

**AGREEMENT FOR SHARING CONSULTANT COSTS FOR  
2020 URBAN WATER MANAGEMENT PLANS**

THIS AGREEMENT is made and entered into as of *October 29, 2020*, by  
and between:

1. MWDOC
2. City of Buena Park
3. City of Fullerton
4. City of Garden Grove
5. City of La Palma
6. City of Orange
7. City of Seal Beach
8. City of Tustin
9. City of Westminster
10. Yorba Linda Water District
11. East Orange County Water District
12. City of Fountain Valley
13. City of Newport Beach
14. City of Santa Ana
15. City of Huntington Beach
16. Mesa Water District
17. City of San Clemente
18. El Toro Water District
19. South Coast Water District
20. Trabuco Canyon Water District
21. City of Brea
22. City of La Habra

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

**RECITALS**

WHEREAS, under California Water Code section 10621(a), the Participating Agencies are required to update their respective Urban Water Management Plan ("UWMP") at least once every five years; and

WHEREAS, the 2020 UWMP's shall be updated and submitted to the California Department of Water Resources ("DWR") by July 1, 2021; and

WHEREAS, each Participating Agency has the responsibility to prepare a separate 2020 UWMP for submission by July 1, 2021; and

WHEREAS, the Participating Agencies share many water supply characteristics, including water sources, regional water management agencies, location, climate history, and demographics; and

WHEREAS, pursuant to California Water Code section 10620, subdivision (d)(3), the Participating Agencies wish to coordinate the preparation of their 2020 UWMPs in the interest of reducing preparation costs; and

WHEREAS, the Participating Agencies and MWDOC desire to cooperate with each other to obtain economies of scale and thereby reduce preparation costs for each of the Participating Agencies; and

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

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

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

1. Engagement of Consultant and Administration of Consultant Agreement

- 1.1 MWDOC shall award a professional services agreement for the work identified in the Request for Proposals to Arcadis ("Consultant Agreement"). MWDOC shall use its standard professional services agreement form for the Consultant Agreement with minor negotiated deviations permitted by MWDOC Executive Director and Legal Counsel and require appropriate types and limits of insurance coverage. Each CGL policy shall identify MWDOC, the Participating Agencies, and their directors, officers, agents, employees, attorneys, consultants and volunteers as additional insureds, or be endorsed to identify these parties as additional insureds using a form acceptable to MWDOC. The Consultant Agreement will require the Consultant's insurer(s) to waive all rights of subrogation against MWDOC, the Participating Agencies, and their directors, officers, agents, employees, attorneys, consultants and volunteers. The Consultant Agreement will require Consultant to ensure that its sub-consultants, if any, provide similar insurance coverage.

- 1.2 MWDOC shall coordinate all aspects of the proposed work with the selected contractor and communicate with each Participating Agency, regularly and upon request of the Participating Agency, regarding the status and substance of its 2020 UWMP;
- 1.3 MWDOC shall make payments to the Consultant for progress payments as work proceeds. MWDOC shall withhold 10% of each progress payment to Consultant in a retention fund until such time as every Participating Agency has notified MWDOC that it is satisfied with the final UWMP prepared for it by Consultant.
- 1.4 Each Participating Agency shall, within a reasonable timeframe, provide all documents, information and assistance requested by the selected contractor during the performance of the Consultant Agreement.

## 2. Cost Sharing by Participating Agencies.

### 2.1 MWDOC shall:

- 2.1.1 Collect from each Participating Agency upon execution of this Agreement the full amount of the Participating Agency's proportionate share of the total cost of the Work as described in the Contractor's proposal, which is in Exhibit A;
- 2.1.2 Inform each Participating Agency of any proposed contingency work under the Consultant Agreement that relates to preparation of that Participating Agency's 2020 UWMP and that would result in an increase in that Participating Agency's payment under this Agreement. MWDOC and the affected Participating Agency must both approve such extra work before MWDOC will notify Consultant to proceed with the work. Exhibit B includes each Participating Agency's base cost with elected contingency items and may be updated pursuant to this section. Exhibit B will be incorporated into this Agreement by this reference, subject to any approved updates.
- 2.1.3 Be responsible for making progress payments directly to Consultant from funds paid to MWDOC by Participating Agencies (see section 1.3).
- 2.1.4 Prepare a final accounting and either distribute any remaining funds collected from the Participating Agencies back to the Participating Agencies or issue a final bill to Participating Agencies where there are funds due.

### 2.2 Each Participating Agency shall:

- 2.2.1 Pay to MWDOC upon execution of this Agreement the full amount of the Participating Agency's proportionate share of the total cost of the Work as described in the Contractor's proposal, which is in Exhibit A;

2.2.2 Pay to MWDOC, upon approval of any extra work under the Consultant Agreement that relates to preparation of its 2020 UWMP, the full amount owed for the approved work. Each Participating Agency shall bear all costs associated with extra work it approves, described within Exhibit B, incorporated into this Agreement by reference.

3. Accounting

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

4. Independent Contractor

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

5. Warranty, Indemnification and Defense

MWDOC shall use its best efforts in administering the Consultant Agreement, but makes no representations, guarantees or warranties to the Participating Agencies as to the quality or timeliness of work product provided by Consultant pursuant to the Consultant Agreement. All losses or liabilities resulting from any and all actions, claims, penalties, obligations or liabilities, in law or in equity, of every kind or nature whatsoever, that may be asserted or claimed by any person, firm, entity, corporation, political subdivision or other organization arising out of or in any manner directly or indirectly connected with any work contemplated by this Agreement shall be subject to the indemnification described in this section. Each of the Parties hereto shall fully indemnify and hold each of the other Parties, their officers, board members, employees, and agents, harmless from any claim, expense or cost, damage or liability imposed or occurring by reason of the negligent acts or omissions or willful misconduct of the indemnifying party, its officers, board members, employees or agents, under or in connection with or arising out of any work, authority or jurisdiction delegated to such party under this Agreement. No Party, nor any officer, board member, employee or agent thereof, shall be responsible for any damage or liability occurring by reason of the negligent acts or omissions or willful misconduct of the other Parties hereto, their officers, board members employees, or agents, under or in connection with or arising out of any work authority or jurisdiction delegated to any other Parties under this Agreement.

6. Notice

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

Notice to Parties	
If to:	
1. MWDOC	Robert J. Hunter, General Manager Municipal Water District of Orange County 18700 Ward St. P.O. Box 20895 Fountain Valley, CA 92728
2. City of Buena Park	James B. Vanderpool, City Manager City of Buena Park 6650 Beach Blvd. Buena Park, CA 90622
3. City of Fullerton	Meg McWade, Director of Public Works City of Fullerton 303 W. Commonwealth Avenue Fullerton, CA 92832-1775
4. City of Garden Grove	Scott Stiles, City Manager City of Garden Grove P.O. Box 3070 Garden Grove, CA 92842
5. City of La Palma	Conal McNamara, City Manager City of La Palma 7822 Walker Street La Palma, CA 90623
6. City of Orange	Rick Otto, City Manager City of Orange 300 E. Chapman Ave. Orange, CA 92866
7. City of Seal Beach	Jill R. Ingram, City Manager City of Seal Beach 211 8th Street Seal Beach, CA 90740
8. City of Tustin	Matthew West, City Manager City of Tustin 300 Centennial Way Tustin, CA 92780
9. Yorba Linda Water District	Brett R. Barbre, General Manager Yorba Linda Water District 1717 E. Miraloma Placentia, CA 92870

10. City of Westminster	Sherry Johnson, Interim City Manager City of Westminster 8200 Westminster Blvd. Westminster, CA 92683
11. East Orange County Water District	Lisa Ohlund, General Manager East Orange County Water District 185 N. McPherson Rd. Orange, CA 92869
12. City of Fountain Valley	Robert Houston, City Manager City of Fountain Valley 10200 Slater Avenue Fountain Valley, CA 92708
13. City of Newport Beach	Grace Leung, City Manager City of Newport Beach P.O. Box 1768 Newport Beach, CA 92663
14. City of Santa Ana	Kristine Ridge, City Manager City of Santa Ana P.O. Box 1988, M-24 Santa Ana, CA 92702
15. City of Huntington Beach	Brian Ragland, Utilities Manager City of Huntington Beach 19001 Huntington Street Huntington Beach, CA 92648-2211
16. Mesa Water District	Paul Shoenberger, General Manager Mesa Water District 1965 Placentia Avenue Costa Mesa, CA 92627-3420
17. City of San Clemente	Erik Sund, Interim City Manager City of San Clemente 100 Avenida Presidio San Clemente, CA 92672
18. El Toro Water District	Dennis Cafferty, General Manager El Toro Water District P.O. Box 4000 Laguna Hills, CA 92654

19. South Coast Water District	Rick Shintaku, General Manager South Coast Water District 31592 West Street Laguna Beach, CA 92651
20. Trabuco Canyon Water District	Fernando Paludi, General Manager Trabuco Canyon Water District 32003 Dove Canyon Drive Trabuco Canyon, CA 92679
21. City of Brea	Bill Gallardo, City Manager City of Brea 1 Civic Center Circle Brea, CA 92821
22. City of La Habra	Jim Sadro, Executive Director City of La Habra P.O. Box 337 La Habra, CA 90633-0337

7. Jurisdiction and Venue

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

8. Counterparts and Facsimile

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

9. Severability

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

10. Term

This Agreement shall commence upon the date of the earliest execution by any

Participating Agency below and shall extend thereafter through the completion of all work product generated by the Consultant and delivered to MWDOC and to each Participating Agency. The scheduled completion date by the Consultant is July 1, 2021. MWDOC shall issue a Notice of Completion to all Participating Agencies upon close-out of the Consultant Agreement. Notwithstanding anything to the contrary in this Section 10, this Agreement may be terminated earlier by MWDOC in its discretion upon or after termination of the Consultant Agreement.

11. Entire Agreement

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

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

Execution of Agreement by Parties	
<p>1. Municipal Water District of Orange County</p>	<p>Date: _____</p> <p>By: _____            Robert J. Hunter, General Manager            Municipal Water District of Orange County</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____            Joseph Byrne            General Counsel</p>
<p>2. City of Buena Park</p>	<p>Date: _____</p> <p>By: _____</p>

	<p>Jim Vanderpool, City Manager</p> <p>City of Buena Park</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>City Attorney</p>
<p>3. City of Fullerton</p>	<p>Date: _____</p> <p>By: _____</p> <p>Meg McWade, Director of Public Works</p> <p>City of Fullerton</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>City Attorney</p>
<p>4. City of Garden Grove</p>	<p>Date: _____</p> <p>By: _____</p> <p>Scott Stiles, City Manager</p> <p>City of Garden Grove</p> <p>Approved as to Form:</p> <p>Date: _____</p>

	<p>By: _____</p> <p>City Attorney</p>
<p>5. City of La Palma</p>	<p>Date: _____</p> <p>By: _____</p> <p>Conal McNamara, City Manager</p> <p>City of La Palma</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>City Attorney</p>
<p>6. City of Orange</p>	<p>Date: _____</p> <p>By: _____</p> <p>Rick Otto, City Manager</p> <p>City of Orange</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>City Attorney</p>
<p>7. City of Seal Beach</p>	<p>Date: _____</p> <p>By: _____</p>

	<p>Jill R. Ingram, City Manager</p> <p>City of Seal Beach</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>City Attorney</p>
<p>8. City of Tustin</p>	<p>Date: _____</p> <p>By: _____</p> <p>Matthew West, City Manager</p> <p>City of Tustin</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>City Attorney</p>
<p>9. Yorba Linda Water District</p>	<p>Date: _____</p> <p>By: _____</p> <p>Brett R. Barbre, General Manager</p> <p>Yorba Linda Water District</p> <p>Approved as to Form:</p> <p>Date: _____</p>

	<p>By: _____</p> <p>District Counsel</p>
<p>10. City of Westminster</p>	<p>Date: _____</p> <p>By: _____</p> <p>Sherry Johnson, Interim City Manager</p> <p>City of Westminster</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>City Attorney</p>
<p>11. East Orange County Water District</p>	<p>Date: _____</p> <p>By: _____</p> <p>Lisa Ohlund, General Manager</p> <p>East Orange County Water District</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>District Counsel</p>
<p>12. City of Fountain Valley</p>	<p>Date: _____</p> <p>By: _____</p>

	<p>Cheryl Brothers, Mayor</p> <p>City of Fountain Valley</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>Attorney for the City</p>
<p>13. City of Newport Beach</p>	<p>Date: _____</p> <p>By: _____</p> <p>Grace Leung, City Manager</p> <p>City of Newport Beach</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>City Attorney</p>
<p>14. City of Santa Ana</p>	<p>Date: _____</p> <p>By: _____</p> <p>Kristine Ridge, City Manager</p> <p>City of Santa Ana</p> <p>Approved as to Form:</p> <p>Date: _____</p>

	<p>By: _____</p> <p>City Attorney</p>
<p>15. City of Huntington Beach a municipal corporation of the State of California</p>	<p>Date: _____</p> <p>By: _____</p> <p>Mayor</p> <p>City of Huntington Beach</p> <p>Date: _____</p> <p>By: _____</p> <p>City Clerk</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>City Attorney</p>
<p>16. Mesa Water District</p>	<p>Date: _____</p> <p>By: _____</p> <p>Paul Shoenberger, General Manager</p> <p>Mesa Water District</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p>

	District Counsel
<p>17. City of San Clemente</p>	<p>Date: _____</p> <p>By: _____</p> <p>Erik Sund, Interim City Manager</p> <p>City of San Clemente</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>City Attorney</p>
<p>18. El Toro Water District</p>	<p>Date: _____</p> <p>By: _____</p> <p>Dennis Cafferty, General Manager</p> <p>El Toro Water District</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>District Counsel</p>
<p>19. South Coast Water District</p>	<p>Date: _____</p> <p>By: _____</p> <p>Rick Shintaku, General Manager</p>

	<p>South Coast Water District</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>District Counsel</p>
<p>20. Trabuco Canyon Water District</p>	<p>Date: _____</p> <p>By: _____</p> <p>Fernando Paludi, General Manager</p> <p>Trabuco Canyon Water District</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p> <p>District Counsel</p>
<p>21. City of Brea</p>	<p>Date: _____</p> <p>By: _____</p> <p>William Gallardo, City Manager</p> <p>City of Brea</p> <p>Approved as to Form:</p> <p>Date: _____</p> <p>By: _____</p>

	City Attorney
22. City of La Habra	Date: _____ By: _____ Jim Sadro, Executive Director City of La Habra Approved as to Form: Date: _____ By: _____ City Attorney

**EXHIBIT A**  
**ARCADIS Consultant Agreement**

## STANDARD AGREEMENT FOR CONSULTANT SERVICES

This **AGREEMENT** for consulting services dated August 19, 2020, which includes all exhibits and attachments hereto, "**AGREEMENT**" is made on the last day executed below by and between **MUNICIPAL WATER DISTRICT OF ORANGE COUNTY**, hereinafter referred to as "**DISTRICT**," and, **ARCADIS U.S., Inc.**, hereinafter referred to as "**CONSULTANT**" for Preparation of 2020 Urban Water Management Plans for MWDOC and participating Member Agencies<sup>1</sup> hereinafter referred to as "**SERVICES**."<sup>2</sup> **DISTRICT** and **CONSULTANT** are also referred to collectively herein as the "**PARTIES**" and individually as "**PARTY**". The **PARTIES** agree as follows:

### I PURPOSE AND SCOPE OF WORK

#### A. Consulting Work

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

#### B. Independent Contractor

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

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

<sup>1</sup> The member agencies include: MWDOC, City of Buena Park, City of Fullerton, City of Garden Grove, City of La Palma, City of Orange, City of Seal Beach, City of Tustin, City of Westminster, Yorba Linda Water District, East Orange County Water District, City of Fountain Valley, City of Newport Beach, City of Santa Ana, City of Huntington Beach, Mesa Water District, City of San Clemente, El Toro Water District, South Coast Water District, Trabuco Canyon Water District, City of Brea, and City of La Habra. (collectively "**PARTICIPATING AGENCIES**" and individually "**PARTICIPATING AGENCY**")

<sup>2</sup> Pursuant to Section 8002 of the District's Administrative Code, the District's "Ethics Policy" set forth at sections 7100-7111 of the Administrative Code is attached hereto as Exhibit "A" and incorporated herein by this reference.

