 years of experience in urban water resources planning and management. He worked with multiple large cities and utilities to analyze water demand pattern, forecast demand, and evaluate available supply. Dr. Alafifi is a proficient data scientist and an expert in business intelligence. He led multiple decision support tools and dashboard development efforts that guided the selection and prioritizing of supply alternatives to meet expected future demand. Dr. Alafifi was the technical lead for multiple public and private sector clients across the United States and has developed simulation and optimization models to streamline the planning and operations of complex systems, facilitate prioritizing alternatives, and improve communication of modeling and planning outputs. Along with his technical experience, Dr. Alafifi brings strong technology consulting experience and has led several large modeling teams to efficiently improve data flow, quality review, visualization, and analysis of capital improvement projects and asset management plans.

Dr. Alafifi will lead the development of Water Conservation Dashboard for each Water Contractor to support conservation planning and decision making to meet their UWUO. He will lead the design of the overall framework and the interface, and the deployment of the Dashboard.

5. SCHEDULE

EKI is prepared to start work on this project immediately upon authorization to proceed. We are committed to working with the City and the Water Contractors to complete the project by December 31, 2025. We will inform the City and the Water Contractors of any issues that arise that may affect the schedule for completion or impact the anticipated level of effort. A general schedule for the project is presented below.



6. REFERENCES

The EKI Team has supported the Partnership, the Water Contractors and others throughout the region and state with demand forecasting and conservation planning. These prior efforts provide a strong foundation to prepare the 2025 Update. We have also worked extensively with several of the Water Contractors to understand their water use trends over time and conservation potential and drought response through the preparation of recent UWMPs, WSCPs, and AWSDAs. The EKI Team has been leading demand and conservation analysis and modeling on key regional and statewide efforts. Specific examples of some of our relevant reference projects with comparative effort and similar scope of work are presented below.

Valley Water - Water Conservation Plan & Drought Assessment

EKI developed a *Water Conservation Strategic Plan* for Valley Water. The work effort included detailed geospatial and statistical analysis of historical program participation, as well as strategies to increase participation in future program offerings. While the primary focus of the Water Conservation Strategic Plan was long-term conservation, EKI also developed a Water Shortage Management chapter that:

1) discusses the various documents that are employed by Valley Water to address water shortage conditions;
2) describes Valley Water's response to the 2012-2016 drought, including specific actions taken in regard to water conservation and demand management policies and recommendations for future drought response;
3) highlights the role of economics in addressing water shortages; and
4) includes a quantitative analysis of Valley Water's 2012-2016 drought response and remaining conservation potential.

This analysis revealed that per capita water use in the Valley Water service area has rebounded very little since the 2012-2016 drought, resulting in customer demand hardening. EKI further found that if Valley Water wants to achieve a 30% water use reduction target in a future drought, the effective per capita water use for its retail agencies would have to be approximately 78 gallons per capita per day (GPCD), which is significantly lower than any of the retail agencies' historical GPCD.

The EKI Team recently supported Valley Water with the water conservation portion of its Water Supply Master Plan 2050, which was adopted by the Valley Water Board in July 2024. Work included establishing regional water savings

Reference Contact and Project Facts:

Metra Richert, Water Supply Planning and Conservation Manager
Valley Water
5750 Almaden Expressway,
San Jose, CA 95118
Ph: (408) 630-2978
mrichert@valleywater.org
Project Duration: 2021 – 2024
Project Cost: $274,680

Key Personnel Involved: Andree Lee, Vanessa De Anda, Anona Dutton

Similar Tasks Completed

- ✓ Long-term conservation planning
- ✓ Drought response planning

EKI's Knowledge Will Provide:

- ✓ Comprehensive knowledge of the Making Conservation a California Way of Life legislation and associated rule making
- ✓ Effective application of the AWE model to estimate water conservation potential

"I'd like to take a moment to thank EKI … for the fantastic efforts and products you've produced across these 2 plus years. Valley Water's Water Conservation Strategic Plan has been an incredible asset. The supplemental materials you produced have already ensured the plan will not be a report on a shelf somewhere, but a living tool for us to reference, query, and analyze to meet our targets and to benefit our 2 million customers."

- Justin Burks, Valley Water

targets and designing suites of measures to achieve the targets. We also developed a water conservation staffing plan to ensure that Valley Water has sufficient staff resources to meet the targets.

Bay Area Water Supply and Conservation Agency (BAWSCA) – Regional Water Conservation Program and Conservation Strategic Plan, Drought Reports

EKI provided significant strategic and technical support to BAWSCA for more than a decade, including leadership for prior demand and conservation studies, BAWSCA's Regional Water Conservation Program and Conservation Strategic Plan, Drought Reports, and implementation of its 2015 Long-Term Reliable Water Supply Strategy (Strategy).

EKI developed 2020 UWMPs for eight of the BAWSCA member agencies. These efforts included compiling historical water use information, projecting future demands based on population growth and water conservation assumptions, and assessing the agencies' development of recycled water supplies. Each agencies' progress toward reaching their targeted reductions per Senate Bill X7-7 and their SWRCB mandated water conservation target were evaluated, as well as demand management measures as they related to supply reliability and demographic projections going forward. As part of this process, for many of these agencies, EKI also developed the agencies' WSCPs, which included utilizing EKI's Drought Response Tool (DRT), an Excel-based spreadsheet model used to help agencies identify water savings opportunities, by customer sector and major end-use, and to quantify and compare the potential water savings benefits of implementing various suites of drought response actions. In addition to work for the member agencies, following the historic 2012-2016 drought, BAWSCA retained EKI to conduct a survey of its 26-member agencies to better understand the implementation and effectiveness of BAWSCA's regional and local drought response actions (key results and timeline graphics are incorporated into BAWSCA's report, which can be found here: http://www.bawsca.org/droughtreport).

Reference Contact and Project Facts:

Tom Francis
Water Resources Manager
Bay Area Water Supply & Conservation Agency
155 Bovet Road, Suite 650
San Mateo, CA 94402
Ph: (650) 349-3000
tfrancis@bawsca.org

Project Duration: 2017 – Present
Project Cost: $284,145

Key Personnel Involved:
Andree Lee, Anona Dutton, Jean Hirayama

Similar Tasks Completed

- ✓ Demand projections and conservation evaluation
- ✓ Regional approach to evaluate actual program savings
- ✓ Projections based on demand hardening and changing land use
- ✓ Prioritization of future programs
- ✓ Outreach and engagement with several agencies in the Partnership

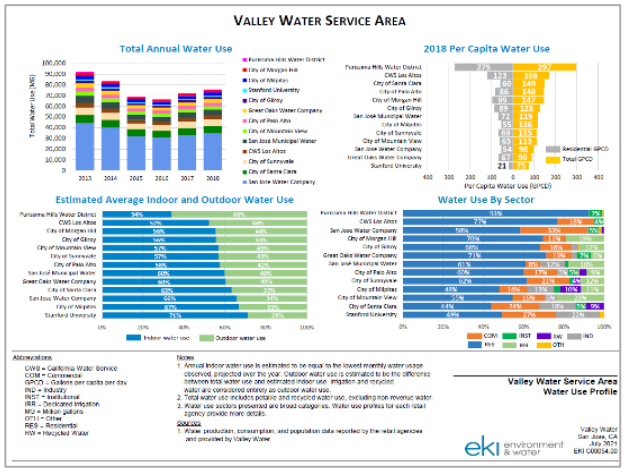
EKI's Knowledge Will Provide:

- ✓ Comprehensive knowledge of the Making Conservation a California Way of Life legislation and associated rule making
- ✓ Land-use and population-based demand forecasting
- ✓ Effective application of the AWE model to estimate water conservation potential
- ✓ Effective support for multi-party decision making

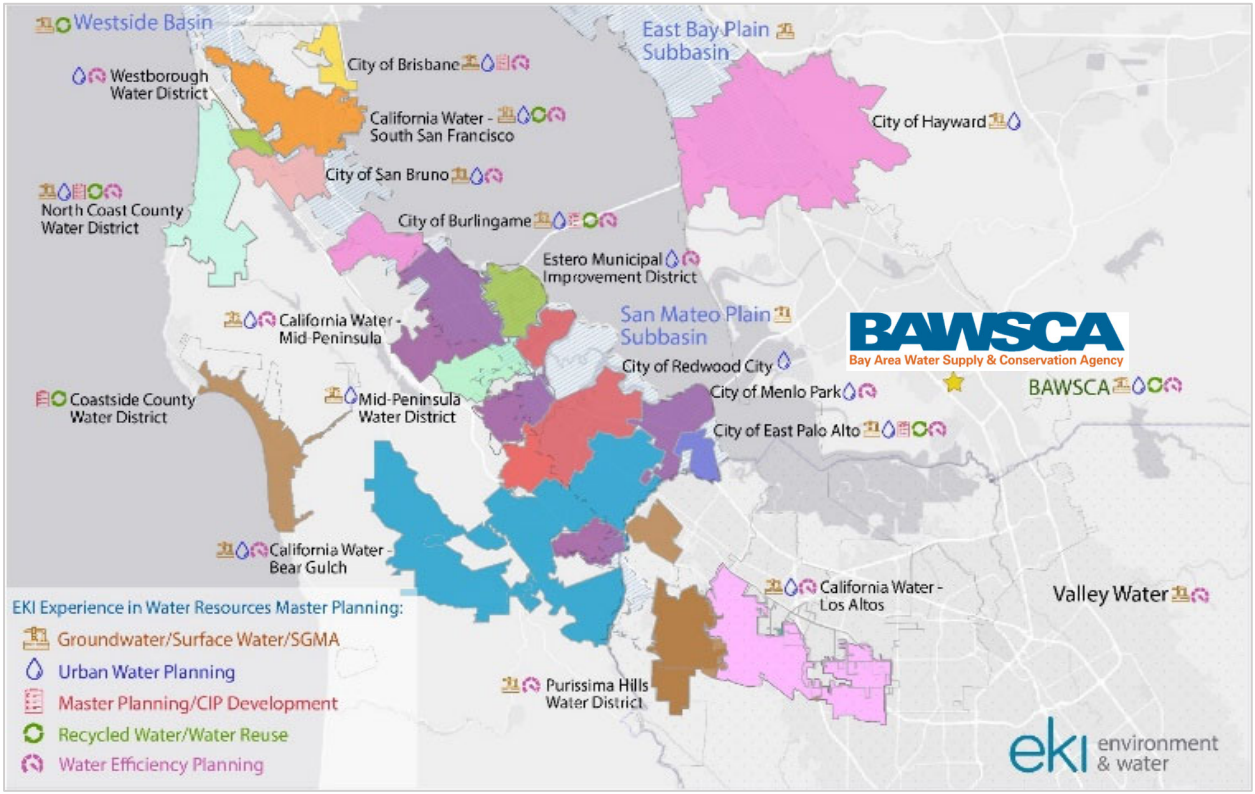
BAWSCA also recently retained EKI to develop its Long-Term Reliable Water Supply Strategy.

EKI is also assisting BAWSCA to initiate the Long-Term Reliable Water Supply Strategy 2050 (Strategy 2050) with a scoping effort to establish the overall approach to developing a Strategy that aligns with the needs of the BAWSCA region. EKI also worked cooperatively with BAWSCA during the development of the 2015 and 2020 UWMP cycles to ensure that the Member Agencies had a consistent and well-informed approach to addressing the significant supply shortfalls being projected for the Regional Water System.

EKI designed and implemented a survey of the member agencies to help BAWSCA better understand the effectiveness of its last regional and local Drought Reponse Measures (DRMs). EKI also developed a compelling infographic for BAWSCA to illustrate the timeline of drought actions and resultant water savings, and drafted content for the previous 2017 Drought Report. EKI also worked cooperatively with BAWSCA during the development of the 2015 and 2020 UWMP cycles to ensure that agencies had a consistent and well-informed approach to addressing the significant supply shortfalls being projected for the Regional Water System.



In a subsequent effort, EKI has been recently awarded the BAWSCA's **2021-2023 Drought Report project** that recognizes the new challenges faced by the region. The Drought Report will evaluate the drought actions and the DRMs implemented by the Member Agencies. It will also document lessons learned and will quantify the effectiveness of the DRMs implemented by BAWSCA, and its partner agencies: the San Francisco Public Utilities Commission (SFPUC), and Santa Clara Valley Water District (Valley Water).



Water Supply and Reliability Projects for BAWSCA Agencies. EKI has also worked directly for half of all BAWSCA agencies on water resources-related projects and has long established working relationships with nearly all the BAWSCA Member Agencies as shown in figure below. EKI has developed UWMPs, WSCPs, AWSDAs, master planning studies, Capital Improvement Plans (CIP), water and sewer system infrastructure, and WSAs for these BAWSCA Member Agencies.

Valley of the Moon Water District Water Supply Resiliency and Urban Water Use

EKI has been working with Valley of the Moon Water District (VOMWD) since 2015 and has successfully completed water supply and conservation and infrastructure design and construction support projects.

Recently EKI has completed the Conservation Standards Assessment for the District. This assessment documented the District's current water use with respect to the new annual water use objective (Objective) and presented a review of related commercial, industrial, and institutional (CII) sector standards being developed by the Department of Water Resources (DWR) and the State Water Resources Control Board (State Water Board) as part of the *Making Water Conservation a California Way of Life* legislation.

EKI has also developed water demand projections and evaluated water conservation opportunities for nine of the Sonoma-Marin Saving Water Partnership agencies (i.e., VOMWD, Marin Municipal Water District, North Marin Water District, and the Cities of Santa Rosa, Petaluma, Rohnert Park, Cotati, Sonoma, and Windsor). This effort included working with each agency to develop robust water demand projections that accounted for historical and projected conservation efforts and the demand hardening experienced since the historic 2014-2016 drought and captured the evolving land use changes across the two-county region.

EKI has also completed several other water supply and planning projects for VOMWD including the:

- DWR's Urban and Multibenefit Drought Relief Grant in 2022 – EKI assisted VOMWD with securing more than $3M in grant funds through the.
- 2015 and 2020 UWMPs and WSCPs.
- Analysis of Making Water Conservation a California Way of Life Impacts to the District.
- Preparation of multiple WSAs and development of a Global WSA Tool to track water use within the District relative to projections.
- 2019 Water System Master Plan, which serves as the basis for VOMWD's 25-year capital

Reference Contact and Project Facts:

Matthew Fullner
General Manager
Valley of the Moon Water District
19039 Bay St, Sonoma, CA 95476
Ph: (707) 996-1037
mfullner@vomwd.org

Project Duration: 2015 – Present
Project Cost: $111,067 (for planning studies only)

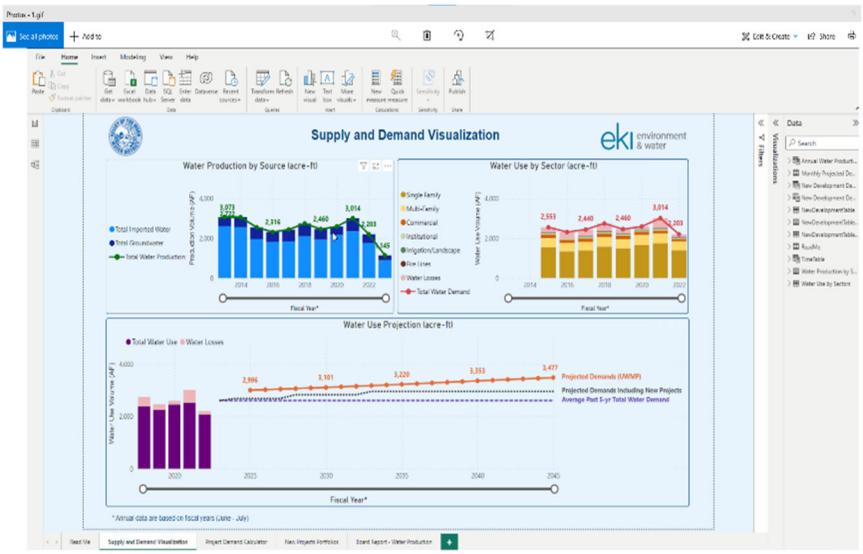
Key Personnel Involved:
Anona Dutton, Ayman Alafifi,

Similar Tasks Completed

- ✓ Conservation Assessment
- ✓ Multi-agency urban water management plan completion
- ✓ Regional level and local studies
- ✓ WSAs, UWMPs, and WSCPs development
- ✓ Coordinated compliance with state regulations across districts
- ✓ Outreach and engagement with several water contractors

EKI's Knowledge Will Provide:

- ✓ Comprehensive knowledge of the Making Conservation a California Way of Life legislation and associated rule making
- ✓ Effective application of the AWE model to estimate water conservation potential



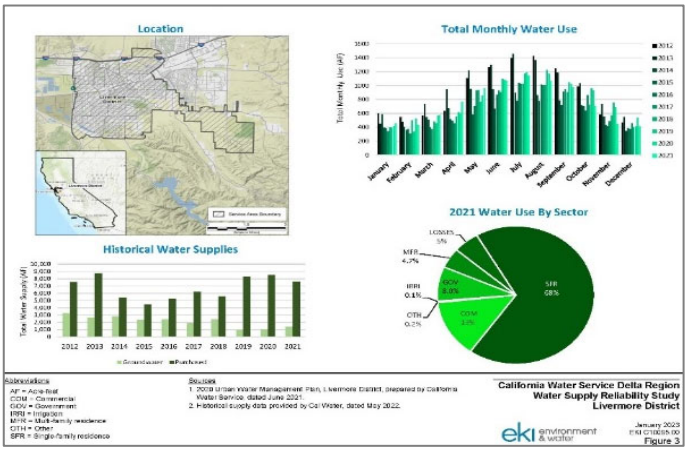
improvement program and identified system deficiencies and recommended improvements to improve system capacities, simplify operations, and improve system resiliency and redundancy. In light of the 2017 Firestorm which devastated the area and destroyed key District Facilities, an extensive re-evaluation of the District system in terms of capacity, resiliency, and reliability was conducted to ensure that the District can serve its customers reliably and cost-effectively. Completed work on the Master Plan includes a zone-based analysis of demands; a storage and supply capacity assessment; and construction, calibration, and analysis of a new hydraulic model. Based on these efforts, EKI has identified system deficiencies and recommended improvements to improve system capacities, simplify operations, and improve system resiliency and redundancy.

Regional Water Supply Reliability Studies and Related Integrated Water Resources Planning Services, Cal Water

EKI has supported Cal Water on a variety of water demand, supply conservation planning-related projects since 2015.

UWMPs, AWSDAs, and WSAs: EKI has provided a range of water planning services to Cal Water since 2015 related to assessing the impacts of SGMA, development of its 25 2020 UWMPs and WSCPs, preparation of 27 SB-610 compliant WSAs, and successful submission of 25 2022 and 2023 AWSDAs.

Water Supply Reliability Studies (WSRS): EKI has been hired to prepare multiple local and regional water supply reliability studies for Cal Water Districts throughout California, using integrated resource planning processes. These studies address challenges from changing water supply reliability conditions, new regulatory requirements, demand growth, and insufficient diversity in water supply sources. The WSRS include supply and demand forecasts through the 2050 planning horizon, an evaluation of supply reliability gaps, identification and evaluation of supply alternative options, and an implementation plan for the preferred options to increase regional reliability.



Reference Contact and Project Facts:

Ken Jenkins, Chief Water Resources Sustainability Officer
Cal Water
1720 North First Street
San Jose, CA 95112
Ph: (310) 257-1484 x71484
kjenkins@calwater.com
Project Duration: 2015 – current
Project Cost: ~$2million

Key Personnel Involved:
Anona Dutton, Andree Lee, Tina Wang, Vanessa De Anda

Similar Tasks Completed

- ✓ Multi-agency urban water management plan completion
- ✓ Regional level and local studies
- ✓ WSA development
- ✓ Coordinated compliance with state regulations across districts
- ✓ Outreach and engagement with several Cal Water districts and agencies

EKI's Knowledge Will Provide:

- ✓ Comprehensive knowledge of the Making Conservation a California Way of Life legislation and associated rule making
- ✓ Land-use and population-based demand forecasting
- ✓ Effective application of the AWE model to estimate water conservation potential

7. PROPOSED FEE

Fee Schedule

A summary fee schedule is included below for the EKI staff anticipated to complete the project scope of work. A complete 2024 Rate Schedule is included as Appendix B.

EKI Staff	Rate Category	Hourly Rate
Anona Dutton	Officer and Chief Engineer-Scientist	$345
Andree Lee	Officer and Chief Engineer-Scientist	$345
Ayman Alafifi	Senior I, Engineer-Scientist	$297
Tina Wang	Associate I, Engineer-Scientist	$275
Vanessa De Anda	Engineer Scientist, G1	$241
Jean Hirayama	Engineer Scientist, G5	$165
--	Engineer Scientist, G6	$144

Itemized Cost Summary

A detailed cost estimate for the above proposed scope of work is presented below. The average fee per 2025 UWMP Water Demand/Conservation Report is presented as both "Streamlined Reports without Optional Tasks" and "Streamlined Reports with Optional Tasks" consistent with the scope of work. Streamlined Reports without Optional Tasks represents the core tasks that are required to complete the 2025 UWMP Water Demand/Conservation Reports. Streamlined Reports with Optional Tasks includes recommended tasks that will significantly elevate the analysis but are not required for completing the 2025 UWMP Water Demand/Conservation Reports. On average, the cost for each 2025 UWMP Water Demand/Conservation Report ranges from approximately $32,600 per report to $60,800 depending on the desired level of detail.

Notes:

(1) A communications charge of 4% of labor costs covers e-mail access, web conferencing, cellphone calls, messaging and data access, file sharing, local and long distance telephone calls and conferences, facsimile transmittals, standard delivery U.S. postage, and incidental in-house copying.

(2) "Other Direct Costs" includes direct expenses, as listed below, incurred in connection with the work and will be reimbursed at cost plus ten percent (10%) for items such as:

a. Maps, photographs, reproductions, printing, equipment rental, and special supplies related to the work.
b. Consultants, soils engineers, surveyors, drillers, laboratories, and contractors.
c. Rented vehicles, local public transportation and taxis, travel and subsistence.
d. Special fees, insurance, permits, and licenses applicable to the work.
e. Outside computer processing, computation, and proprietary programs purchased for the work.