## C. Changes in Scope of Work

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

## II TERM

This **AGREEMENT** shall commence upon the date of its execution and shall extend thereafter until August 19, 2021, unless earlier terminated as provided herein.

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

### A. Budgeted Amount for Services

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

### B. Fees

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

### C. Notification Clause

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

#### Notices shall be made as follows:

Municipal Water District of Orange County  
Robert J. Hunter  
General Manager  
18700 Ward Street, P.O.Box 20895  
Fountain Valley, CA 92708

ARCADIS U.S., Inc  
Sarina Sriboonlue  
Senior Engineer  
320 Commerce, Suite 200  
Irvine, CA 92602  
(714) 508-2682

#### **D. Billing and Payment**

**CONSULTANT's** fees shall be billed by the 25<sup>th</sup> day of the month and paid by **DISTRICT** on or before the 15<sup>th</sup> of the following month. Invoices shall reference the Purchase Order number from the **DISTRICT**. The **DISTRICT** shall withhold ten percent (10%) of each monthly payment to **CONSULTANT** in a retention fund until such time as every **PARTICIPATING AGENCY** has notified the **DISTRICT** that it is satisfied with the final 2020 Urban Water Management Plans prepared by **CONSULTANT** (“**RETENTION AMOUNT**”).

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

#### **E. Billing Records**

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

### **IV DOCUMENTS**

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

### **V TERMINATION**

Each **PARTY** may terminate this **AGREEMENT** at any time upon thirty (30) days written notice to the other **PARTY**, except as provided otherwise in **Exhibit "B."** In the event of termination: (1) all finished and unfinished work product prepared by or in custody of **CONSULTANT** shall be promptly delivered to **DISTRICT** within fifteen (15) days of the date of termination; (2) **DISTRICT** shall pay **CONSULTANT** all payments due under this **AGREEMENT** at the effective date of termination; (3) **CONSULTANT** shall promptly submit a final invoice to the **DISTRICT**, which shall include any and all non-cancelable obligations owed by **CONSULTANT** at the time of termination, (4) neither **PARTY** waives any claim of any nature whatsoever against the other for any breach of this **AGREEMENT**; (5) **DISTRICT** may withhold 125 percent of the estimated value of any disputed amount pending resolution of the dispute, consistent with the provisions of section III D above, and; (6) **DISTRICT** and **CONSULTANT** agree to exert their best efforts to expeditiously resolve any dispute between the **PARTIES**; (7) **CONSULTANT** shall not receive the **RETENTION AMOUNT**, if **CONSULTANT** terminates the **AGREEMENT** prior to completion of the **SERVICES**, (8) in the event this **AGREEMENT** is terminated in whole or in part as provided herein, the **DISTRICT** may procure, upon such terms and in such manner as it may determine appropriate, services similar to those terminated.

### **VI INSURANCE REQUIREMENTS**

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

#### A. **Workers' Compensation Insurance**

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

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

#### B. **Professional Liability Insurance**

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

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

#### C. **Other Insurance**

**CONSULTANT** will file with **DISTRICT**, before beginning professional **SERVICES**, ACORD certificates of insurance, or other certificates of insurance satisfactory to **DISTRICT**, evidencing general liability coverage of not less than \$1,000,000 per occurrence for bodily injury, personal injury and property damage; automobile liability (owned, scheduled, non-owned or hired) of at least \$1,000,000 for bodily injury and property damage each accident limit; workers' compensation (statutory limits) and employer's liability (\$1,000,000) (if applicable); requiring 30 days (10 days for non payment of premium) notice of cancellation to **DISTRICT**.

For the coverage required under this paragraph, the insurer(s) shall waive all rights of subrogation against **DISTRICT**, the **PARTICIPATING AGENCIES** and its directors, officers, agents, employees, attorneys, consultants or volunteers. **CONSULTANT's** insurance coverage shall be primary insurance as respects **DISTRICT**, the **PARTICIPATING AGENCIES**, and its directors, officers, agents, employees, attorneys, consultants and volunteers for all liability arising out of the activities performed by or on behalf of the **CONSULTANT**. Any insurance pool coverage, or self-insurance maintained by **DISTRICT**, the **PARTICIPATING AGENCIES** and its directors, officers, agents, employees, attorneys, consultants or volunteers shall be excess of the **CONSULTANT's** insurance and shall not contribute to it.

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

**AGREEMENT**, it shall be the **CONSULTANT's** responsibility to require and confirm that each sub-consultant meets the minimum insurance requirements specified herein.

**D. Expiration of Coverage**

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

## VII INDEMNIFICATION (Revised as of June 2020)

To the fullest extent permitted by applicable law, **CONSULTANT** shall indemnify, defend and hold harmless **DISTRICT**, its officers, Directors employees, and agents, and each of the **PARTICIPATING AGENCIES** (defined as those California public agencies under contract with **DISTRICT** for **CONSULTANT's** Services), and their officers, directors, board members, employees and agents, from and against:

- a. When the law establishes a professional standard of care for the **CONSULTANT's** services, all claims and demands of all persons that arise out of, pertain to, or relate to the **CONSULTANT's** negligence, recklessness or willful misconduct in the performance (or actual or alleged non-performance) of the work under this agreement. **CONSULTANT** shall defend itself against any and all liabilities, claims, losses, damages, and costs arising out of or alleged to arise out of **CONSULTANT's** performance or non-performance of the **SERVICES** hereunder, and shall not tender such claims to **DISTRICT** or **PARTICIPATING AGENCIES**, nor their respective officers, directors, board members, employees and agents, for defense or indemnity.
- b. Any and all actions, proceedings, damages, costs, expenses, penalties or liabilities, in law or equity, of every kind or nature whatsoever, arising out of, resulting from, or on account of the violation of any governmental law or regulation, compliance with which is the responsibility of **CONSULTANT**.
- c. Any and all losses, expenses, damages (including damages to the work itself), attorney's fees incurred by counsel of the **DISTRICT's** choice, or the choice of the respective **PARTICIPATING AGENCY**, and other costs, including all costs of defense, which any of them may incur with respect to the failure, neglect, or refusal of **CONSULTANT** to faithfully perform the work and all of the **CONSULTANT's** obligations under the agreement. Such costs, expenses, and damages shall include all costs, including attorneys' fees, incurred by counsel of the **DISTRICT's** choice, or the choice of the respective **PARTICIPATING AGENCY**, incurred by the indemnified parties in any lawsuit to which they are a party.

**CONSULTANT** shall immediately defend, at **CONSULTANT's** own cost, expense and risk, any and all such aforesaid suits, actions, or other legal proceedings of every kind that may be brought or instituted against **DISTRICT** or **PARTICIPATING AGENCIES**, or their respective officers, directors, board members, employees and agents with legal counsel reasonably acceptable to **DISTRICT** or **PARTICIPATING AGENCIES**, and shall not tender such claims to **DISTRICT**, **PARTICIPATING AGENCIES**, nor their officers, directors, board members, employees and agents.

**CONSULTANT** shall immediately pay and satisfy any judgment, award or decree that may be rendered against **DISTRICT**, **PARTICIPATING AGENCIES**, or their respective officers, directors, board members, employees and agents, in any and all such suits, actions, or other legal proceedings.

**CONSULTANT** shall immediately reimburse **DISTRICT**, **PARTICIPATING AGENCIES**, or their respective officers, directors, board members, employees and agents, for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing indemnity herein provided.

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

## **VIII FINANCIAL DISCLOSURE AND CONFLICTS OF INTEREST**

Although **CONSULTANT** is retained as an independent contractor, **CONSULTANT** may still be required, under the California Political Reform Act and **DISTRICT's** Administrative Code, to file annual disclosure reports. **CONSULTANT** agrees to file such financial disclosure reports upon request by **DISTRICT**. Further, **CONSULTANT** shall file the annual summary of gifts required by Section 7105 of the **DISTRICT's** Ethics Policy, attached hereto as **Exhibit "A."**

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

## **IX PERMITS AND LICENSES**

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

## **X LABOR AND MATERIALS**

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

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

## **XI CONFIDENTIALITY AND RESTRICTIONS ON DISCLOSURE**

### **A. Confidential Nature of Materials**

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

### **B. No Disclosure of Confidential Materials**

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

### **C. Protections to Ensure Control Over Materials**

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

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

## **XII OWNERSHIP OF DOCUMENTS AND DISPLAYS**

All original written or recorded data, documents, graphic displays, reports or other **MATERIALS** which contain information relating to **CONSULTANT's** performance hereunder and which are originated and prepared for **DISTRICT** and **PARTICIPATING AGENCIES** pursuant to the **AGREEMENT** are instruments of service and shall become the property of **DISTRICT** and **PARTICIPATING AGENCIES** upon completion or termination of the Project. **CONSULTANT** hereby assigns all of its right, title and interest therein to **DISTRICT** and **PARTICIPATING AGENCIES**, including but not limited to any copyright interest. In addition, **DISTRICT** and **PARTICIPATING AGENCIES** reserve the right to use, duplicate and disclose in whole, or in part, in any manner and for any purpose whatsoever all such data, documents, graphic displays, reports or other **MATERIALS** delivered to **DISTRICT** and **PARTICIPATING AGENCIES** pursuant to this **AGREEMENT** and to authorize others to do so.

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

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

## **XIII EQUAL OPPORTUNITY**

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

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

#### **XIV INTEGRATION OF ALL OTHER AGREEMENTS**

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

#### **XV ATTORNEYS' FEES**

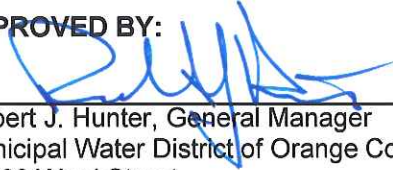
In any action at law or in equity to enforce any of the provisions or rights under this **AGREEMENT**, the prevailing **PARTY** shall be entitled to recover from the unsuccessful **PARTY** all costs, expenses and reasonable attorney's fees incurred therein by the prevailing **PARTY** (including, without limitations, such costs, expense and fees on any appeals), and if such prevailing **PARTY** shall recover judgment in any such action or proceeding, such costs, expenses, including those of expert witnesses and attorneys' fees, shall be included as part of this judgment.

#### **XVI JURISDICTION AND VENUE SELECTION**

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

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

**APPROVED BY:**


  
\_\_\_\_\_  
Robert J. Hunter, General Manager  
Municipal Water District of Orange County  
18700 Ward Street,  
P.O.Box 20895  
Fountain Valley, CA 92708  
(714) 963-3058

Date

9-25-2020

**CONSULTANT ACCEPTANCE:**

Date

  
\_\_\_\_\_  
9/14/2020

Name: Christine Cotton, Senior Vice President  
Arcadis U.S., Inc.

Address: 445 S. Figueroa Street, Suite 3650  
Los Angeles, CA 90638

Phone: (213) 797-5304

Tax I.D. # 57-0373224

**Internal Use Only:**

Program No. \_\_\_\_\_

Line Item: \_\_\_\_\_

Funding Year: \_\_\_\_\_

Contract Amt.: \_\_\_\_\_

Purchase Order # \_\_\_\_\_

## EXHIBIT "A"

ETHICS POLICY	§7100-§7110
---------------	-------------

### **§7100 PURPOSE**

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

### **§7101 RESPONSIBILITIES OF BOARD MEMBERS**

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

### **§7102 PROPER USE OF MWDOC PROPERTY AND RESOURCES**

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

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

---

Motion - 1/17/96;

### **§7103 CONFLICT OF INTEREST**

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

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

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

#### **§7104 GIFTS**

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

1. Acceptance of food and refreshments of nominal value on infrequent occasions in the ordinary course of a breakfast, luncheon or dinner meeting or other meeting or on an inspection tour where the arrangements are consistent with the transaction of official business.\*
2. Acceptance of transportation, lodging, meals or refreshments, in connection with attendance at widely attended gatherings sponsored by industrial, technical or professional organizations; or in connection with attendance at public ceremonies or similar activities financed by nongovernmental sources where the employee's participation on behalf of MWDOC is the result of an invitation addressed to him or her in his/her official capacity, and the transportation, lodging, meals or refreshment accepted is related to, and is in keeping with, his/her official participation.\*
3. Acceptance of unsolicited advertising or promotional materials such as pens, pencils, note pads, calendars, or other items of nominal value.\*
4. Acceptance of plaques and commemorative mementoes, of nominal value, or of value only to the recipient, such as service pins, recognition awards, retirement mementoes.
5. Acceptance of incidental transportation from a private organization, provided it is furnished in connection with an employee's official duties and is of the type customarily provided by the private organization.

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

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

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

---

Motion - 1/17/96;

### **§7105 PERSONS OR COMPANIES REPORTING GIFTS**

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

---

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

### **§7106 USE OF CONFIDENTIAL INFORMATION**

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

### **§7107 POLITICAL ACTIVITIES**

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

---

Motion – 6/17/15

## **§7108 IMPROPER ACTIVITIES**

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

## **§7109 VIOLATION OF POLICY – STAFF AND STAFF OFFICERS**

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

If a Board appointed officer (Secretary, Treasurer or General Manager) is reported to have violated MWDOC's Ethics Policy, the matter shall be referred to the Executive Committee for investigation and consideration of any appropriate action. The Executive Committee may make a determination and present the issue to the full Board.

---

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

## **§7110 VIOLATION OF POLICY -- DIRECTORS**

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

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

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

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

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

**EXHIBIT "B"**

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

<p>Company: <b>ARCADIS U.S., Inc.</b> Address: <b>320 Commerce, Suite 200</b> Irvine, CA 92602 Phone: <b>(714) 508-2682</b> Tax I.D. #</p>
--

1. Term – Commencement: August 19, 2020 Termination: August 19, 2021
2. Fees/Rates to be billed - See page 31 of July 8, 2020 Proposal Attached
3. Budgeted Amount - See Exhibit B p. 54; Note: Budgeted amount is based on the "Base Price" and the contingency items on which the participating agency provides written approval. **CONSULTANT's** fees shall be billed by the 25<sup>th</sup> day of the month and paid by **DISTRICT** on or before the 15th of the following month. Invoices shall reference the Purchase Order number from the **DISTRICT**  
  
Upon invoicing **DISTRICT** 80% of the contract amount, **CONSULTANT** shall prepare and provide to **DISTRICT** a "cost to complete" estimate for the remaining work.
4. Scope of Work/Services – Preparation of 2020 Urban Water Management Plans for MWDOC and MWDOC Member Agencies attached proposal dated June 8, 2020 (Attachment B).
5. Consultant Representative: Sarina Sriboonlue

## EXHIBIT "A"

ETHICS POLICY	§7100-§7110
---------------	-------------

### **§7100 PURPOSE**

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

### **§7101 RESPONSIBILITIES OF BOARD MEMBERS**

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

### **§7102 PROPER USE OF MWDOC PROPERTY AND RESOURCES**

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

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

---

Motion - 1/17/96;

### **§7103 CONFLICT OF INTEREST**

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

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

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

### **§7104 GIFTS**

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

1. Acceptance of food and refreshments of nominal value on infrequent occasions in the ordinary course of a breakfast, luncheon or dinner meeting or other meeting or on an inspection tour where the arrangements are consistent with the transaction of official business.\*
2. Acceptance of transportation, lodging, meals or refreshments, in connection with attendance at widely attended gatherings sponsored by industrial, technical or professional organizations; or in connection with attendance at public ceremonies or similar activities financed by nongovernmental sources where the employee's participation on behalf of MWDOC is the result of an invitation addressed to him or her in his/her official capacity, and the transportation, lodging, meals or refreshment accepted is related to, and is in keeping with, his/her official participation.\*
3. Acceptance of unsolicited advertising or promotional materials such as pens, pencils, note pads, calendars, or other items of nominal value.\*
4. Acceptance of plaques and commemorative mementoes, of nominal value, or of value only to the recipient, such as service pins, recognition awards, retirement mementoes.
5. Acceptance of incidental transportation from a private organization, provided it is furnished in connection with an employee's official duties and is of the type customarily provided by the private organization.