Detailed Cost Estimate

TASKS	EKI LABOR								OTHER DIRECT COSTS (2)	TASK BUDGET TOTALS
	G6- TBD	G5 - Jean Hirayama	G1 - Vanessa De Anda	ASSOC I - Tina Wang	SNR1 - Ayman Alafifi	OFC - Anona Dutton	OFC - Andree Lee	TOTAL EKI Labor, including 4% Comm. Charge (1)		
	144	165	241	275	297	345	345	($)	($)	($)
Task 1 - Preliminary Work and Project Management										
Subtask 1.1 – Facilitate Kick-off and Data Needs Meeting		2	4	6		1	2	$4,138	$120	$4,300
Subtask 1.2 – Develop Project Timeline	2			2			1	$1,230		$1,300
Subtask 1.3 – Project Management			10	24			8	$12,241		$12,300
Subtotal	2	2	14	32	0	1	11	$17,609	$120	$17,900
Task 2 - Information and Data Collection										
Subtask 2.1 – Submit Data Request		2		2				$915		$1,000
Subtask 2.2 – Review and Summarize Previous DWR Comments	6		6					$2,402		$2,500
Subtask 2.3 – Summarize New DWR Requirements		4	2	2			2	$2,477		$2,500
Subtask 2.4 – Review Planning Documents										
Review and establish forecasted growth for 9 Water Contractors	27	18	9	9			2	$12,680		$12,700
Subtask 2.5 – Conduct Data Review										
Review Conservation Program Data	10	10	8	4				$6,363		$6,400
Fill in Data Gaps	10	10	8	4			1	$6,722		$6,800
Subtask 2.6 – Prepare Technical Memorandum (TM) #1	24	20	36	12		2	2	$20,916		$21,000
Subtotal	77	64	69	33	0	2	7	$52,475	$0	$52,900
Task 3 - Develop Updated Regional Conservation Measures										
Subtask 3.1 - Regional Conservation Measure Workshop	2	2	16	8			8	$9,811	$120	$10,000
Subtask 3.2 - Regional Conservation Measure Codification										
Prepare Draft TM #2	2	2	24	16			4	$12,669		$12,700
Subtotal	4	4	40	24	0	0	12	$22,481	$120	$22,700
Task 4 - Demand Analysis and Water Conservation Measures Update										
Subtask 4.1 – Analyze Demographic Data	9	9	4	4			2	$5,756		$5,800
Subtask 4.2 – Develop Water Use Characteristics	12	12	9	6			2	$8,546		$8,600
Subtask 4.3 – Estimate Future Water Demands										
Indoor vs. Outdoor Water Use	8		8	8			2	$6,209		$6,300
Update the AWE Model for each Water Contractor	36		9	4			2	$9,509		$9,600

TASKS	EKI LABOR								OTHER DIRECT COSTS (2)	TASK BUDGET TOTALS
	G6- TBD	G5 - Jean Hirayama	G1 - Vanessa De Anda	ASSOC I - Tina Wang	SNR1 - Ayman Alafifi	OFC - Anona Dutton	OFC - Andree Lee	TOTAL EKI Labor, including 4% Comm. Charge (1)		
	144	165	241	275	297	345	345	($)	($)	($)
Subtask 4.4 – Calculate UWUOs	45		18	9				$13,825		$13,900
Subtask 4.5 – Water Conservation and Economic Analysis	18	18	18	9			2	$13,588		$13,600
Subtask 4.6 – Prepare Draft Reports	90	90	45	45		9	12	$60,606		$60,700
Subtask 4.7 – Attend Review Meetings										
Two Meetings per Water Contractor (18 in Total)	9			27			18	$15,528	$800	$16,400
Email/Telephone Conference Calls (Up to Three per Water Contractor)			27	27				$14,489		$14,500
Revise Analysis and Projections	27	27	18	9			2	$16,480		$16,500
Subtask 4.8 – Prepare Final Reports	45	45	27	27		2	18	$36,126	$120	$36,300
Subtotal	299	201	183	175	0	9	60	$200,662	$920	$202,200
Optional Task 5 – Detailed Water Use and Water Conservation Analysis (*Per Agency*)										
Subtask 5.1 – Request Customer Billing and AMI Data										
Compile Project Working Database	6		1	1				$1,435		$1,500
Subtask 5.2 – Residential Indoor/Outdoor Water Use Assessment										
Refined Indoor and Outdoor Water Use Estimate	4		2	1				$1,386		$1,400
Statistical and Spatial Analysis of Water Use Patterns	4		2	1				$1,386		$1,400
Comparison with Residential Water Use Standards	1		2	2				$1,223		$1,300
Subtask 5.3 – Analysis of Past Program Participation										
Past Program Participation	2	2	1	1				$1,179		$1,200
Geospatial Participation Density Analysis	4	2	2	1				$1,730		$1,800
Subtask 5.4 – Analyze and Quantify Water Savings Achieved by Past Programs	4	2	2	1				$1,730		$1,800
Subtotal	25	6	12	8	0	0	0	$10,069	$0	$10,400
Optional Task 6 – Water Conservation Dashboard & Decision Support Tool (*Per Agency*)										
Water Conservation Dashboard	8			2	25			$9,492		$9,500
Decision Support Tool and User Guide	8			2	20			$7,948		$8,000
Subtotal	16			4	45			$17,440	$0	$17,500
TOTAL STREAMLINED REPORTS WITHOUT OPTIONAL TASKS:	**382**	**271**	**306**	**264**	**0**	**14**	**91**	**$293,227**	**$1,160**	**$295,700**
TOTAL STREAMLINED REPORTS WITHOUT OPTIONAL TASKS (*AVG. PER REPORT*):	**42**	**30**	**34**	**29**	**0**	**2**	**10**	**$32,581**	**$129**	**$32,856**
TOTAL STREAMLINED REPORTS WITH OPTIONAL TASKS (*AVG. PER REPORT*):	**83**	**36**	**46**	**41**	**45**	**2**	**10**	**$60,090**	**$129**	**$60,756**

8. CONFIRMATION

EKI understands and accepts the City's Agreement and insurance requirements (attached as Exhibit "C" to the RFP). We will be able to execute the contract as executed for the prior Sonoma-Marin Water Savings Partnership's Demand Projections and Water Conservation project for Sonoma and Marin County Water Agencies.

APPENDIX: RESUMES

Tina Wang, PE

Water Resources Engineer

Ms. Wang has ten years of experience working in water resources engineering. She has project experience supporting public and private sector clients with water resources planning, which includes developing Urban Water Management Plans, drought response plans, Water Supply Assessments, water and sewer master plans, as well as conducting supply reliability assessments. She has also provided technical support on Sustainable Groundwater Management Act (SGMA) implementation, water system permitting, water right evaluations, and water transfers.