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

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

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

---

Motion - 1/17/96;

### **§7105 PERSONS OR COMPANIES REPORTING GIFTS**

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

---

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

### **§7106 USE OF CONFIDENTIAL INFORMATION**

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

### **§7107 POLITICAL ACTIVITIES**

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

---

Motion – 6/17/15

## **§7108 IMPROPER ACTIVITIES**

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

## **§7109 VIOLATION OF POLICY – STAFF AND STAFF OFFICERS**

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

If a Board appointed officer (Secretary, Treasurer or General Manager) is reported to have violated MWDOC's Ethics Policy, the matter shall be referred to the Executive Committee for investigation and consideration of any appropriate action. The Executive Committee may make a determination and present the issue to the full Board.

---

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

## **§7110 VIOLATION OF POLICY -- DIRECTORS**

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

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

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

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

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

**EXHIBIT "B"**

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

<p>Company: ARCADIS U.S., Inc. Address: 320 Commerce, Suite 200 Irvine, CA 92602 Phone: (714) 508-2682 Tax I.D. #</p>
---

1. Term –Commencement: August 19, 2020 Termination: August 19, 2021
2. Fees/Rates to be billed -See page 31 of July 8, 2020 Proposal Attached
3. Budgeted Amount -See Exhibit B pg. 54 ; Note: Budgeted amount is based on the "Base Price" and the contingency items on which the participating agency provides written approval. **CONSULTANT's** fees shall be billed by the 25<sup>th</sup> day of the month and paid by **DISTRICT** on or before the 15th of the following month. Invoices shall reference the Purchase Order number from the **DISTRICT**  
Upon invoicing **DISTRICT** 80% of the contract amount, **CONSUL TANT** shall prepare and provide to **DISTRICT** a "cost to complete" estimate for the remaining work.
4. Scope of Work/Services –Preparation of 2020 Urban Water Management Plans for MWDOC and MWDOC Member Agencies attached proposal dated June 8, 2020 (Attachment B).
5. Consultant Representative: Sarina Sriboonlue

In association with:



MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

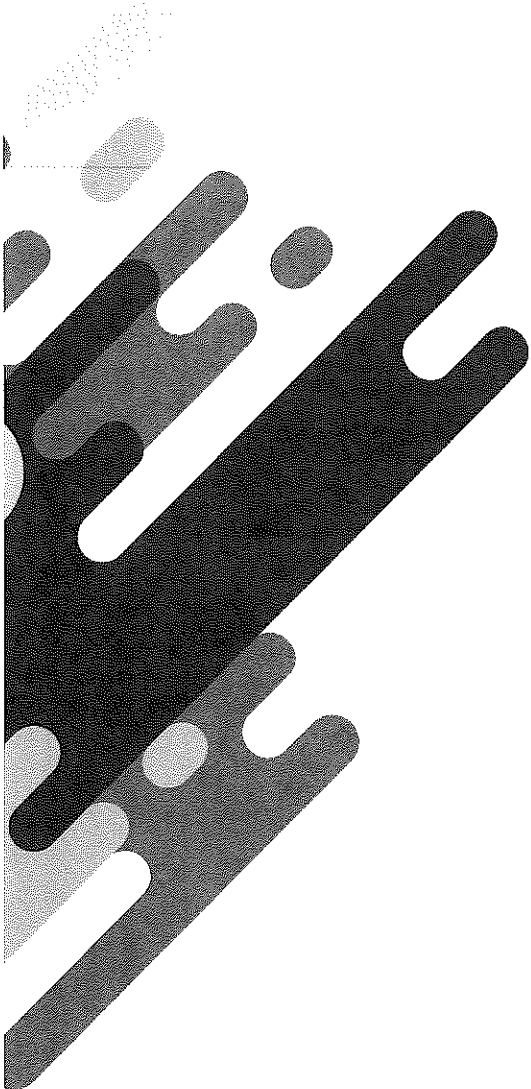
Proposal

# 2020 Urban Water Management Plans for MWDOC & a number of MWDOC Member Agencies



# Exhibit B

## COVER LETTER



# Exhibit B

Harvey F. De La Torre  
Associate General Manager  
Municipal Water District of Orange County  
18700 Ward Avenue  
Fountain Valley, California 92728  
Via Email: HDeLaTorre@MWDOC.com

Subject:  
Proposal for Preparation of 2020 Urban Water Management Plans (UWMPs) for MWDOC and a number of MWDOC Member Agencies

Dear Mr. De La Torre:


Thank you for the opportunity to submit our proposal to provide consulting services for the preparation of the 2020 Urban Water Management Plans (UWMP) for MWDOC and a number of MWDOC Member Agencies. Arcadis brings a long standing UWMP track record with MWDOC and Member Agencies that include the successful deliveries of both the 2010 and 2015 UWMPs.

It is our honor to continue providing our well-established services to MWDOC and Member Agencies in 2020. Arcadis is partnering with Maddaus Water Management to form a collaborative team with specialized knowledge of recent water legislation and new 2020 UWMP requirements. We are committed to providing high quality work and services. Our priorities in the preparation of the 2020 UWMPs for MWDOC and Member Agencies are listed below:

- **Produce high quality 2020 UWMP reports** that address all DWR requirements, meet CWC compliance, and can be presented to respective Boards of Directors or City Councils for adoption with no revisions.
- **Execute the project as smoothly and as efficiently as possible** for to the large number of agencies involved and with the large amount of data and coordination required.
- **Enhance the previous UWMP delivery approaches** to increase efficiency by using innovative communication tools, a dedicated Data Coordinator, and a one-stop secured Data Hub.

We appreciate the opportunity to share our team's strengths and qualifications. We look forward to continuing our relationship with MWDOC and Member Agencies. If you have any questions, please contact Sarina Sriboonlue at (714) 508-2682.

Sincerely,  
Arcadis U.S., Inc.



Sarina Sriboonlue, PE, ENV SP  
Project Manager



Christine A. Cotton  
Senior Vice President

Water

Date:  
July 8, 2020

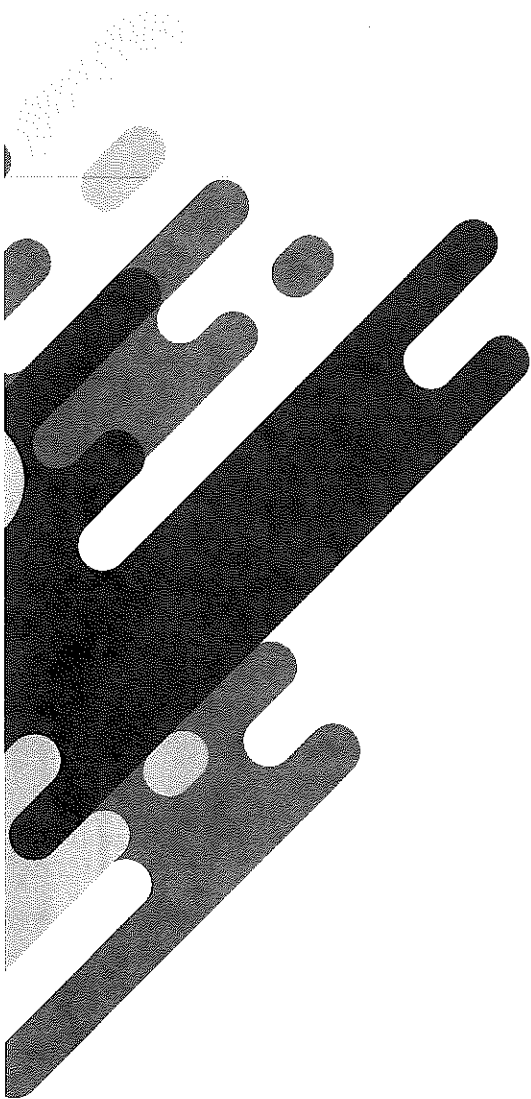
Contact:  
Sarina Sriboonlue, PE, ENV  
SP

Phone:  
(714) 508-2682

Email:  
Sarina.Sriboonlue@Arcadis.  
com

# Exhibit B

## SCOPE OF WORK & PROJECT APPROACH



## Scope of Work

### Project Understanding

Arcadis has a long standing UWMP track record with MWDOC and Member Agencies that include the successful deliveries of both the 2010 and the 2015 Urban Water Management Plans (UWMP). Our Project Manager, Sarina Sriboonlue was a Task Leader and lead author of both the 2010 and 2015 UWMPs. Sarina also took over as Project Manager and Quality Reviewer to ensure MWDOC and all Member Agencies' 2015 UWMPs met all California Water Code requirements.

It is our honor to continue providing our well-established services to MWDOC and Member Agencies in 2020. Our team brings a validated approach to delivering UWMPs that we plan to improve upon to increase efficiency. Arcadis is partnering with Maddaus Water Management to form a collaborative team with specialized knowledge of recent water legislatures and new 2020 UWMP requirements.

Arcadis understands MWDOC and its member agencies are seeking a qualified consultant to assist with the preparation and coordination of

the 2020 UWMPs. The California Department of Water Resources (DWR) had indicated that for the 2020 UWMP cycle, it does not intend to reinvent the wheel but is seeking to update with new requirements in line with new regulations.

UWMPs are comprehensive documents that present an evaluation of a water system's reliability over a long-term (20-year) horizon. Two complimentary components will be added to the 2020 UWMP. First is the **Water Shortage Contingency Plan (WSCP)** to assess the water system's near term 5-year drought risk assessment. Second is the **Annual Water Supply Demand Assessment (WSDA)** to assess the current year plus one dry year i.e. short-term demand/supply outlook. Analyses over these three time-horizons together will provide a more complete picture of a water supplier's reliability and will serve to inform appropriate actions it needs to take to build up capacity over the long term.

In 2020, DWR's overall UWMP goal is for California water suppliers to achieve improvements for long term reliability and resilience to drought and climate change. **With this understanding, the key considerations that will drive successful development of the 2020 UWMPs for MWDOC and its member agencies include:**

- 1 **Evolving California water regulations and new requirements for the 2020 UWMP**
- 2 **Completing UWMPs with efficiency and economy of scale**
- 3 **Recognizing 2020 UWMP as a foundational reference document for future analyses**



1

## Evolving California Water Regulations and New Requirements for the 2020 UWMP

Legislation related to water supply planning in California has evolved to address climate change and drought issues. New UWMP requirements in 2020 are a direct result of these new water regulations. Our team brings solid institutional knowledge from our experience on the frontlines of developing implementation guidelines for the new legislation.





**MAKING CONSERVATION A WAY OF LIFE (AB1668/SB606)** establishes guidelines to be in place by 2022 requiring Californians to use water wisely and prepare for more frequent and persistent periods of limited water supply.

 <b>NEW KEY REQUIREMENTS FOR 2020 UWMPs</b>	 <b>ARCADIS TEAM ADVANTAGE</b>
<p>Enhanced WSCP</p> <ul style="list-style-type: none"> <li>▮ Prescriptive elements 5-year Drought Risk Assessment (previously 3 years)</li> <li>▮ Six shortage levels at 10%, 20%, 30%, 40%, 50% and &gt;50% (previously up to 50%)</li> </ul>	<ul style="list-style-type: none"> <li>☐ Working with DWR to develop guidelines for implementation (<b>Lisa Maddaus</b>)</li> <li>☐ Engaging in UWMP Guidebook Workgroup meetings (<b>Lisa Maddaus</b> and <b>Michelle Maddaus</b>)</li> <li>☐ Advised Elsinore Valley Municipal Water District (EVMWD) on approaches to addressing the legislature (<b>Lisa Maddaus</b> and <b>Michelle Maddaus</b>)</li> </ul>
<p>Procedures for doing the annual WSDA</p>	<ul style="list-style-type: none"> <li>☐ Attended March WSDA workshop. Heard first-hand MWDOC's questions on the implementation of this requirement (<b>Sarina Sriboonlue</b>)</li> <li>☐ Attended June 2020 DWR workshop and reviewed UWMP Guidebook (<b>Lisa Maddaus</b> and <b>Michelle Maddaus</b>)</li> <li>☐ Hosting UWMP webinar in September 2020 (<b>Michelle Maddaus</b>)</li> </ul>
<p>Climate change vulnerability assessment and energy intensity analysis</p>	<ul style="list-style-type: none"> <li>☐ Assisted Inland Empire Utilities Agency's 2015 UWMP energy intensity analysis (<b>David Eberle</b> and <b>Sarina Sriboonlue</b>)                             <ul style="list-style-type: none"> <li>☐ Determined water, wastewater, and recycled water energy intensity of their operations</li> <li>☐ Facilitated climate change scenario planning stakeholder workshop</li> </ul> </li> </ul>
<p>Seismic risk assessment and mitigation plan</p>	<ul style="list-style-type: none"> <li>☐ Assisting many water agencies (e.g. East Valley Water District) in California to develop their Hazard Mitigation Plans</li> </ul>



**WATER LOSS PERFORMANCE STANDARDS (SB555)** requires urban retail water suppliers to conduct water loss audits annually and submit results to the state. The data from these audits will serve to inform DWR in the development of Real Loss Standards

 <b>NEW KEY REQUIREMENTS FOR 2020 UWMPs</b>	 <b>ARCADIS TEAM ADVANTAGE</b>
<p>5 previous years of system water losses</p>	<ul style="list-style-type: none"> <li>☐ Helping DWR developing the guidelines on the implementation of SB555 (<b>Lisa Maddaus</b>)</li> <li>☐ Providing technical assistance to DWR regarding the Urban Wholesaler Water Loss Study Report (<b>Lisa Maddaus</b>)</li> <li>☐ Providing input to DWR through CA/NV AWWA on SB555 implementation (<b>Gary Trachtman</b>)</li> </ul>

## 2

### Completing UWMPs with Efficiency and Economy of Scale

MWDOC and its member agencies seek a team that will execute this project as smoothly and as efficiently as possible. The majority of the 2020 UWMP document will be straightforward and similar to 2015 UWMP. A smaller—but critical—portion of the 2020 UWMP will be addressing new requirements. Our team is in an unprecedentedly strong position to effectively execute this project.

ATTRIBUTES OF THE SELECTED CONSULTANT	ARCADIS TEAM ADVANTAGE
A high quality 2020 UWMP report that can be presented to their respective Board of Directors or City Council for adoption with no revisions.	<ul style="list-style-type: none"> <li><input type="checkbox"/> Highly technical, detail-oriented, and solid UWMP experience</li> <li><input type="checkbox"/> 30+ 2015 UWMPs completed for SoCal agencies</li> <li><input type="checkbox"/> Six 2015 UWMPs completed for NorCal agencies</li> <li><input type="checkbox"/> Presented at MWDOC agencies' public hearings (<b>Sarina Sriboonlue</b>)</li> </ul>
A complete 2020 UWMP report that addresses all DWR requirements and meets CWC compliance.	<ul style="list-style-type: none"> <li><input type="checkbox"/> Close working relationship with DWR that will allow us to ask DWR questions directly and receive a response in a timely manner.</li> </ul>
Smooth coordination among MWDOC, Member Agencies, and consultant team due to the large number of agencies involved and the large amount of data and information to be collected.	<ul style="list-style-type: none"> <li><input type="checkbox"/> Familiarity with MWDOC and its member agencies UWMP data, process, and staff</li> <li><input type="checkbox"/> Dedicated Data Coordination to serve as the main point of contact (<b>Carolina Villacis</b>)</li> <li><input type="checkbox"/> Project Manager conveniently based in Irvine (<b>Sarina Sriboonlue</b>)</li> </ul>
Economy of scale by using similar or shared information applicable to multiple member agencies to develop the UWMP content	<ul style="list-style-type: none"> <li><input type="checkbox"/> Have Word documents of all Member Agencies' 2015 UWMPs to create 2020 UWMP base draft</li> <li><input type="checkbox"/> Have base draft 2020 UWMP ready for kick-off meetings with individual agencies</li> <li><input type="checkbox"/> Real-time edits to base draft 2020 UWMP at kick-off meetings</li> </ul>

## 3

### Recognizing 2020 UWMP as a Foundational Reference Document for Future Analyses

UWMPs serve as a foundational document for Water Supply Assessment (WSA) and Water Supply Verifications (WSV), and a valuable reference document for other planning activities. Our team is familiar with the applications of UWMP data as described below.

APPLICATIONS OF UWMP	ARCADIS TEAM ADVANTAGE
<p><b>A LONG-RANGE PLANNING DOCUMENT FOR WATER SUPPLY:</b> Water supply and demand analysis presented in the 2020 UWMP will provide the basis for and serve to inform future WSA and WSV documents for projects within MWDOC member agencies' service area that meet SB610 and/or SB221 threshold.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Familiar with the application of UWMP for WSA/ WSV</li> <li><input type="checkbox"/> Prepared WSA and WSV documents for El Toro Water District, City of Orange, Moulton Niguel Water District, and Santa Margarita Water District (<b>Sarina Sriboonlue</b>)</li> <li><input type="checkbox"/> Developing UWMPs with future WSA/WSV in mind will make the preparation of WSA/WSV more straightforward and efficient</li> </ul>



APPLICATIONS OF UWMP

**SOURCE DATA FOR DEVELOPMENT OF A REGIONAL WATER PLAN:** UWMPs are data-rich documents that often serve as a comprehensive reference and data source for many water planning documents. The addition of a 5-year Drought Risk Assessment, annual WSDA, and refinement of the WSCP will make the 2020 UWMPs an even more useful reference for drought planning.

**A SOURCE DOCUMENT FOR CITIES AND COUNTIES AS THEY PREPARE THEIR GENERAL PLANS:** General Plans/land use planning and UWMP/ water planning are companion documents. These planning processes should be integrated to accomplish proper urban planning. 2020 UWMPs will incorporate projected land use changes in demand forecasting.

**UWMP AS A REQUIREMENT TO MEET FUNDING ELIGIBILITY FOR SOME STATE PROGRAMS, LOANS AND GRANTS FOR WATER RESOURCES STUDIES, PROJECTS, FACILITIES, AND CONSERVATION:** According to the latest UWMP Act, state grants and loans eligibility is tied to UWMP adoption.



ARCADIS TEAM ADVANTAGE

- Familiar with the application of UWMP for other planning activities, such as
  - City of Newport Beach 2019 Water Master Plan (**Sarina Sriboonlue**)
  - Laguna Beach County Water District 2018 Water Master Plan (**Sarina Sriboonlue**)
  - City of Buena Park 2019 Sewer Master Plan (**Sarina Sriboonlue**)
  - Inland Empire Utilities Agency's Chino Basin Water Bank development (**Sarina Sriboonlue**)
- Will make use of applicable General Plans to ensure that projected land use changes are properly documented in the 2020 UWMPs especially related to demand forecasting
- Our priorities are:
  - High quality 2020 UWMP reports
  - Can be presented to your respective Board of Directors or City Council for adoption with no revisions
  - Meet all CWC compliance by or before July 1, 2021 to ensure you are eligible for state funding.

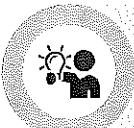
Arcadis Team Advantage



**ESTABLISHED RELATIONSHIP.** Successful track record for 2010 and 2015 UWMPs deliveries for MWDOC and Member Agencies with Sarina as Task Leader and in 2020 as Project Manager



**VALIDATED APPROACH.** Enhance 2015 UWMP delivery approach to increase efficiency. Add innovative communication tools, dedicated Data Coordinator, and one-stop Data Hub.



**SPECIALIZED KNOWLEDGE.** Expertise on water supply planning, water shortage contingency planning, and water loss. Frontline on UWMP Guidebook Workgroup.



**PEER-REVIEWED STRUCTURE.** Subject Matter Experts to oversee technical details. Arcadis staff as lead authors and MWM staff as fresh set of eyes for QC.



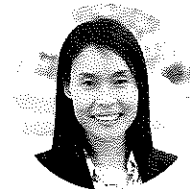
**EFFICIENT TOOLS & PROCESSES.** Familiarity with MWDOC and Member Agencies data. Base draft 2020 UWMP ready at kick-off. Group Workshop 1 ready – with content from MWM’s UWMP 101 webinar in May 2020. Survey Monkey to collect specific data.

## Project Approach

Our team is committed to effective project management of the UWMPs preparation. To facilitate the concurrent and efficient preparation of the UWMPs, Arcadis has aligned the project tasks into three phases similar to the successful execution in 2015. We will improve upon 2015 UWMP preparation by streamlining deliverables and communication to ensure every touchpoint and meeting with MWDOC and its member agencies is meaningful and productive. We will also streamline data collection and coordination.

We have organized the tasks listed in Attachment B - Scope of Services into 3 phases (shown below). This process proved successful on the 2015 UWMP. We will utilize this knowledge and experience to complete the 2020 UWMP on time and within budget.

Our Project Manager, Sarina Sriboonlue, has 14 years of consulting experience in a wide range of water resources planning projects for municipal and industrial clients. She assisted over 30 water agencies in southern California develop their 2015 Urban Water Management Plans.



### VALUE TO MWDOC

- ☐ Key author and task leader of MWDOC's and member agencies' 2010 and 2015 UWMPs.
- ☐ Familiarity with DWR guidelines. Attended DWR 2020 UWMP Workshops.

**40+** STUDIES/PLANNING PROJECTS COMPLETED

**50+** UWMPs COMPLETED

**PHASE 1**  
Kick-off, Data Collection, Coordination, & Work Plan

● ○ ○

**PHASE 2**  
Draft 2020 UWMP Report

○ ● ○

**PHASE 3**  
Final 2020 UWMP Report

○ ○ ●

**PHASE 1**

**Kick-off, Data Collection, Agencies Coordination, & Work Plan**

**OBJECTIVES**

- ✎ **CONDUCT** kick-off activities and meetings,
- ✎ **DEVELOP** a Work Plan
- ✎ **COORDINATE** with MWDOC and its member agencies to collect and review required data (RFP Task 1 and 15).
- ✎ **DEVELOP** a list of agencies that each of the member agencies are required to coordinate with (RFP Task 2). *These lists will mostly be the same as the 2015 UWMP since service area boundaries are mostly unchanged.*

● ○ ○

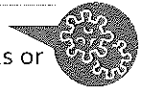
**RFP TASKS**

- 1 Data Information Collection & Review
- 2 Agencies Coordination
- 15 Meetings & Workshops to be Conducted

- DELIVERABLES**
- Data Request
  - Work Plan
  - Group Kick-off Workshop Minutes
  - Individual Kick-off Meeting Minutes

## STREAMLINE WORK PLAN & MEETINGS

	2015 APPROACH	2020 STREAMLINED APPROACH
<b>WORK PLAN</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Prepared individual scope of work for each agency (x23 agencies)</li> <li><input type="checkbox"/> Documented points of contact for Arcadis and agency staff (duplicate information from Kick-off meeting minutes)</li> <li><input type="checkbox"/> Time-consuming and limited usage</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Take ready-made Work Plan table prepared for this proposal (Section 2) and refine it to suit each Member Agency per their input at the Kick-off meeting</li> <li><input type="checkbox"/> The Work Plan table, add on items the agency chooses, and points of contact will be documented as part of the Kick-off meeting minutes</li> </ul>
<b>INDIVIDUAL AGENCY MEETINGS</b>	<p>Kick-off meetings with individual Member Agencies were held in-person with paper printouts and hand-written notes to be digitized later</p>	<p>For efficiency and safety during the Covid-19 pandemic, kick-off meetings will be held virtually (through MS Teams or other virtual meeting platforms) Advantages:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Mark-up the Work Plan in real-time</li> <li><input type="checkbox"/> Document UWMP changes and updates in real-time</li> <li><input type="checkbox"/> Share cloud-based data/file storage and show agencies how to utilize them</li> <li><input type="checkbox"/> Save time and cost, and stay safe.</li> </ul>



## STREAMLINE DATA COLLECTION & COORDINATION

**SHARED CLOUD-BASED DATA AND FILE STORAGE.** Arcadis will set up a Cloud-based data storage (such as MS Teams or SharePoint) folder to be used as a secured Data Hub. This Data Hub will house data from MWDOC, Member Agencies, and other data needed to complete the UWMPs. The Data Hub will also house deliverable schedules specific to each Member Agency as well as contact information of the project team. When the draft UWMPs are ready for review, it will be uploaded to the Data Hub. This allows Member Agency staff to review and edit the report without having to email it back to Arcadis. Each Member Agency will only have access to their specific folder. Arcadis is highly committed to cyber security and will implement strong security measures using established business platform, such as MS Teams or SharePoint.

Carolina Villacis will serve as the *dedicated Data Coordinator* who will be our team's point of contact and liaison to interface with MWDOC and its member agencies in collecting data. She will be the keeper of the data files to ensure organized data storage and will be the liaison within our team.



## COMMUNICATION TOOL

Our team will send out a Survey Monkey survey to individual agencies prior to the individual kick-off meeting. Survey Monkey provides an efficient way to collect the following data from agencies:

- Additional contact information
- Add-on services agency wishes to select
- Dates of Board of Directors/City Council meetings
- Background and tailored information agency wishes to include

**ARCADIS DATA HUB**

- One-stop data and file storage location
- Meeting materials
- Recorded Group Workshop webinars
- Data from MWDOC
- Data from individual Member Agencies
- Draft 2020 UWMP files
- Project schedule
- Secured platform
- Agency-specific access
- Organized communication
- Real-time updates

**PHASE 2**

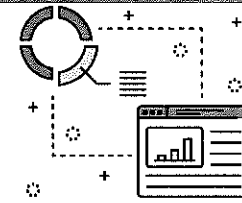
## Draft 2020 UWMP Report

### OBJECTIVES

- ✎ **PREPARE** the Draft 2020 UWMPs (RFP Task 3 to 12) following the proposed Work Plan. The Draft 2020 UWMP documents will be about 90% complete.
- ✎ **FACILITATE** UWMP review meetings (RFP Task 15)
- ✎ **MEET** with MWDOC and Participating Agencies individually to receive comments and edits (RFP Task 15).

### STREAMLINE UWMP TEMPLATES

2015 APPROACH	2020 STREAMLINED APPROACH
Generic templates were created for each agency category and for main sections of the report requiring multiple revisions.	<ul style="list-style-type: none"> <li>✎ Streamline process by creating a <b>complete UWMP report for one agency</b> per agency category</li> <li>✎ Get feedback from the agency to refine</li> <li>✎ Complete UWMP becomes a template for the agency category</li> <li>✎ Use template to efficiently create the rest of the UWMP reports</li> <li>✎ Create templates based on the 2015 UWMP report and add sections to address 2020 requirements.</li> </ul>



#### RFP TASKS

- 3 Service Area Information
- 4 Water Resource Reliability
- 5 Demand Management Measures
- 6 Water Shortage Contingency Plan with Prescriptive Elements
- 7 Current & Proposed Use of Recycled Water
- 8 Estimation of Energy Intensity of Urban Water Systems
- 9 Seismic Risk Assessment & Mitigation Plan
- 10 Water Quality Impacts on Reliability
- 11 Public Participation
- 12 Prepare a Draft 2020 UWMP Update Report
- 15 Meetings & Workshops to be Conducted

#### DELIVERABLES

- Draft 2020 UWMP with completed DWR checklist

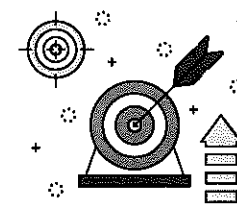
**PHASE 3**

## Final 2020 UWMP Report

### OBJECTIVES

- ✎ **REFINE** the Draft 2020 UWMPs to produce the Final Draft by incorporating inputs received from MWDOC and Participating Agencies (RFP Task 13)
- ✎ **PREPARE** a Final 2020 UWMP by incorporating public comments (RFP Task 14)

The final phase of the UWMP preparation involves the preparation and submission of the Adopted Final 2020 UWMP Report. Comments from each Participating Agency's public hearing will be incorporated into its Final Plan. Arcadis will polish the final draft UWMP into the final document to be submitted to DWR. The Member Agency will be responsible for submitting the 2020 UWMP to DWR, cities, county of the Member Agency's service area.



#### RFP TASKS

- 13 Prepare Final Draft 2020 UWMP Update Report
- 14 Prepare, Submit, & Adopt Final 2020 UWMP Updated Report
- 15 Meetings & Workshops to be Conducted

#### DELIVERABLES

- Final Draft 2020 UWMPs
- Final 2020 UWMPs

# Exhibit B

## 2020 UWMP Work Plan

The table below presents the Work Plan that Arcadis proposes to complete this project following the 15 RFP tasks. This Work Plan table represents a base Work Plan that will be refined with input from each Member Agency at the Kick-off meeting to create an agency-specific Work Plan for use in this project.

TASK	NEW 2020 REQUIREMENTS	DATA NEEDS	KEY CONSIDERATION	WORK PLAN
<b>Task 1. Data/ Information Collection and Review</b>		<p><b>Data needs from MWD, MWDOC, Participating Agencies, OCWD, and others</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 2015 UWMPs</li> <li><input type="checkbox"/> Integrated Water Resource Management Plans</li> <li><input type="checkbox"/> Water Master Plans</li> <li><input type="checkbox"/> Groundwater Management Plans</li> <li><input type="checkbox"/> Regional Water Use Efficiency Programs</li> <li><input type="checkbox"/> Water Transfers and Exchanges</li> <li><input type="checkbox"/> Regional Water Plans</li> <li><input type="checkbox"/> Cooperative Agreements</li> <li><input type="checkbox"/> Existing Water Management Tools</li> </ul>	Data needed to develop Member Agencies 2020 UWMPs will mostly be provided by MWDOC and Metropolitan. Some will be available on websites or can be found in the 2015 UWMPs. Remaining data needed from each Member Agency will be obtained at the Individual Kick-off Meeting with each agency.	<ul style="list-style-type: none"> <li><input type="checkbox"/> Present list of data needs to Member Agencies at the group kick-off workshop. Data request will be emailed to individual Member Agency following the kick-off workshop and discuss in detail at the Individual Kick-off Meeting with each agency.</li> <li><input type="checkbox"/> Transfer all applicable 2015 UWMP content into the 2020 UWMP outline to create a Base Draft 2020 UWMP.</li> <li><input type="checkbox"/> At the individual kick-off meetings the Base Draft 2020 UWMP will be marked up in real time. Review will include the 2015 UWMP demand management measures implementation, 20%x2020 water use target, recycled water plans (if applicable), land use changes, and others.</li> </ul>
<b>Task 2. Agencies Coordination</b>		<p>Similar to 2015 UWMP MWDOC will provide:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Hydrologic year basis to determine normal, single-dry, and multiple and five dry years for the Member Agencies service area</li> <li><input type="checkbox"/> Historical imported supply from Metropolitan</li> <li><input type="checkbox"/> Current and projected supply from Metropolitan and its reliability under different hydrologic conditions</li> <li><input type="checkbox"/> Projected water demand using Metropolitan demand projection model in MWDOC's service area</li> </ul>	This task is straightforward and follows the same 2015 requirements. The list of agencies that Member Agencies are required to coordinate with will mostly be the same as 2015 UWMP since service area boundaries are mostly unchanged. DWR encourages agencies to send this notification at the start of the process, well in advance of the required 60 days prior to the UWMP public hearing.	<ul style="list-style-type: none"> <li><input type="checkbox"/> Update the Agencies Coordination Table from 2015 UWMP and confirm any changes with Member Agencies at the kick-off meeting.</li> <li><input checked="" type="checkbox"/> <b>Add on item - Assist with coordination and submit these documents to city/county agencies on behalf of the Member Agencies.</b></li> </ul>
<b>Task 3. Service Area Information</b>		<p>Similar to 2015 UWMP preparation</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> MWDOC will provide demographic data (population, land use, income, etc) from Center for Demographic Research at Cal State Fullerton.</li> <li><input type="checkbox"/> Arcadis will download climate data from NOAA and CIMIS website.</li> </ul> <p>New 2020 requirement:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Projected land use changes related to demand forecasting.</li> </ul>	<p>Most of this task is straightforward and follows the same 2015 requirements.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> New 2020 Requirement: More detailed land use projection is required to be incorporated in demand forecasting. If data is not readily available from the Member Agencies, land use data can be obtained from an agency's General Plan Land Use Element.</li> <li><input type="checkbox"/> <b>Further Consideration:</b> While CWC requires a 20-year projection and a 25-year projection is optional, Arcadis recommends doing a 25-year projection (similar to 2015 UWMP). One practical advantage of having a 25-year projection is for WSA purposes. WSA requires a 20-year evaluation so if a WSA is needed in say 2024, Member Agencies will already have 2040-2045 demand and supply analysis available.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Tabulate all data provided by MWDOC into corresponding UWMP tables.</li> <li><input type="checkbox"/> Download climate data from NOAA and CIMIS. For any weather stations used in 2015 UWMP that are no longer active, data from the closest station or most representative data will be used.</li> <li><input type="checkbox"/> Review the relevant City's General Plan: Land Use Element with each Member Agency to document how planned land use affect demand projections. Arcadis assumes the demand projection developed by MWDOC and its member agencies already account for projected land use changes.</li> <li><input type="checkbox"/> Document all future development projects to provide a basis for the preparation of WSAs in the future.</li> </ul>
<b>Task 4. Water Resource Reliability</b>		<p>MWDOC will provide the following data:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Description of water supplies by source</li> <li><input type="checkbox"/> Reliability of supplies for normal, single dry, and 5-year drought by source</li> <li><input type="checkbox"/> Transfer and exchange opportunities</li> <li><input type="checkbox"/> Water demand by customer category</li> <li><input type="checkbox"/> Water loss audits from last 5 years</li> <li><input type="checkbox"/> Expected future water supply projects and programs</li> <li><input type="checkbox"/> Narrative and possibly quantitative information related to impact of climate change on water use, system supplies, reliability</li> </ul>	<p>New 2020 Requirements include:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Analysis of demand and supply assessment by source (instead of assessment of overall demand/supply)</li> <li><input type="checkbox"/> Reliability of supplies over 5 years of drought (instead of 3)</li> <li><input type="checkbox"/> Assessment of climate change vulnerability and impact on water supplies</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Update the 2015 UWMP narrative and populate 2020 data tables using new data from MWDOC, Metropolitan, and OCWD as applicable.</li> <li><input type="checkbox"/> Provide a narrative that assesses climate change impact on related to sea level rise, flooding, ecosystem and habitat vulnerability, and hydropower.</li> </ul>