Relevant Experience

- **Multiple Water Suppliers,** *Urban Water Management Plan Updates.* California. Project Manager. Ms. Wang was the project manager and technical lead for the development of 2020 UWMPs and Water Shortage Contingency Plans (WSCPs) for various water suppliers in the San Francisco Bay area and the Central Valley. The documents serve as updates for the 2015 UWMPs and WSCPs and required significant new contents as a result of the *Making Water Conservation a California Way of Life* legislation. Ms. Wang managed future demand analyses and reliability assessments of purchased water and recycled water supplies. As part of the effort, she developed unit water use for a variety of land uses and performed demand modeling. Ms. Wang also the design of both consumer and agency actions within each WSCP stage. As part of the process, she applied EKI's spreadsheet model (Drought Response Tool) to quantitatively assess effectiveness of the drought response actions.
- **Multiple Water Suppliers,** *Water Supply Assessments (WSAs).* San Francisco Bay Area, CA. Project Manager. Ms. Wang was the project manager and engineer for the preparation of Senate Bill 610-compliant Water Supply Assessments (WSAs) for various San Francisco Bay Area developments as well as planning updates. The projects include a variety of land uses, including residential, office/R&D, hotel, transit center, and other commercial uses. Using historical water use data from similar land uses, Ms. Wang compared and cross-checked methodologies developed based on literature, codes, and ordinances. Using a water demand estimation method that incorporates project details in land use, population, and conservation efforts, Ms. Wang provided evaluations of the projects' future water demand and its supply and demand implications during normal and dry periods.
- **Multiple Water Suppliers,** *Development of EKI's Drought Response Tool*. California-wide. Project Engineer. Ms. Wang supported development of EKI's Drought Response Tool (DRT), an Excel-based spreadsheet model used by over 80 California water agencies to facilitate rapid response to drought conditions and for WSCP drought

Education

- M.S., Civil and Environmental Engineering, Stanford University, 2014
- B.S., Environmental Engineering, Economics, Northwestern University, 2012

Registrations/Certifications

- Professional Civil Engineer, CA (C #85789)
- 40-hour OSHA HAZWOPER Training Course

Technical Expertise

- Demand Analysis and Reliability Assessment
- Urban Water Management Plans (UWMPs)
- Water Supply Assessments (WSAs)
- Drought Response Actions Effectiveness Assessment
- Annual Water Supply and Demand Assessments (AWSDAs)
- Water Shortage Contingency Plans (WSCPs)
- Hydraulic Modeling
- Stakeholder Engagement and Facilitation

planning. The DRT is used to help agencies identify water savings opportunities, by customer sector and major end-use, and to quantify and compare the potential water savings benefits of implementing various suites of drought response actions. Ms. Wang compiled numerous water conservation studies in urban settings and developed the drought response evaluation module. The module helps quantify potential water use reduction of various water conservation measures for each of the retail agencies based on an end use water savings methodology.

- **Bay Area Water Supply and Conservation Agency (BAWSCA),** *2021-23 Drought Report.* San Francisco Bay Area, CA. Project Manager. Ms. Wang is leading the production of BAWSCA's 2021-23 Drought Report which includes an effectiveness assessment of selected drought response measures using statistical and geospatial analysis of demographics and AMI data. As project manager, Ms. Wang led the documentation and evaluation of agency drought response measures and timing, developed the technical approach to assess the water use reductions from regional messaging and various water use restrictions, and managed the collection of AMI data.
- **BAWSCA,** *Strategic Planning and Water Supply Reliability Evaluation.* San Francisco Bay Area, CA. Project Engineer. EKI supported the development of the BAWSCA's regional water supply reliability model, which aims to provide a comprehensive assessment of spatial-temporal water supply conditions and constraints that incorporates all water supplies and demands of BAWSCA member agencies. As a project engineer, Ms. Wang assisted in the development of modeling schematics, key assumptions, and performance measurements. The challenge of this process is to develop a unified approach to represent the various regional and local water sources. As part of this effort, Ms. Wang gathered data and reviewed regional models to identify policy and physical constraints and assisted in developing a framework of model operating rules.
- **California Water Service (Cal Water),** *Water Supply Reliability Study for Delta Region Districts.* California. Project Manager. EKI supported a water supply reliability study for Cal Water's Dixon, Livermore, and Stockton Districts. The study aims to proactively identify potential water supply shortfalls and potential projects to address projected shortfalls. As part of this effort, Ms. Wang lead design of planning scenarios through engagement of Cal Water staff and the technical team, as well as analysis of supply reliability using various numerical models.
- **Marina Coast Water District (MCWD)**, *SGMA Implementation Support.* Marina, CA. Project Manager. Ms. Wang is the project manager for development of MCWD's Groundwater Sustainability Plan (GSP) and subsequent implementation efforts. She supports MCWD in securing three rounds of grant funding from the Department of Water Resources, including preparation of detailed work plan, budget estimate, project timelines, and project justification. She also assisted MCWD in grant implementation such as managing project budget and schedule according to the grant agreements.

Andree (Johnson) Lee

Vice President

Ms. Lee has 16 years of experience managing water resources projects for public agencies. She specializes in working across entities to achieve collaborative solutions to complex water supply challenges. She brings extensive experience preparing Water Shortage Contingency Plans and Urban Water Management Plans for BAWSCA member agencies and others throughout California, as well as direct experience planning for and implementing drought response programs in her prior role as a Senior Water Resources Specialist at BAWSCA. Ms. Lee led the preparation of BAWSCA's first Drought Report, documenting actions and lessons learned from the 2014 – 2017 drought. She has also supported BAWSCA, the BAWSCA member agencies, and other clients throughout the Bay Area on water use efficiency planning and other water reliability planning and water supply development efforts. She has extensive expertise in water demand forecasting, drought contingency planning, and drought response.

Education

- B.A., Geography and Environmental Studies University of California, 2006

Affiliations

- Urban Water Institute, Board Chair (2022 – present)
- Urban Water Institute, Board Secretary (2020-2022)

Technical Expertise

- Drought Management
- Water Supply Assessment, Planning, and Development
- Water Resilience Planning
- Water Supply Reliability Planning
- Water Use Efficiency Planning and Implementation
- Successful Grant Procurement
- Funding Strategy
- Coalition Building and Stakeholder Coordination
- Integrated Regional Water Management Planning
- Stakeholder Engagement

Relevant Experience

- **Bay Area Water Supply and Conservation Agency.** *2014 – 2017 Drought Report.* In her prior role as BAWSCA's Senior Water Resources Specialist, Ms. Lee was the Project Manager for developing BAWSCA's first-ever drought report. Ms. Lee developed the report content, conducted member agency outreach, and managed the EKI team developing the drought analytics.
- **California Water Service Company.** *Regional Water Supply Reliability Study. Multiple Counties.* Ms. Lee was the Technical Advisor for reliability study for Bay Area districts. She assisted in identifying sources of water supply and demand, analyzing resulting gaps under various forecasting scenarios, including climate change, and developing a plan to implement additional supply and demand management options to meet the defined water resource needs.
- **City of Millbrae.** 2020 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP); 2021 and 2022 Annual Water Supply and Demand Assessments (AWSDAs). Ms. Lee was the Project Manager for preparation of 2021 UWMP and WSCP and the subsequent AWSDAs. She prepared the City's water demand forecast, water supply estimates, and water reliability analysis. She also developed the City's WSCP, including custom analysis of estimated effectiveness of potential drought response measures. She recommended shortage contingency plan actions to be implemented and presented findings to management and council.
- **Purissima Hills Water District.** *2021 Water Shortage Contingency Plan.* Project manager for WSCP development. Calculated available water supply and associated cutback requirements for a range of potential near-term and long-term hydrologic conditions and

regulatory scenarios and evaluated the effects of potential water supply and demand management actions to improve future reliability. Facilitated Board workshops to share technical analysis and reach consensus on shortage response actions.