TASK	DATA NEEDS	KEY CONSIDERATION	WORK PLAN
<b>NEW 2020 REQUIREMENTS</b> <b>Task 5. Demand Management Measures (DMM)</b>	<ul style="list-style-type: none"> <li>MWDOC will provide information related to water use efficiency programs that it implements on behalf of its member agencies.</li> <li>Member Agencies will provide information related to additional programs specific to each agency.</li> <li>MWDOC will provide 2020 water use data and updated narrative related to the OC Regional Alliance and SBx7-7 compliance.</li> </ul>	<p>MWDOC implements many water use efficiency programs on behalf of its member agencies. Member Agencies may have additional programs they implement specific to their agency. MWDOC also administers the OC Regional Alliance on behalf of its member agencies. Documenting DMM information and updating SBx7-7 compliance data in the 2020 UWMPs will be a straightforward process.</p> <p>New 2020 Requirements include:</p> <ul style="list-style-type: none"> <li>Annual Water Supply and Demand Assessment Procedures</li> <li>Six Standard Water Shortage Levels</li> </ul>	<ul style="list-style-type: none"> <li>Update the 2015 UWMP narrative and populate 2020 data tables using new data from MWDOC and its Member Agencies.</li> </ul>
<b>Task 6. Water Shortage Contingency Plan with Prescriptive Elements</b>	<ul style="list-style-type: none"> <li>MWDOC will provide each Member Agencies adopted WSCP</li> <li>Member Agencies will provide Wastewater Quantity, Quality and Current Uses.</li> </ul>	<p>Work with Member Agencies to:</p> <ul style="list-style-type: none"> <li>Describe the decision-making process that the agency will use each year to determine its water supply reliability.</li> <li>Develop how the existing shortage levels cross-reference to the six standard shortage levels and defined based on the agency's water supply condition.</li> <li>Describe potential revenue reductions and expense increases associated with activated shortage response actions and corresponding mitigation plan.</li> <li>Review an agency's plan to ensure it describes customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions.</li> <li>Document the agency's Communication Protocol regarding a current or predicted water supply shortage and shortage response action to be triggered.</li> </ul>	<ul style="list-style-type: none"> <li>Update 2015 UWMP narrative with new information where necessary.</li> </ul>
<b>Task 7. Current and Proposed Use of Recycled Water</b>	<ul style="list-style-type: none"> <li>MWDOC and/or Member Agencies will provide information on planned use of recycled water in their respective service area.</li> <li>Member Agencies will provide estimate of wastewater collected within their service area.</li> </ul>	<p>The task is straightforward and follows the same 2015 requirements.</p>	<ul style="list-style-type: none"> <li>Assist Member Agencies to identify appropriate data for the energy intensity calculations and will perform all calculations.</li> </ul>
<b>Task 8. Estimation of Energy Intensity of Urban Water Systems</b>	<p>Based on 2015 UWMP where energy intensity calculation was optional under Appendix O, data needs from Member Agencies will include, where applicable:</p> <ul style="list-style-type: none"> <li>Volume of water entering and energy consumed for each of these 5 processes: extract or divert, place into storage, conveyance, treatment, and distribution.</li> <li>Volume of wastewater and recycled water entering and energy consumed for each of these 5 processes: collection/conveyance, treatment, discharge distribution, The Climate Registry report, and indirect/outside of the agency's operational control.</li> </ul> <p><i>Data needs will be confirmed when DWR 2020 Guidebook is released</i></p>	<p>Economy of scale can be achieved here. Many of the same assumptions related to energy requirements of extraction, treatment, and distribution of water would likely apply across the MWDOC service area or at least across the agency categories (i.e. OCWD groundwater agencies, South Orange County agencies, etc). The same methodology to calculating energy intensity would also apply across all agencies.</p>	<ul style="list-style-type: none"> <li>Develop a narrative describing the seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and plans to mitigate those vulnerabilities based on each Member Agency's most recently adopted local hazard mitigation plan or multi-hazard mitigation plan.</li> </ul> <p><b>Add on item - For Member Agencies that do not have an adopted local hazard mitigation plan or multi-hazard mitigation plan, Arcadis is able to assist in the development of such plan, concurrently with the 2020 UWMP development.</b></p>
<b>Task 9. Seismic Risk Assessment &amp; Mitigation Plan</b>	<p>MWDOC and its member agencies will provide the most recent adopted local hazard mitigation plan or multi-hazard mitigation plan.</p>	<p>Information needed to satisfy this new requirement is readily available for most Member Agencies; an agency may comply with this requirement by submitting a copy of their most recently adopted local hazard mitigation plan or multi-hazard mitigation plan.</p>	<ul style="list-style-type: none"> <li>Develop a narrative describing the seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and plans to mitigate those vulnerabilities based on each Member Agency's most recently adopted local hazard mitigation plan or multi-hazard mitigation plan.</li> </ul> <p><b>Add on item - For Member Agencies that do not have an adopted local hazard mitigation plan or multi-hazard mitigation plan, Arcadis is able to assist in the development of such plan, concurrently with the 2020 UWMP development.</b></p>
<b>Task 10. Water Quality Impacts on Reliability</b>	<p>Information on water quality impacts on supplies can be obtained from:</p> <ul style="list-style-type: none"> <li>Metropolitan's 2020 UWMP for imported water quality</li> <li>OCWD reports e.g. Annual Engineer's Report and SGMA Alternative Plan (Basin 8-1 Alternative) for groundwater quality</li> <li>San Juan Basin Authority reports e.g. Groundwater Management Plan</li> </ul>	<p>This task is straightforward and follows the same 2015 requirements.</p>	<ul style="list-style-type: none"> <li>Analyze and describe how water quality will impact water management strategies and supply reliability in the Member Agency's service area.</li> <li>Quantify and describe the changes in each water supply due to water quality issues from 2020 to 2040 (or 2045), in 5-year increments</li> </ul>
<b>Task 11. Public Participation</b>	<p>Participating Agencies will provide tentative date(s) for the public hearing.</p>	<p>The public hearing must be noticed in a local newspaper once a week for two successive weeks.</p>	<ul style="list-style-type: none"> <li>Provide a reminder to the Member Agencies to publish public hearing notices in a local newspaper.</li> </ul>

# Exhibit B



REQUIREMENTS  
NEW 2020

TASK	DATA NEEDS	KEY CONSIDERATION	WORK PLAN
Task 12. Prepare a Draft 2020 UWMP Update Report	No additional data needed	The UWMP preparation will compile the data, information, and analyses done under Tasks 1 to 11 into one comprehensive document - the Draft 2020 UWMP.	<input type="checkbox"/> Prepare the Draft 2020 UWMP Update. This document will be 90% complete. <input type="checkbox"/> Complete the DWR UWMP Preparation Checklist for each Member Agency <input type="checkbox"/> Submit five copies of the draft 2020 UWMP Update to each Member Agency and relevant agencies for review and comment
Task 13. Prepare Final Draft 2020 UWMP Update Report	No additional data needed	MWDOC, Member Agencies, and other relevant agencies will review and provide comments and edits for the Draft 2020 UWMP. The Draft will be refined to produce the Final Draft 2020 UWMP for another review.	<input type="checkbox"/> Receive, review and incorporate comments from the Draft 2020 UWMP Update <input type="checkbox"/> Prepare a Final Draft 2020 UWMP Update for the Member Agency adoption in accordance with the requirements of UWMP Act <input type="checkbox"/> Submit 10 copies of the Final Draft 2020 UWMP Update to each Member Agency <input type="checkbox"/> Assist the Member Agency in the adoption of the 2020 UWMP Update, including coordination of the Notice of Public Hearing, Resolution of Plan adoption, and circulation of copies of the Final Draft 2020 UWMP Update, if desired by the Member Agency
Task 14. Prepare, Submit and Adopt Final 2020 UWMP Updated Report	No additional data needed	The final phase of the UWMP preparation involves a public hearing, adoption of the UWMP by the governing body, and submission of the adopted Final 2020 UWMP report to DWR and to cities and county of the Member Agency's service area. The public hearing may take place at the same meeting as the adoption. However, the public hearing portion must take place before the adoption portion to allow the governing body the opportunity to modify the UWMP in response to public input before adoption.	<input type="checkbox"/> Incorporate comments from public hearing, as approved <input type="checkbox"/> Prepare a Final 2020 UWMP Update for the Member Agency <input type="checkbox"/> Provide for printing of the final documents in the quantity and format requested by each agency (minimum of 10 copies to be assumed). <input type="checkbox"/> The Member Agency will be responsible for submitting the 2020 UWMP Update to DWR, cities and county of the Member Agency's service area. <input checked="" type="checkbox"/> <b>Add on item - Arcadis is familiar with the DWR WUE Portal used for UWMP submittal and can efficiently submit the 2020 UWMPs on behalf of all Member Agencies.</b>
Task 15. Meetings and Workshops to be Conducted	MWDOC will provide the list of attendees for the Group Workshop 1: Project Kick-off.	To increase efficiency and stay safe during this Covid-19 pandemic, Arcadis will hold meetings using a virtual platform (such as MS Teams) that allows screen sharing.	<input type="checkbox"/> Workshops and meetings as outlined on page 13.

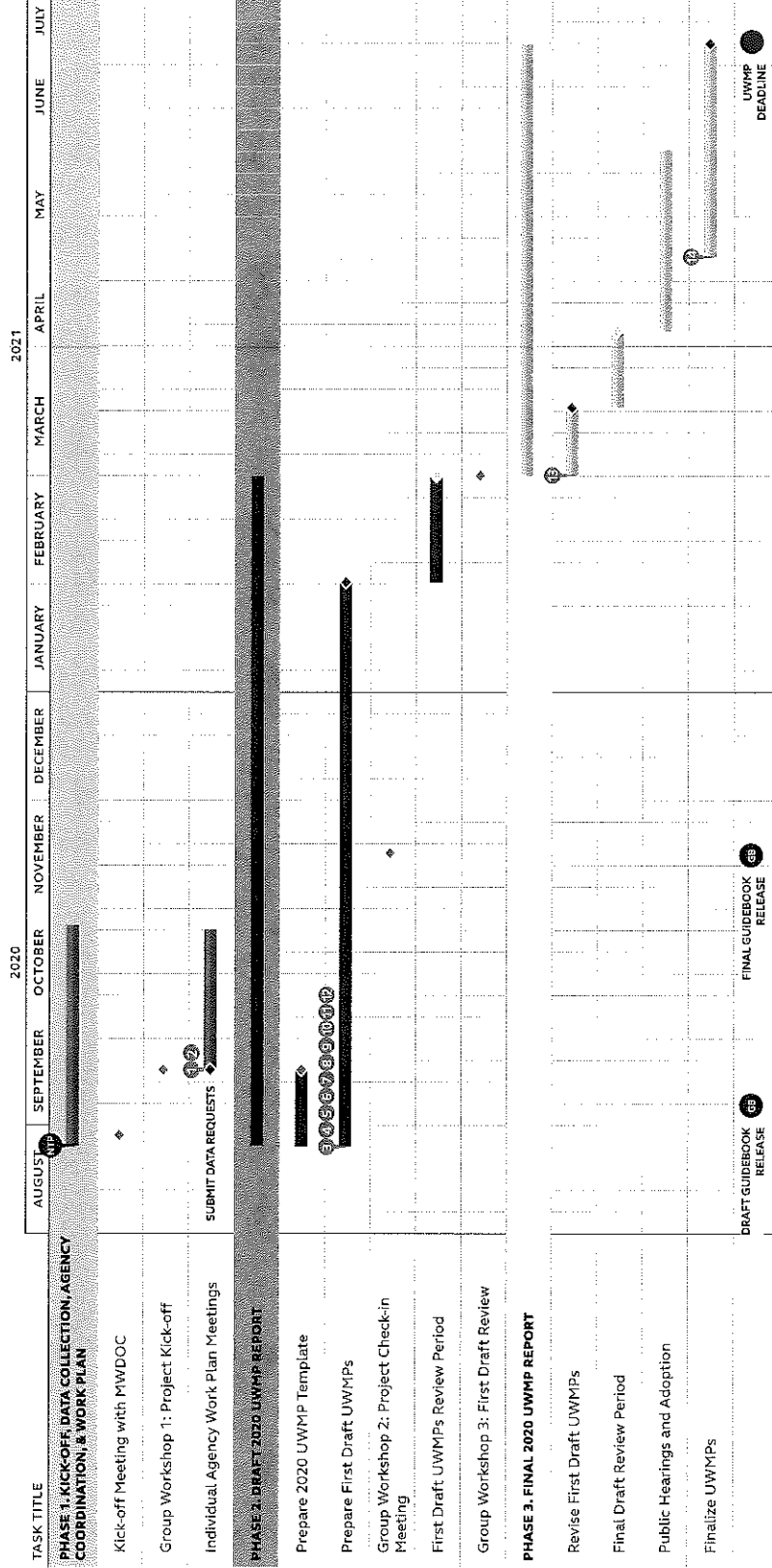
**Add on item -** Add on items listed under the Work Plan are optional services that can be included on an as needed bases for individual member agencies. The cost estimates provided do not include these items.

# Exhibit B

## Project Schedule

The following is our proposed schedule showing milestones and time frames for key tasks. The schedule indicated begins with the estimated Notice to Proceed (NTP) on August 24, 2020 and ends with UWMP submittals on July 1, 2021. Our proposed schedule is divided into three phases. It takes into account our previous experience with the 2010 and 2015 UWMP schedules. The tasks outlined in the RFP are called out by corresponding number throughout.

- 1 Meetings & Workshops to be Conducted
- 2 Meeting/Workshop
- 3 Submittal
- 4 Comment Deadline



## Group Workshops

Our team is ready to facilitate and deliver all group workshops in a webinar format. Virtual workshops are productive and efficient allowing more attendees to participate. All webinars will be recorded and posted to the project Data Hub for later viewing. We are proposing the following four group workshops to effectively communicate with the group.

**GROUP WORKSHOP 1  
Project Kick-off  
(September 2020)**

- New 2020 requirements
- Data collection process
- Communication protocol and intro to Data Hub

**GROUP WORKSHOP 2  
Project Check-in  
(November 2020)**

- Progress update & timeline check-in
- Survey Monkey results review
- Group communication opportunity

**GROUP WORKSHOP 3  
First Draft Review  
(End of Jan/Early Feb 2021)**

- Comments on First Draft 2020 UWMP
- Steps and timeline for completion
- Agencies coordination and public notification timeline review

**GROUP WORKSHOP 4  
Reliability Analysis  
(TBD)**

- Review of Metropolitan's Reliability Analysis
- Opportunity for all agencies to comment
- Incorporation into Draft 2020 UWMP

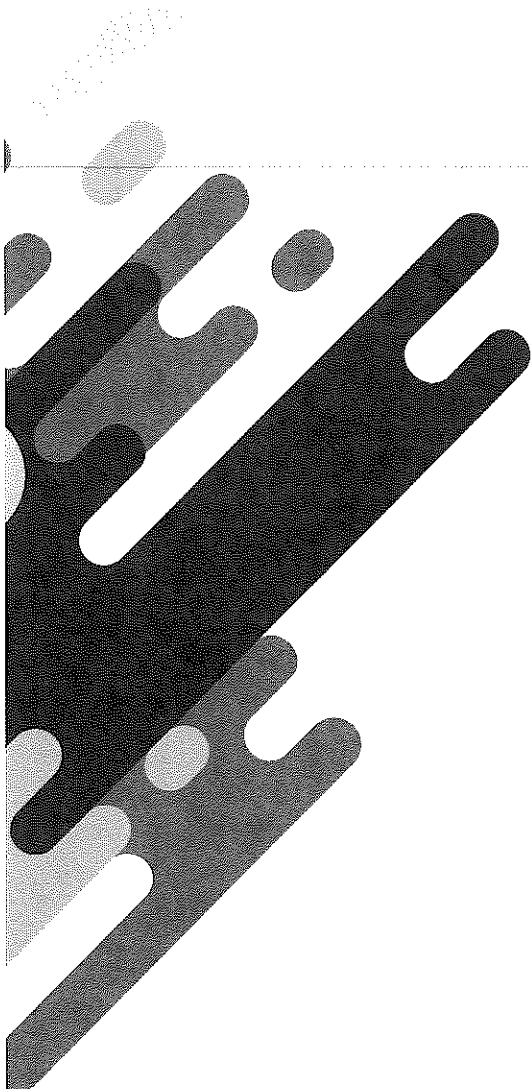
## Group Workshops & Meetings

PHASE	WORKSHOPS/ MEETINGS	OBJECTIVES	AGENCY ATTENDEES	TIMELINE
<b>Phase 1</b>	<b>Kick off meeting with MWDOC</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Review and confirm scope of work, schedule, points of contact, work plan, data needs, data collection process and logistics</li> <li><input type="checkbox"/> Plan for and coordinate the kick-off meeting with all Member Agencies. Identify template agencies</li> </ul>	MWDOC	Month 1 (09/2020)
	<b>Group Workshop 1 – Project Kick-off</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Review UWMP elements with focus on new requirements of the 2020 UWMP</li> <li><input type="checkbox"/> Review Work Plan</li> <li><input type="checkbox"/> Review data collection process</li> <li><input type="checkbox"/> Discuss communication protocol and intro to Data Hub</li> </ul>	MWDOC and All Member Agencies	Month 1 (09/2020)
	<b>Individual Member Agencies Work Plan Meeting</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Review 2020 UWMP template and identify updates since 2015</li> <li><input type="checkbox"/> Review implementation of 2015 UWMP</li> <li><input type="checkbox"/> Review list of the agencies (cities, counties) that Member Agencies are required to coordinate UWMP preparation and what needs to be provided to them and by when</li> <li><input type="checkbox"/> Review Cloud-based data storage</li> </ul>	Individual Member Agency	Month 2 (10/2020)
	<b>Group Workshop 2 – Project Check-in</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Progress update &amp; timeline check-in</li> <li><input type="checkbox"/> Survey Monkey results review</li> <li><input type="checkbox"/> Group communication opportunity</li> </ul>	MWDOC and All Member Agencies	Month 3 (11/2020)
<b>Phase 2</b>	<b>Template UWMP Review Meeting</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Review and receive comments on the template UWMPs</li> </ul>	Template Member Agencies and MWDOC	Month 2 (10/2020)
	<b>Group Workshop 3 – First Draft Review</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Comments on First Draft 2020 UWMP</li> <li><input type="checkbox"/> Steps and timeline for completion</li> <li><input type="checkbox"/> Agencies coordination and public notification timeline review</li> </ul>	MWDOC and all Member Agencies	Month 6 (02/2021)
	<b>First Draft Review Meeting</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Review and receive comments on the 90% draft UWMP</li> <li><input type="checkbox"/> Review schedule for adoption and agencies coordination – determine dates for Board/City Council adoption and dates for public notice</li> </ul>	Individual Member Agency	Month 6-7 (02/2021-03/2021)
	<b>Group Workshop 4 – MWD Reliability Analysis</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Review reliability analysis after MET information becomes available</li> </ul>	MWDOC and All Member Agencies	2 weeks after MWD release analysis
<b>Phase 3</b>	<b>Final Draft Review Meeting (As Needed)</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Review and receive comments on the Final Draft UWMP</li> </ul>	MWDOC and all Member Agencies	Month 7-8 (03/2021-04/2021)
	<b>Public Hearing Prep Meeting</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Prepare for Public Hearing presentation</li> </ul>	Individual Member Agency	Month 8-9 (04/2021-05/2021)

# Exhibit B

## PROPOSED SUBCONTRACT ARRANGEMENTS

PROPOSED SUBCONTRACT  
ARRANGEMENTS



## Proposed Subcontractor Arrangements

We have teamed with Maddaus Water Management, Inc. (MWM) to provide support for Task 5 - Demand Management Measures and Task 6 - Water Shortage Contingency Plan. MWM has extensive knowledge of water resources planning, specializing in demand analysis, water conservation and drought planning to help water utilities around the globe. More than 20 years ago, MWM's first project was supporting the water conservation planning needs of Bangkok, Thailand. Since that time, their work has extended to support both publications and training workshops for the United Nations Economic and Social Commission for Asia and the Pacific Region. MWM has completed over 440 projects, focused mainly in the United States.

MWM brings an unparalleled combination of water resources planning expertise with a well-honed understanding of water demands, conservation, drought and water supply reliability. In 1999, William Maddaus, the company's founder, developed the first water conservation model. This Decision Support System (DSS) model has been used in over 20 states across the nation and internationally in Canada, New Zealand and Australia, representing a population of over 40 million people.

*MWM is a family-owned and certified Micro Small Business Enterprise/Women-Owned Business in California.*



**MADDAUS  
WATER  
MANAGEMENT  
INC.**

- MWM TASK LEADERS VALUE TO MWDOC**
- UWMP webinar through WaterNow Alliance
  - Working with DWR on key elements of new legislature - Making Conservation a Way of Life and Water Loss.
  - Highly technical and detail-oriented

# Exhibit B

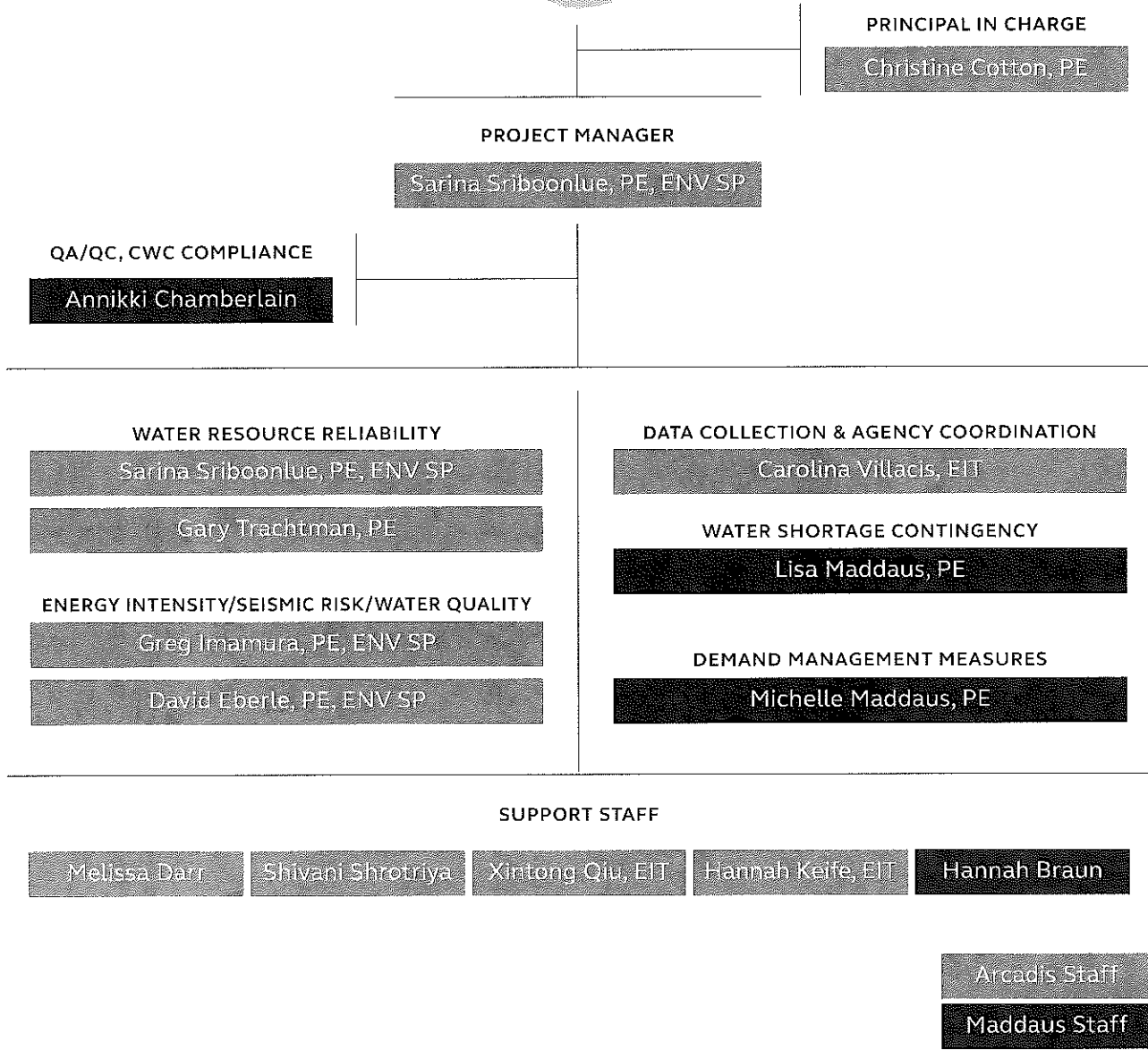
## FIRM'S SPECIFIC EXPERIENCE & CAPABILITIES

FIRM'S SPECIFIC EXPERIENCE &  
CAPABILITIES

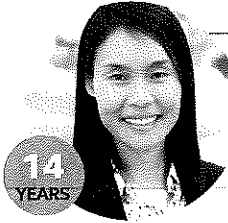


## Firm's Specific Experience & Capabilities

We have developed a team with previous experience on the 2010 and 2015 UWMPs for MWDOC and similar projects. The team includes technical experts in the categories important to MWDOC as outlined in the scope of services tasks in the RFP. We have also teamed with MWM to provide additional value to MWDOC.



## Key Staff Qualifications



**PROJECT MANAGER AND WATER RESOURCE RELIABILITY TASK LEADER**

### Sarina Sriboonlue, PE, ENV SP

Ms. Sriboonlue is a Senior Water Engineer and Certified Project Manager at Arcadis with dedication to delivering quality work, attention to details, and adept organizational skills. Her 14 years of consulting experience spans a wide range of water and wastewater planning projects for municipal and industrial clients in southern California. Water resources planning is one of her specialty. She assisted numerous wholesale and retail water agencies to develop their 2010 and 2015 Urban Water Management Plans, including MWDOC and retail water agencies in Orange County, Inland Empire Utilities Agency and Water Facilities Authority, Central Basin Municipal Water District, West Basin Municipal Water District, and various other agencies. She has prepared many Water Supply Assessments (WSA) (SB610) for MWDOC member agencies. The most recent was the WSA for The Village at Laguna Hills Project completed in May 2020 for the El Toro Water District. She is familiar with water loss audits (SB555) and has assisted the City of Norwalk in the preparation of its annual water loss audit and validation for CY 2016, 2017, and 2018. Ms. Sriboonlue has worked with many MWDOC agencies on other planning projects, including Newport Beach and Laguna Beach County Water District Water Master Plans, Buena Park's Sewer Master Plan, Huntington Beach Water Use Efficiency Plan. Ms. Sriboonlue is a member of the Arcadis Strategy and Innovation team that worked with Metropolitan Water District in 2019 to assess its organization's innovation program and organizational culture with the objectives to define Metropolitan's Innovation Program expectations and future aspirations. Ms. Sriboonlue was the Location Leader of the Arcadis Irvine office whose goal was to promote collaboration and a sense of community for the 100-person office.

#### VALUE TO MWDOC

- ❑ Key author and task leader of MWDOC's and member agencies' 2010 and 2015 UWMPs
- ❑ Familiarity with DWR guidelines. Attended DWR 2020 UWMP Workshops
- ❑ Direct coordination with DWR UWMP Project Manager. Key to getting member agencies' 2015 UWMPs to meet CWC compliance
- ❑ Familiarity with the application of UWMPs – preparation of Water Supply Assessments and Water Supply Verifications
- ❑ Completed 6 WSAs and WSVs for four MWDOC member agencies



**PRINCIPAL IN CHARGE**

### Christine Cotton

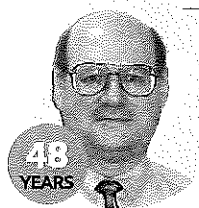
Ms. Cotton has managed complex programs and master plans over her career, including program master plans, stakeholder development, large capital improvements designs, and facilities start-up. She has been contract manager for utilities and agencies of all sizes and prides herself in being accessible and responsive and will assist the project team as needed to deliver the UWMPs and exceed your expectations.

**ENERGY INTENSITY/SEISMIC RISK/WATER QUALITY TASK LEADER**

### Greg Imamura, PE, ENV SP

Mr. Imamura is a Civil Engineer specializing in water treatment and distribution on Arcadis' water planning team based in Los Angeles, CA. He has over eight years' experience working through a variety of projects ranging from grading plans to hexavalent chromium treatment planning and design. He is a certified Water Audit Validator who has performed water audit validation for various California water utilities including, San Francisco Public Utilities Commission, Golden State Water Company, City of Norwalk, and others. He is also a Level 2 distribution system operator (D2). His specific experience analyzing water sources includes developing water supply analyses, urban water management plans, and demand forecasting.





48  
YEARS

**WATER RESOURCE RELIABILITY & WATER LOSS SUBJECT MATTER EXPERT**

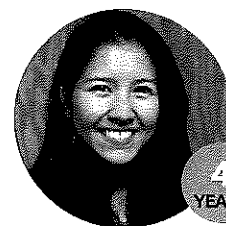
**Gary Trachtman, PE**

Mr. Trachtman has extensive experience in comprehensive water supply studies, evaluations of long-term dependability alternatives for complex water supply systems, and water supply and demand management options for integrated water resource management plans using criteria addressing technical, environmental, economic and social issues. He has also performed computer-based hydraulic analysis of a wide range (by size and location) of water distribution systems, and design of water treatment, pumping, and storage facilities, as well as operation assistance for distribution systems. He has evaluated the impact of demand-side and system-side water conservation measures on future water demands and developed drought management plans. He has also developed source water assessments, emergency response plans, vulnerability assessments and evaluations of online water quality monitoring technologies and optimal placement of water quality sensor networks for distribution systems.