- **City of Brisbane/Guadalupe Valley Municipal Improvement District.** *2023 Water Shortage Contingency Plan.* Ms. Lee was the Project Manager developing the City's updated WSCP to comply with state requirements. She led the development of the EKI Drought Response Tool (DRT) for the City, which evaluated effectiveness of potential drought response measures based upon the City's customer demand profile and water use patterns. She prepared the WSCP report, incorporating drought response measures, historical drought information, and water reliability analysis. She facilitated workshops with City management to share technical analysis and reach consensus on drought response measures.
- **Marin Municipal Water District (MMWD),** *Water Efficiency Potential Study,* Marin County. Ms. Lee is leading the development of a water efficiency potential study, which includes detailed analysis of customer-level water use history, trends, and responses to implementation of water efficiency programs and practices. The effort includes the evaluation of demographic and geospatial trends in past program participation, analysis of water efficient device saturation and passive savings, and the development and modeling of several potential water efficiency program approaches.
- **Valley Water,** *Conservation Portfolios for Water Supply Master,* Santa Clara County. Ms. Lee is leading the development of a water conservation targets and program portfolios for Valley Water's Water Supply Master Plan 2050. The project includes detailed analysis of remaining water savings potential and anticipated future passive conservation savings, identification of potential long-term water conservation targets, development of potential water conservation measures, cost-benefit analysis, and preparation of conservation portfolios to meet potential savings targets.
- **Bay Area Water Supply and Conservation Agency.** *Drought Allocation Plan.* Ms. Lee is the Project Manager for developing a plan to allocate available water supply among the 26 BAWSCA member agencies during shortages. She is supporting BAWSCA in workshop facilitation and leading technical analysis and model development.
- **Bay Area Water Supply and Conservation Agency.** *As-Needed Water Resources Support.* Ms. Lee was an expert advisor for long-term water supply planning, demand forecasting, drought management, and water conservation program implementation.
- **City of Burlingame.** *Advanced Metering Infrastructure Study.* Project manager to identify the range of AMI technology options in the marketplace and make initial recommendations for the type of AMI system and a vendor or short list of vendors that best meet the City's technology needs. Evaluated City's existing metering infrastructure, coordinated a Request for Information with AMI vendors, identified funding opportunities, and established implementation options.

Anona L. Dutton, PG, CHg

Vice President / Director of Water Resources

Ms. Dutton has over twenty years of professional experience managing water resources projects. She has managed multi-million dollar efforts to secure reliable water supplies for water agencies and developers, including leading the technical efforts to minimize the water footprint of new and existing development, assessing groundwater and surface water supply yields, securing water transfer options, and evaluating the feasibility of developing new water supply sources such as recycled water, desalination water, and other non- potable sources. Her work to support public sector clients has included Water Conservation Plans and studies, Water Supply Assessments (WSAs), Water System Master Plans, Urban Water Management Plans (UWMPs), and water supply feasibility assessments Ms. Dutton is also deeply involved in implementation of the Sustainable Groundwater Management Act (SGMA) throughout the State, including provision of strategic and technical support for Groundwater Sustainability Agency formation and administration, basin boundary adjustments, Groundwater Sustainability Plan development, and securing grant funding.

Education

- M.S., Hydrogeology, Stanford University, 2000
- B.S., Environmental Sciences, Stanford University, 1998

Registrations/Certifications

- Professional Geologist in California (#7683)
- Certified Hydrogeologist in California (#841)
- LEED Green Associate
- Water Use Efficiency Practitioner - Grade 1

Technical Expertise

- Water and Demand and Conservation projections and modeling
- Water Use Efficiency Studies
- Urban Water Management Planning (UWMPs)
- Water Supply Assessments and Master Planning (WSAs/WSMPs)
- SGMA Planning and Implementation
- Groundwater Supply Infrastructure Planning

Relevant Experience

- **Sonoma-Marin Water Savings Partnership.** *Water Demand and Conservation Planning.* Sonoma and Marin Counties, CA. Ms. Dutton oversaw the development of water demand projections and evaluated water conservation opportunities for nine Sonoma and Marin County water agencies that purchase water from the Sonoma County Water Agency in support of their 2020 UWMPs and other planning efforts. This effort included working with each agency to develop robust water demand projections that account for the demand hardening experienced since the historic 2014-2016 drought and changing land use in these unique areas. This effort also included taking stock and evaluating water conservation program opportunities that consider the implications of the evolving Making Water Conservation a California Way of Life legislation. Following that effort, Ms. Dutton oversaw the development of UWMPs and/or WSAs for several Sonoma and Marin County entities, including Valley of the Moon Water District, Marin Municipal Water District, North Marin Water District, and the cities of Sonoma and Petaluma. Ms. Dutton continues to actively support these agencies with a variety of water resources tasks including, securing grants, augmenting their water supply portfolio with groundwater and ASR wells, and developing strategic water conservation plans.
- **Valley Water.** *Water Conservation Strategic Planning.* Santa Clara County, CA**.** Ms. Dutton oversaw development of the 2021 Water Conservation Strategic Plan for Valley Water. This work included

detailed geospatial and statistical analysis of historical conservation program participation and saturation, as well as strategies to increase participation in future program offerings. Efforts concluded water conservation modeling and administration of a survey to improve program offerings and design. While the primary focus of the Water Conservation Strategic Plan was long-term conservation, this effort also included a Water Shortage Management chapter that describes Valley Water's response to the 2012-2016 drought, including specific actions taken for water conservation and demand management policies and recommendations for future drought response and includes a quantitative analysis of Valley Water's 2012-2016 drought response and remaining conservation potential. EKI has been retained for further efforts related to implementation of the Plan, including supporting water conservation projections for Valley Water's 2050 Water Supply Master Plan.

- **Bay Area Water Supply and Conservation Agency (BAWSCA).** *Urban Water Management and Conservation Planning.* San Mateo County, CA**.** While at the BAWSCA, Ms. Dutton oversaw the administration of BAWSCA's award-winning regional water conservation program and the development of their Long-Term Water Supply Reliability Strategy. She also supported the BAWSCA member agencies in the development of their UWMPs. As a consultant she has supported BAWSCA and numerous member agencies with water supply and conservation planning issues, including for the Cities of Mountain View, Burlingame, East Palo Alto, Menlo Park, San Bruno, Brisbane, Redwood City, and Foster City, and Westborough Water District and Purissima Hills Water District. This work has included the development of UWMPs, Drought Response Plans, Water Master Plans, BAWSCA's Regional Water Supply Reliability Model, BAWSCA's One Water Roundtable series, BAWSCA's Drought Planning and Assessment, and BAWSCA 2050 Strategy.
- **Solano County Water Agency (SCWA) Water Conservation Study.** *Solano County Water Agency*. Solano County, CA. Ms. Dutton oversaw EKI's performance of a two-phase study for the SCWA, evaluating the effectiveness of SCWA's single-family residential water conservation programs and demonstrating measurable water savings. EKI analyzed a 6 million-record dataset of account-level water use from four cities' water billing systems to quantify the real impact of water conservation programs on water use and evaluate drought response on an account-level basis. EKI also used geospatial statistical and multi-criteria analysis techniques within ArcGIS to evaluate geographic trends in program participation and to identify opportunities for future water conservation potential. Based on these analyses, EKI developed recommendations for future program design and customer outreach and targeting. The studies also analyzed income-effect on water conservation participation and saturation, objectively identifying the demographics of Solano County households with significant remaining water conservation potential. The pilot study focused on the City of Vallejo and was expanded for the for the second phase to include additional cities and capture over 80% of the single-family residential accounts in Solano County.
- **California Water Service Company (Cal Water)**. *Water Supply Assessments and Water Supply Reliability Studies*. CA. Ms. Dutton led the preparation of multiple local and regional water supply reliability studies (WSRS) for Cal Water Districts throughout California, using integrated resource planning processes to create a long-term supply reliability strategy through 2050. These studies address challenges from changing water supply reliability conditions, new regulatory requirements, growth in water demands, and insufficient diversity in existing water supply sources. The reliability studies include supply and demand forecasts through the 2050 planning horizon, an evaluation of supply reliability gaps, identification and evaluation of potential water supply alternative options to address supply gaps, identification and assessment of preferred water supply options, and an implementation plan for the preferred options. This WSRS work extends from EKI's work provided to Cal Water since 2015 related to assessing the impacts of the SGMA, development of its 25 2020 UWMPs, preparation of 27 SB-610 compliant WSAs, and analysis of groundwater and local surface water production potential.