Mr. Trachtman is a member of the AWWA Water Loss Control Committee, contributed to the 3rd and 4th editions of Manual M36 Water Audits and Loss Control Programs and peer-reviewed USEPA's guidance document on Best Practices to Consider When Evaluating Water Conservation and Efficiency as an Alternative for Water Supply Expansion (2016). He is also Secretary of the AWWA Customer Metering Practices Committee and contributed to the 3rd edition of AWWA Manual M22 Sizing Water Service Lines and Meters.

layout/selection/costing, and conceptual level design. He is passionate about sustainability and looks for opportunities to increase economic, environmental, and social value into every project he engages. He is also a core member of Arcadis' global sustainability team responsible for developing, tracking, and monitoring the organizations' sustainability goals.

**DATA COLLECTION AND AGENCIES COORDINATION TASK LEADER**

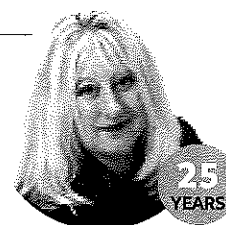


4  
YEARS

**Carolina Villacis, EIT**

Ms. Villacis is a water resources engineer who specializes in water, wastewater, and stormwater planning projects. She is detail-oriented and possesses exceptional communication and organization skills, which allows her to excel in stakeholder and data coordination. She has effectively coordinated with various departments within a Client's organization including the executive committee, local and global Arcadis staff, regulatory agencies, and subcontractors to prepare master plans, emergency-related plans, and to obtain permits. Ms. Villacis's data coordination and management skills using spreadsheets and GIS were vital when compiling, organizing, and analyzing various datasets such as historical and current water, asset, census, land use zones, and capacity data to prepare the City of Buena Park's 2018 Updated Sewer Master Plan. More recently, Ms. Villacis coordinated with various staff from the City of Norwalk's public works, engineering, and financial departments to obtain the necessary data to prepare their Calendar Year 2018 American Water Works Association Water Loss Audit.

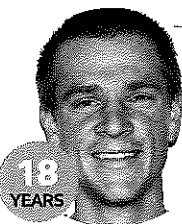
**WATER SHORTAGE CONTINGENCY TASK LEADER**



25  
YEARS

**Lisa Maddaus, PE**

Ms. Maddaus is a senior water resources engineer with experience preparing water resources planning, conservation, drought, and water loss control studies for water suppliers across the country. Lisa has worked on numerous UWMPs. She worked with Suisun-Solano Water Authority on their 2015 Urban Water Management Plan as well as on their water loss analysis. Lisa also was project manager for the 2015 UWMP for



18  
YEARS

**ENERGY INTENSITY/SEISMIC RISK/WATER QUALITY SUBJECT MATTER EXPERT**

**David Eberle, PE, ENV SP**

**LEED AP**

Mr. Eberle is one of Arcadis' water resources, planning, and quality experts. David's experience is deeply rooted in his municipal and industrial water work focused on master planning, feasibility studies, alternative assessments, triple bottom line analyses, treatment process

Cambria Water Services District. Lisa continues to advise clients for the upcoming 2020 Urban Water Management Plans and approaches to addressing the new “Making Water Conservation a California Way of Life” legislation. She also recently assisted the California Department of Water Resources in addressing this new legislation by providing technical assistance to DWR regarding the Urban Wholesaler Water Loss Study Report submitted in January 2020.

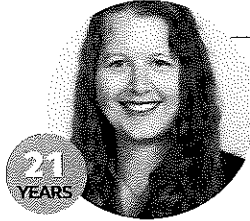
Lisa presented via webinar on the 2020 UWMP requirements, which was well reviewed and attended by over 90 individuals.

## QA/QC & CALIFORNIA WATER CODE COMPLIANCE



### Annikki Chamberlain

Ms. Chamberlain is a Water Resource Analyst and Training Specialist with 12 years of experience in many facets of water management, including water supply and efficiency, watershed and climate science, wastewater treatment, and water policy. Annikki has served as a CII Solutions and Water Conservation Specialist, having great success assisting and training hundreds of service providers in equipment operation, troubleshooting, and diagnostic analysis using water use data, infographics, and standard operating procedures. She has conducted more than 50 water audits across residential and commercial properties and effectively trained a diverse range of audiences on a variety of technical water topics, including CII Water Audits, Environmental and Industrial Processes, Landscape and Irrigation Evaluation, and Cooling Tower Assessment. Most recently, she provided CII Water Audit Training for over 100 attendees in a PG&E webcast and 10 employees at an in-person training for El Paso Water in Texas.



## DEMAND MANAGEMENT MEASURES TASK LEADER

### Michelle Maddaus, PE

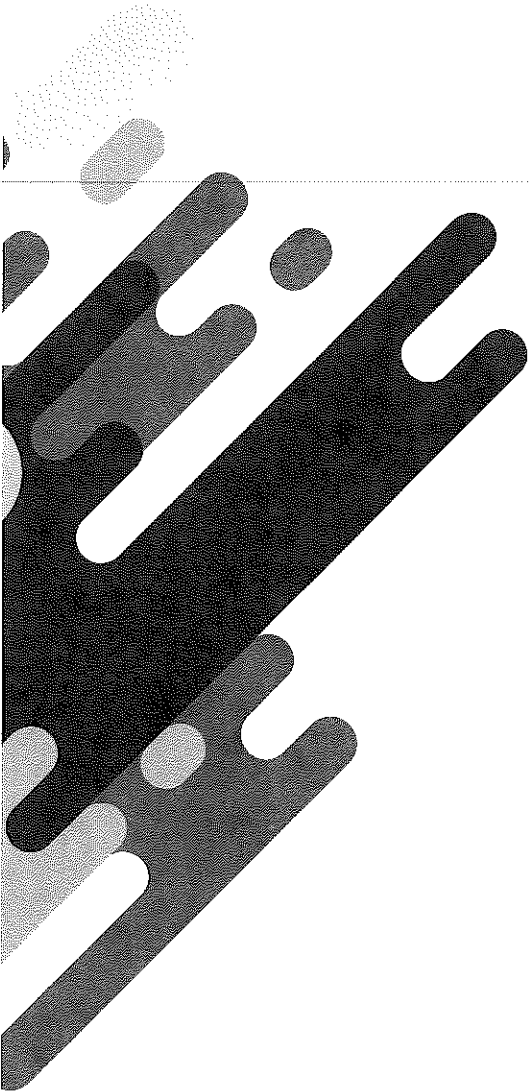
Ms. Maddaus is a registered civil engineer with 21 years of experience, a wide variety of which is in the water resources field. She has been working with urban water management plans since 2000, including the City of Sacramento (2000), Calistoga (2005), Suisun-Solano Water Authority (2005, 2010, 2016), South Tahoe Public Utilities (2010), Liberty Utilities (2016), Mid-Peninsula Water District (2016), City of Sonoma (2016) and the technical demand analysis portion of the UWMPs for over 57 agencies, like Marin Municipal Water District, North Marin County Water District, City of Santa Rosa, City of Petaluma, City of Rohnert Park, Town of Windsor, City of Sonoma, Valley of the Moon, City of Cotati. In May 2020, Michelle and

## Ability to Perform

The following table shows the percentage of time each team member will contribute to the project.

TEAM MEMBER	ROLE	CONTRIBUTION
Sarina Sriboonlue, PE ENV SP	Project Manager/Task Leader - Water Resources Reliability	15%
Lisa Maddaus, PE	Task Leader - Water Shortage Contingency	7.5%
Michelle Maddaus, PE	Task Leader - Demand Management Measures	2.5%
Greg Imamura, PE ENV SP	Task Leader - Energy Intensity/Seismic Risk/Water Quality/Water Loss	20%
Carolina Villacis, EIT and Technical Support Staff	Task Leader - Data Collection and Agencies Coordination and Report Preparation	45%
David Eberle, PE	Subject Matter Expert - Energy Intensity and Climate Change	2.5%
Gary Trachtman, PE	Subject Matter Expert - Water Resources Reliability and Water Loss	2.5%
Annikki Chamberlain	QA/QC - California Water Code Compliance	5%
	<b>Total</b>	<b>100%</b>

# Exhibit B



## PROJECT TEAM'S PAST RECORD OF PERFORMANCE



PROJECT TEAM'S PAST RECORD OF PERFORMANCE

## Project Team's Past Record of Performance

### Relevant Project Experience

The following projects demonstrate our team's experience completing UWMPs and similar projects together.

### 2015 & 2010 Urban Water Management Plan Updates

*Municipal Water District of Orange County & 23 Retail Agencies | Fountain Valley, California*

#### REFERENCE

Harvey F. De La Torre  
Associate General Manager  
Municipal Water District of  
Orange County  
☎ (714) 593-5027  
✉ HDeLaTorre@MWDOC.com

#### KEY STAFF

- Sarina Sriboonlue
- Greg Imamura
- Gary Trachtman

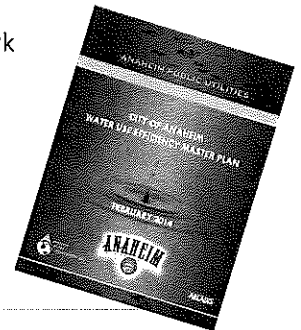
Arcadis assisted MWDOC and 23 retail agencies in the development of their 2015 UWMPs. Arcadis worked with MWDOC and retail agencies to create comprehensive UWMP documents that 1) account for planning activities within the MWDOC service area including that of the MWDOC-led Orange County Regional Alliance to comply with Water Conservation Bill of 2009 (SBx7-7) 20x2020 water use reduction goals; and 2) align with planning activities of other entities within the region, such as Orange County Water District and Metropolitan Water District. All of the 2015 UWMPs developed for MWDOC and retail agencies met the requirement of the UWMP Act, as well as various legislations and guidance documents available including: a detailed evaluation of the supplies necessary to meet demands over a 25-year period in a single year and multi-year droughts as well as average conditions; documentation of the stages of actions the agency would undertake to address up to 50% reduction in its water supplies; a description of the actions to be undertaken in the event of an interruption in water supplies; and an evaluation of water use efficiency measures to satisfy the requirements of the Water Conservation Bill of 2009 (SBx7-7).

### ARCADIS & MWM COLLABORATIVE PROJECTS



Arcadis and MWM, specifically, **Sarina** and **Michelle** have partnered to deliver many successful projects together for almost a decade. Sarina's big picture thinking and Michelle's detail-oriented nature are complimentary. **Our teams work well together and genuinely enjoy the collaboration.**

- ✦ 2015 Urban Water Management Plan Liberty Utilities (formerly Park Water Company), Downey CA
- ✦ Water Resources Plan (2016) Liberty Utilities (formerly Park Water Company), Downey CA
- ✦ Water Use Efficiency Master Plan (2012) City of Anaheim, CA
- ✦ Water Use Efficiency Master Plan (2012) City of Corona, CA



### 2015 Land Use-Based Demand Model Development & 2015 Urban Water Management Plan

*Inland Empire Utilities Agency | Chino, California*

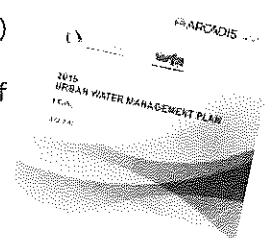
#### REFERENCE

Elizabeth Hurst  
Senior Environmental  
Resource Planner  
Inland Empire Utilities Agency  
☎ 909.993.1634 |  
✉ EHurst@IEUA.org

#### KEY STAFF

- Sarina Sriboonlue
- David Eberle

Arcadis assisted the Inland Empire Utilities Agency (IEUA) in the development of its 2015 Urban Water Management Plan (UWMP). Arcadis worked with IEUA to create a robust and comprehensive UWMP document that aligned with its other regional planning documents, specifically the 2015 Integrated Water Resources Plan (IRP) and the 2015 Water Use Efficiency Business Plan. For the development of its 2015 UWMP, IEUA had the goals to not only meet the UWMP Act requirements but also to 1) develop a land use-based water demand model



that disaggregates regional data to the member agency level; 2) determine the water energy intensity of IEUA's operations; and 3) evaluate climate change vulnerability impacts of IEUA's supply portfolio.

With input from IEUA and its member agencies, Arcadis developed a land use-based water demand projection tool that offers a transparent demand forecasting approach using consistent planning data and appropriate stakeholder (i.e. retail agency) involvement. The methodology used to create the demand model relied on the development of a land use database within a geographic information system (GIS) and the determination of water use factors on a per acre basis. The demand model provided demand projections for each member agency separately and the total IEUA service area in five-year increments to 2040.

As part of this project, Arcadis also assisted IEUA to determine the water energy intensity of its operations and facilitate a climate change scenario planning stakeholder workshop. The workshop discussion evolved around "what if" scenarios, identified stakeholder concerns, as well as identified and prioritized climate change risks to supply reliability. The climate change risk assessment exercise generated a list of considerations for future studies. Arcadis completed the UWMP on time and on budget. The UWMP satisfied all requirements of the California Water Code. The project generated two presentations for the CA-NV AWWA Fall 2016 conference

## Water Supply Assessments for Five Lagunas and The Village at Laguna Hills Project

*El Toro Water District | Lake Forest, California*

**REFERENCE**

Dennis Cafferty, PF  
General Manager  
El Toro Water District  
24251 Los Alisos Blvd,  
Lake Forest, CA 92630

**KEY STAFF**

- ☐ Sarina Sriboontue
- ☐ David Eberle
- ☐ Shivani Shrotriya

In 2015, Arcadis assisted El Toro Water District (ETWD) in preparing the Water Supply Assessment (WSA) for the Five Lagunas development project concept proposed by

Merlone Geier Partner. The Five Lagunas project proposed to develop multi-family residential units and to redevelop and expand the existing Laguna Hills Mall per the Urban Village Specific Plan to create a new mixed-use town center. The Five Lagunas concept later evolved into a project called The Village at Laguna Hills. The revised project concept proposes to develop multi-family residential units and to redevelop Laguna Hills Mall. The City of Laguna Hills determined that The Village at Laguna Hills project proposed by Merlone Geier Partners qualified as a "project" as defined by the California Water Code § 10912 and requested ETWD to prepare a WSA to satisfy the requirements of Senate Bill (SB) 610. Arcadis evaluated ETWD's projected future demands with additional water demands associated with The Village at Laguna Hills project and compared to projected supplies available to ETWD through 2040. In accordance with the foregoing and the standards set forth by Water Code § 10910, WSA addressed whether the total projected water supplies available to ETWD during average, single-dry, and multiple-dry water years over the next 20 years are sufficient to meet the projected water demands for the proposed The Village at Laguna Hills project, in addition to ETWD's existing uses.

## Suisun-Solano Water Authority UWMPs

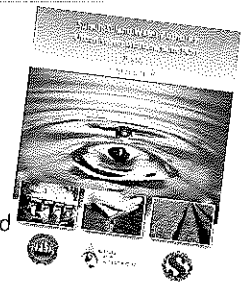
*Suisun-Solano Water Authority | California*

**REFERENCE**

Jim Daniels  
Solano Irrigation District  
☎ (707) 455-4015  
✉ JDaniels@SISDWater.org

**KEY STAFF**

- ☐ Michelle Maddaus



Michelle Maddaus prepared Suisun-Solano Water Authority's Urban Water Management Plan in 2005, 2010, and 2015. The Plan closely followed the content requirements found in the California Department of Water Resources Guidebook. She worked with District engineers to define the local water supply. Using the DSS Model she prepared a water demand forecast using data from their General Plan. She identified cost-effective conservation measures for the Suisun-Solano Water Authority to implement. All the 2005, 2010, and 2015 UWMP reports were submitted to the CA DWR for approval and adopted by the City Council after a public hearing.

## “Making Conservation a Way of Life” Water Conservation Strategic Plan, & Regional Demand & Conservation Projections Analysis

Bay Area Water Supply & Conservation Agency | California

**REFERENCE**

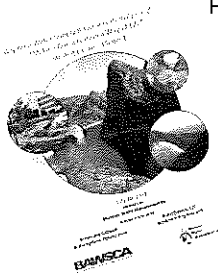
Nicole H. Sandkulla, P.E.  
CLO  
Bay Area Water Supply & Conservation Agency  
☎ (650) 743-6688  
✉ NSandkulla@BAWSCA.org

**KEY STAFF**

☐ Michelle Maddaus

MWM led the development of the Bay Area Water Supply & Conservation Agency’s (BAWSCA’s) Water Conservation Strategic Plan. MWM reviewed the State’s “Making Water Conservation a California Way of Life” regulations and BAWSCA existing conservation efforts. Partnering with industry experts, MWM assessed the CII account classification and outdoor landscape area measurements existing capabilities and best practices. The Project Team also inventoried current water auditing and water loss control of each of the 27 individual member agencies that BAWSCA represents and outlined areas for audit improvement and water loss opportunities. A roadmap was developed for the landscape, CII, and water loss project elements to scope tasks and timeline for implementation of improved data collection and management, further assessment, and intervention needs. Three memos, a final report, and multiple workshops and webinars were conducted to engage the BAWSCA member agencies in the process. The “Making California a Way of Life” Strategic Plan report can be found at the following link: <http://bawasca.org/water/reliability>.