Vanessa De Anda

Water Resources Planner

Ms. De Anda has seven years of experience providing services in integrated water resources management. She supports clients in preparing for compliance with the *Making Conservation a California Water of Life* requirements by developing long-term water demand projections, evaluating water supplies, and developing tailored strategies to improve water use efficiency and supply reliability under varying hydrologic and regulatory conditions. Ms. De Anda has also collaborated closely with clients to develop Urban Water Use Objective (UWUO) reports, Water Shortage Contingency Plans (WSCPs), 2020 Urban Water Management Plans (UWMPs), Annual Water Supply and Demand Assessments (AWSDAs), Water Supply Assessments (WSAs), and other regulatory planning documents related to water resources planning and implementation. Ms. De Anda has extensive experience developing water demand projections, evaluating and assessing available water supplies under various levels of hydrologic conditions, and identifying the potential impacts to supply availability and meet future demands within the service area.

Education

- Masters, Environmental Science and Management, University of California-Santa Barbara, 2017
- Bachelors, Environmental Science, University of California-Los Angeles, 2014

Technical Expertise

- Water Use Efficiency and Conservation
- Regulatory Tracking and Reporting
- Drought Resiliency Planning
- Water Supply and Demand Projection and Planning
- Integrated Regional Water Program Management and Planning
- Water Supply Reliability Assessment
- Successful Grant Administration
- Stakeholder Coordination
- Community Outreach and Stakeholder Collaboration

Relevant Experience

- **Marin Municipal Water District (MMWD),** *Water Efficiency Master Plan (WEMP).* Marin, CA. Ms. De Anda assisted in the development of MMWD's WEMP to evaluate the MMWD's existing water efficiency programs, identify opportunities to optimize conservation program savings by examining the current conservation portfolio, assess the remaining potential for water conservation, and provide recommendations to MMWD on how to attain this potential.
- **Santa Clara Valley Water District (Valley Water).** *Conservation Portfolios for Water Supply Master.* Santa Clara County, CA. Ms. De Anda helped identify and evaluate water conservation targets and program portfolios for Valley Water's Water Supply Master Plan 2050, including estimating the associated savings potential and costs. The project includes detailed analysis of remaining water savings potential and anticipated future passive conservation savings, identification of potential long-term water conservation targets, development of potential water conservation measures, cost-benefit analysis, and preparation of conservation portfolios to meet potential savings targets.
- **Multiple Water Suppliers**. *2024 Urban Water Use Objective Reports (UWUOs).* Ms. De Anda supported multiple water suppliers in preparing their 2024 UWUO reports following the California Department of Water Resources (DWR) interim annual water use reporting template. This included compiling and reviewing existing

data, populating the interim annual water use report template, participating in meetings with suppliers to discuss findings, and electronic submission to DWR.

- **Multiple Water Suppliers**. *2024 Annual Water Supply and Demand Assessment (AWSDA)*. Ms. De Anda analyzed supply and demand data to evaluate water supply statuses and possible water shortages. She utilized data to prepare technical memos, data tables and figures, and data findings slides for submittal to DWR.
- **California Water Service (Cal Water)**. *Water Supply Assessments*. CA. Ms. De Anda helped prepare Senate Bill (SB) 610-compliant WSAs for Cal Water for projects within multiple Cal Water districts, including South San Francisco, Bakersfield, Salinas, and Chico-Hamilton City districts. She developed water demand projections for the proposed development projects and overall water districts using Cal Water-specific models, evaluated available water supplies under various levels of hydrologic conditions, and identified the potential impacts to district supply availability that may result from implementation of the proposed projects. The WSAs developed for Cal Water serve as reliable water supply efficiency assessments to meet all future demands within each district's service area.
- **Goleta Water District (GWD),** *2020 UWMP Update and WSCP.* Goleta, CA. Ms. De Anda provided technical support to ensure the 2020 UWMP Update reflects GWD's needs while successfully meeting DWR requirements. Ms. De Anda was responsible for reviewing and analyzing data to conduct demand forecasting and shortage contingency planning, as well as preparing the 2020 UWMP and WSCP sections.
- **Antelope Valley State Water Contractors Association,** *Antelope Valley Integrated Regional Water Management (AVIRWM) Plan Update and Program Management.* CA. Ms. De Anda updated the 2019 AVIRWM Plan. Technical support included analyzing future water supply and demand projections, population growth, and climate change impacts. She also managed the AVIRWM Program for five years, including facilitating stakeholder meetings and identifying funding opportunities.
- **Indio Subbasin Groundwater Sustainability Agency (GSA),** *2022 Indio Subbasin Water Management Plan (WMP) Update.* CA. Ms. De Anda provided technical support in the development of the 2022 Indio Subbasin WMP for submission to DWR under the Sustainable Groundwater Management Act (SGMA). She supported the development of projects and management actions and implementation plan, conducted stakeholder outreach, and drafted plan sections.
- **Palmdale Water District (PWD),** *2022 Strategic Water Resources Plan (SWRP) Update.* CA. Ms. De Anda updated a Water Evaluation and Planning System (WEAP) model prepared for PWD's 2010 SWRP with current supply and demand projections to assess potential supply gaps through 2050. Ms. De Anda also helped develop alternative water supply portfolios packaging various water supply options and evaluated each alternative's ability to bridge potential gaps in supply and demand. She also assisted in drafting the SWRP.

Ayman Alafifi, PE, PhD

Data Integration Lead

Dr. Alafifi has over 14 years of experience in urban water resources planning and management. He worked with multiple large cities and utilities to analyze water demand pattern, forecast demand, and evaluate available supply. Dr. Alafifi is a proficient data scientist and an expert in business intelligence. He led multiple decision support tools and dashboard development efforts that guided the selection and prioritizing of supply alternatives to meet expected future demand. Dr. Alafifi was the technical lead for multiple public and private sector clients across the United States and has developed simulation and optimization models to streamline the planning and operations of complex systems, facilitate prioritizing alternatives, and improve communication of modeling and planning outputs. *Dr. Alafifi brings both technical and technology consulting experience and has succesffuly delivered simulations and optimization models, GIS web applications, and Decision Support Tools to support infrastructure improvements and asset management.*

Education

- PhD, Water Resources Engineering, Utah State University, 2017
- MS, Environmental Strategy and Sustainable Development, University of Surrey, 2010
- BS, Civil Engineering, The Islamic University of Gaza, 2008

Technical Expertise

- Urban Water Resources Planning and Management
- Water Supply Evaluation Tool Development
- Interactive Dashboards for and Decision Support Tools
- Water Supply and Demand Forecasting
- Scenario Development

Relevant Experience

- **Valley of The Moon Water District (VOTM).** *Global Water Supply Assessment Tracking Tool.* Sonoma, CA. Developed a dashboard to help VOTM evaluate the reliability and availability of its water supplies to support development applications. The dashboard visualizes historical water use and projected demand. It serves as an entry form to calculate new development projected water needs.
- **Westlands Water District**. *Grant Tracking Tool.* Developed an interactive dashboard to help Westlands track open solicitations for grants, upcoming funding opportunities, and track applied and awarded grants.
- **Arvin-Edison Water Storage District (AEWSD).** *Grant Tracking and Management Tool.* Developed an interactive dashboard to help AEWSD track: open solicitations for grants, upcoming funding opportunities, applied and awarded grants, and manage grant documents.
- **San Francisco Public Utilities Commission (SFPUC).** *Alternative Water Supply Evaluation Tool***.** San Francisco, CA. Technical Lead. Developed functional requirements and created a platform to couple 8 different R and Python modules on Microsoft Azure services. Worked with the University of Massachusetts Amherst to convert a research-based model into a modeling and planning tool for SFPUC to evaluate alternative water supply projects considering multiple climate change, demand, and policy uncertainties.
- **Multiple Municipal and Private Clients***. Multi-Criteria Decision Analysis Tool*. Multiple Locations. Technology Lead. Lead the effort to develop a modular and interactive multi-criteria decision analysis tool to score, weigh, and rank alternatives to support capital improvement prioritization projects and cost-benefit analyses.

Jean Hirayama, EIT

Environmental Engineer

Ms. Hirayama provides technical support on a broad range of water resource projects. She has experience with water resources planning, which includes developing Annual Water Supply and Demand Assessments, drought response plans, Water Supply Assessments, as well as conducting supply reliability assessments. She has extensive experience with data processing and drafting reports to support projects. Her technical skills include civil design using AUTOCAD and cartographic design and data analysis with ArcGIS. Ms. Hirayama's experience in WSAs, AWSDAs, and other planning projects have provided her the knowledge to perform the processes needed for water resources projects.

Education

- M.S., Environmental Engineering, University of California, Berkeley, 2022
- B.S., Civil and Environmental Engineering, University of California, Berkeley, 2021

Registrations/Certifications

- Engineer-in-Training, CA (#175711)
- 40-hour HAZWOPER Training

Technical Expertise

- Water Supply and Demand Data Analysis
- Water Supply Assessments (WSAs)
- Water Demand Projections
- Stakeholder Engagement and Facilitation

Relevant Experience

- **Bay Area Water Supply and Conservation Agency (BAWSCA)**, *2021-23 Drought Report*. *Project Engineer*. Ms. Hirayama assisting in the production of BAWSCA's 2021-23 Drought Report which includes an effectiveness assessment of selected drought response measures using statistical and geospatial analysis of demographics and AMI data. As project engineer, Ms. Hirayama collected and reviewed drought response actions and data from all 24 BAWSCA member agencies and evaluated the timing and effectiveness of the drought measures.
- **California Water Service (Cal Water)**, *Water Supply Reliability Study for Delta Region Districts. Project Engineer.* Ms. Hirayama assisted in a study to proactively identify potential water supply shortfalls and develop management strategies for Cal Water's Delta Regional Districts, which include the Dixon, Livermore, and Stockton Districts. Ms. Hirayama helped assess key water supply issues and uncertainty factors and supported Cal Water in identifying a series of planning scenarios.
- **Marin Municipal Water District (MMWD),** *Water Efficiency Master Plan Phase II. Project Engineer.* Ms. Hirayama assisted in updating MMWD's Water Efficiency Master Plan by examining the current conservation portfolio and assessing the remaining potential for water conservation using the Alliance for Water Efficiency Water Conservation Tracking Tool.
- **Bay Area Water Supply & Conservation Agency (BAWSCA)**, *One Water Roundtable. Environmental Engineer*. The goals of the roundtable series were to understand how participants' supply projects fit within the One Water concept, to help identify collaborative opportunities amongst participants, and to explore how BAWSCA can help support various financing and permitting opportunities for its member agencies. Ms. Hirayama recorded meeting minutes, succinctly summarized the main topics covered in each session, helped prepare presentation materials and project information forms used by participants, and helped prepare a final report summarizing the workshops and key findings.

eki environment & water

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https://www.savingwaterpartnership.org/

ATTACHMENT ONE
INSURANCE REQUIREMENTS FOR
PROFESSIONAL SERVICES AGREEMENTS

A. Insurance Policies: Consultant shall, at all times during the terms of this Agreement, maintain and keep in full force and effect, the following policies of insurance with minimum coverage as indicated below and issued by insurers with AM Best ratings of no less than A-:VI or otherwise acceptable to the City.

	Insurance	Minimum Coverage Limits	Additional Coverage Requirements
1.	Commercial general liability	$ 1 million per occurrence $ 2 million aggregate	Coverage must be at least as broad as ISO CG 00 01 and must include completed operations coverage. If insurance applies separately to a project/location, aggregate may be equal to per occurrence amount. **Coverage may be met by a combination of primary and umbrella or excess insurance but umbrella and excess shall provide coverage at least as broad as specified for underlying coverage. Coverage shall not exclude subsidence**.
2.	Business auto coverage	$ 1 million	ISO Form Number CA 00 01 covering any auto (Code 1), or if Consultant has no owned autos, hired, (Code 8) and non-owned autos (Code 9), with limit no less than $ 1 million per accident for bodily injury and property damage.
3.	Professional liability (E&O)	$ 1 million per claim $ 1 million aggregate	Consultant shall provide on a policy form appropriate to profession. If on a claims made basis, Insurance must show coverage date prior to start of work and it must be maintained for three years after completion of work.
4.	Workers' compensation and employer's liability	$ 1 million	As required by the State of California, with Statutory Limits and Employer's Liability Insurance with limit of no less than $ 1 million per accident for bodily injury or disease. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by the Consultant, its employees, agents and subcontractors.

B. Endorsements:

1. All policies shall provide or be endorsed to provide that coverage shall not be canceled, except after prior written notice has been provided to the City in accordance with the policy provisions.

2. Liability, umbrella and excess policies shall provide or be endorsed to provide the following:

   a. For any claims related to this project, Consultant's insurance coverage shall be primary and any insurance or self-insurance maintained by City shall be excess of the Consultant's insurance and shall not contribute with it; and,

   b. **The City of Santa Rosa, its officers, agents, employees and volunteers are to be covered as additional insureds on the CGL policy**. General liability coverage can be provided in the form of an endorsement to Consultant's insurance at least as broad as ISO Form CG 20 10 11 85 or if not available, through the addition of both CG 20 10 and CG 20 37 if a later edition is used.

C. Verification of Coverage and Certificates of Insurance: Consultant shall furnish City with original certificates and endorsements effecting coverage required above. Certificates and endorsements shall make reference to policy numbers. All certificates and endorsements are to be received and approved by the City before work commences and must be in effect for the duration of the Agreement. The City reserves the right to require complete copies of all required policies and endorsements.

D. Other Insurance Provisions:

1. No policy required by this Agreement shall prohibit Consultant from waiving any right of recovery prior to loss. Consultant hereby waives such right with regard to the indemnitees.

2. All insurance coverage amounts provided by Consultant and available or applicable to this Agreement are intended to apply to the full extent of the policies. Nothing contained in this Agreement limits the application of such insurance coverage. Defense costs must be paid in addition to coverage amounts.

3. Policies containing any self-insured retention (SIR) provision shall provide or be endorsed to provide that the SIR may be satisfied by either Consultant or City. Self-insured retentions above $10,000 must be approved by City. At City's option, Consultant may be required to provide financial guarantees.

4. Sole Proprietors must provide a representation of their Workers' Compensation Insurance exempt status.

5. City reserves the right to modify these insurance requirements while this Agreement is in effect, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.