The Regional Demand and Conservation Projections Analysis is currently in process and scheduled to be completed by June 2020. It involves efficiently updating BAWSCA’s conservation program business case analysis and water savings projections by developing uniform demand and conservation projections for the BAWSCA member agencies. The



final report and modeling tools will be designed to support BAWSCA regional planning efforts (e.g., the implementation of BAWSCA’s Long-Term Reliable Water Supply Strategy) and individual member agency work assignments (e.g., 2020 Urban Water Management Plans).

## Liberty Utilities (formerly Park Water Company) 2015 UWMP

Liberty Utilities | Downey, California

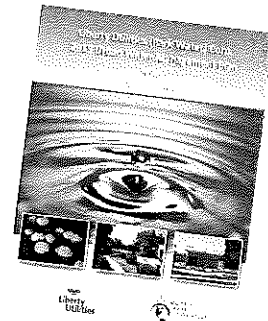
**REFERENCE**

Sarah Rae  
Liberty Utilities  
☎ (562) 805-2099  
✉ Sarah.Rae@LibertyUtilities.com

**KEY STAFF**

☐ Michelle Maddaus

In 2015-2016, MWM closely followed the content requirements found in the California Department of Water Resources 2015 Guidebook to prepare Liberty’s 2015 UWMP. Using the DSS Model, MWM prepared a water demand forecast based on data provided by Liberty, which included a conservation analysis of 20 individual water conservation measures. The conservation measures were reviewed along with per capita conservation targets to meet the SB X7-7 conservation targets of 20% reduction by the year 2020. Cost-effective conservation measures were identified for Liberty. The 2015 UWMP report was submitted to the California Department of Water Resources for approval and adopted by Liberty’s Board in June 2016.



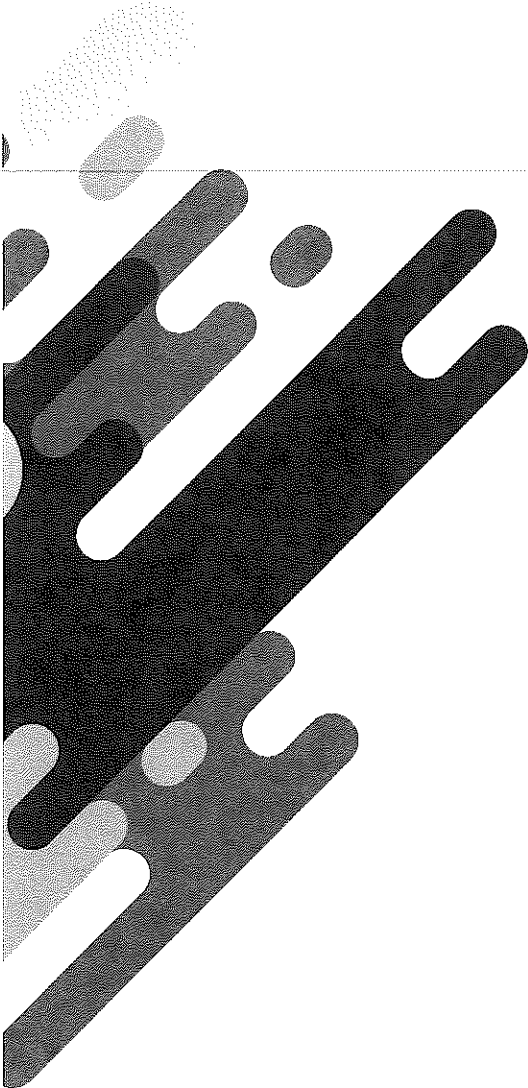
Later in 2016, the WUE Master Plan was updated to reflect Liberty’s 2015 UWMP. With the use of MWM’s DSS Model, the plan provided detailed information for 20 individual conservation measures, giving Liberty the flexibility to use this plan as a guide to implement additional measures to help increase water savings should the statewide drought worsen significantly. To determine Liberty’s target per capita water use, baseline per capita water use was refined by determining Liberty’s 2010 service area population using GIS techniques to align water service area and 2010 census block boundaries.

# Exhibit B

PROJECT	CLIENT	PROJECT TEAM	UWMP / WSA	WATER RESOURCE RELIABILITY	GROUNDWATER MANAGEMENT	DEMAND MANAGEMENT MEASURES	WATER SHORTAGE / DROUGHT PLANNING	WATER LOSS MANAGEMENT	WATER UTILITY MANAGEMENT	STAKEHOLDER COORDINATION	CLIMATE CHANGE
Innovation Program Review and Recommendation	Metropolitan Water District of Southern California	Sarina Sriboontue, Shivani Shrotriya									
Leading Water and Wastewater Utility Innovation	Water Research Foundation + 75 utilities (incl. Metropolitan)	Sarina Sriboontue, Shivani Shrotriya									
2010 and 2015 Urban Water Management Plan	MWDCC, X member agencies, Anaheim, Fullerton, Santa Ana	Sarina Sriboontue, Greg Imamura	■	■	■	■	■	■	■	■	■
Water Supply Assessment for The Village at Laguna Hills	El Toro Water District	Sarina Sriboontue, Shivani Shrotriya	■	■							
Energy Optimization Study	Mesa Water District	Greg Imamura			■				■		
Chino Basin Water Bank Development	Inland Empire Utilities Agency	Sarina Sriboontue, Carolina Villacis, Shivani Shrotriya		■	■		■				■
2015 Demand Model and Urban Water Management Plan	Inland Empire Utilities Agency	Sarina Sriboontue	■	■	■	■	■	■	■	■	■
2015 Urban Water Management Plan	West Basin Municipal Water District	Sarina Sriboontue	■	■	■	■	■	■	■	■	■
2015 Urban Water Management Plan	Central Basin Municipal Water District	Sarina Sriboontue	■	■	■	■	■	■	■	■	■
2015 Urban Water Management Plan	Liberty Utilities (Park Water Company)	Sarina Sriboontue, Michelle Maddaus	■	■	■	■	■	■	■	■	■
Water Resources Plan	Liberty Utilities (Park Water Company)	Sarina Sriboontue, Michelle Maddaus		■	■		■				
2015 Urban Water Management Plan	City of Norwalk	Sarina Sriboontue	■	■	■	■	■	■	■	■	■
Water Loss Management Assistance	Golden State Water Company	Sarina Sriboontue, Greg Imamura, Gary Tratchman						■			
Water Loss Audit Validation	San Francisco Public Utilities Commission	Greg Imamura						■			
Hazard Mitigation Plan	East Valley Water District	Carolina Villacis							■		
Use and Effectiveness of Municipal Irrigation Restrictions During Drought Research Study and Report	Alliance for Water Efficiency	Michelle Maddaus, Lisa Maddaus, Hannah Braun, Annikki Chamberlain					■				■
"Making Conservation a Way of Life" Water Conservation Strategic Plan	Bay Area Water Supply and Conservation Agency	Michelle Maddaus, Lisa Maddaus, Hannah Braun, Annikki Chamberlain				■					■
2015 Urban Water Management Plan	Cambria Community Services District	Lisa Maddaus	■	■	■	■	■	■	■	■	■
Water Supply Assessments (6 separate WSAs)	City of Foster City	Michelle Maddaus, Lisa Maddaus, Hannah Braun	■			■					
Water Conservation Master Plans	City of Oceanside	Michelle Maddaus, Lisa Maddaus				■					■
2010, 2016 and 2020 Conservation Analysis for the Long-Term Water Supply Plan and CII Program Design and Implementation	City of Santa Barbara	Michelle Maddaus, Lisa Maddaus, Hannah Braun				■	■				■
2010 and 2015 Urban Water Management Plan	City of Sonoma	Michelle Maddaus, Lisa Maddaus	■	■	■	■	■	■	■	■	■
Integrated Water Resources Plan	Jordan Valley Conservancy District (wholesaler with 19 retailers)	Michelle Maddaus, Lisa Maddaus, Hannah Braun, Annikki Chamberlain				■					■
2015 Urban Water Management plan	Liberty Utilities (formerly Park Water Company)	Michelle Maddaus	■	■	■	■	■	■	■	■	■
Water Supply and Conservation Plan and Update	Metropolitan North Georgia Water Planning District (16 counties and 93 cities)	Michelle Maddaus, Lisa Maddaus				■					■
2015 Urban Water Management Plan and Water Shortage Plan	Mid-Peninsula Water District	Michelle Maddaus, Lisa Maddaus	■	■	■	■	■	■	■	■	■
Water Shortage Contingency Plan and Water Supply Assessment Reports	Rancho Murieta Community Services District	Lisa Maddaus	■	■		■					■

# Exhibit B

## CONFLICT OF INTEREST

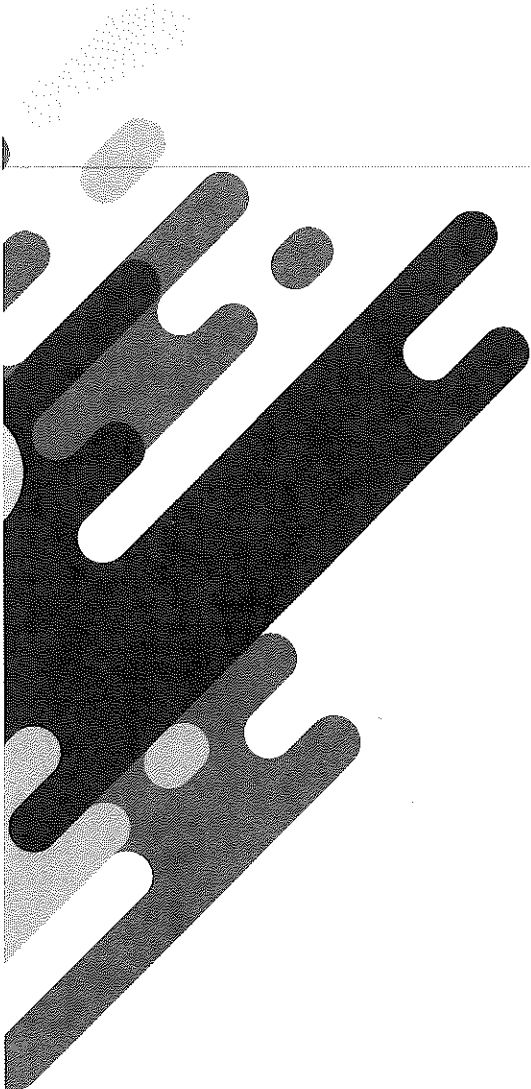


## Conflict of Interest

Arcadis U.S., Inc. does not have any personal or organizational conflicts of interest prohibited by law. Arcadis U.S., Inc. does not have any interest or ownership, and does not receive or anticipate receiving remuneration of any type from the manufacturer(s), supplier(s), or distributor(s) which may be recommended on the project. To the best of our knowledge we have no conflicts as they may relate to both MWDOC and any potentially participating Member Agencies.

# Exhibit B

## ACCEPTANCE OF AGREEMENT TERMS & CONDITIONS



## Acceptance of Agreement Terms & Conditions

We have reviewed the sample copy of MWDOC's professional services agreement (Attachment C) and are willing to accept the agreement terms and conditions without changes or modifications.

---

# Exhibit B

## DETAILED BUDGET

DETAILED BUDGET



# Exhibit B

## Detailed Budget

### Budget Summary Proposal

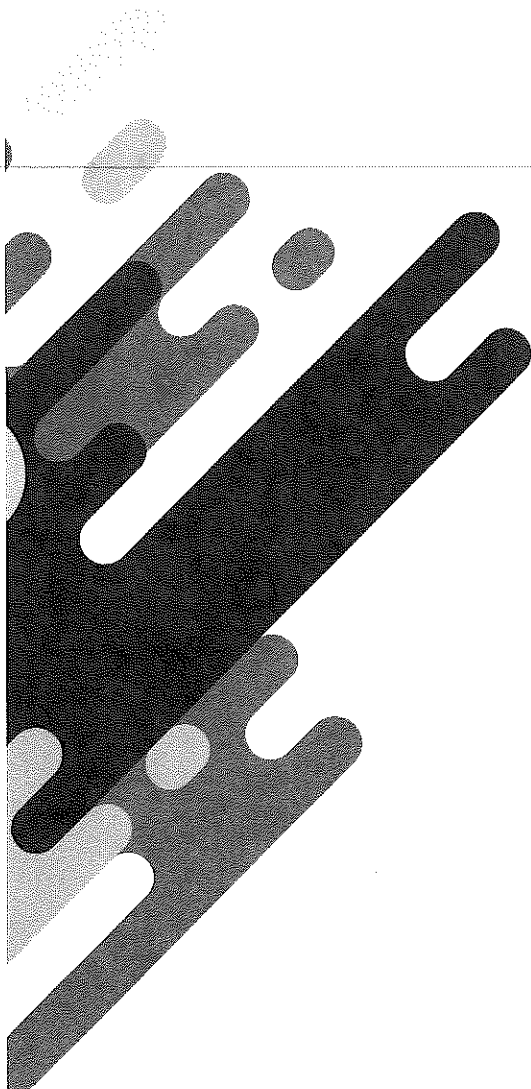
#### COST PER CATEGORY OF UWMP

UWMP CATEGORY	MINIMUM OF 15 AGENCIES	APPROXIMATELY 25 AGENCIES
MWDOC	\$32,720	\$32,720
OCWD Groundwater Agencies	\$24,650	\$24,650
OCWD Groundwater Agencies with Recycled Water	\$25,530	\$25,530
South Orange County Agencies with Recycled Water	\$24,910	\$24,910
Non-OCWD North County Groundwater Basin Agencies	\$25,790	\$25,790
South Orange County Agencies WITHOUT Recycled Water	\$24,390	\$24,390

#### Summary Table

UWMP CATEGORY	ARCADIS HOURS					ARCADIS COST				MWM COST			TOTAL LABOR	TOTAL COST
	SRIBOONLUE PM	TRACHTMAN/ EBERLE SME	IMAMURA SENIOR ENGINEER	VILLACIS STAFF ENGINEER	ADMIN	SUB TOTAL	LABOR	ODCS	SUB TOTAL	LABOR	ODCS	SUB TOTAL		
	\$200	\$220	\$180	\$130	\$110									
MWDOC	16	8	52	66	12	154	\$24,220	\$1,200	\$25,420	\$6,300	\$1,000	\$7,300	190	\$32,720
OCWD	16	8	32	48	10	114	\$18,060	\$1,000	\$19,260	\$5,590	\$0	\$5,590	146	\$24,650
OCWD W/RW	16	8	34	52	10	120	\$18,940	\$1,000	\$20,140	\$5,590	\$0	\$5,590	152	\$25,530
SOUTH COUNTY W/RW	16	8	32	50	10	116	\$18,320	\$1,000	\$19,520	\$5,590	\$0	\$5,590	148	\$24,910
NON-OCWD	16	8	34	54	10	122	\$19,200	\$1,000	\$20,400	\$5,590	\$0	\$5,590	154	\$25,790
SOUTH COUNTY	16	8	32	46	10	112	\$17,800	\$1,000	\$19,000	\$5,590	\$0	\$5,590	142	\$24,390

# Exhibit B

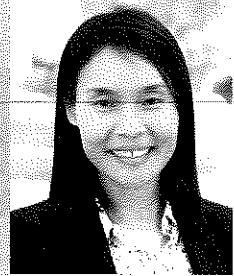


## RESUMES



# Exhibit B

## SARINA SRIBOONLUE, PE, ENV SP PROJECT MANAGER



### EDUCATION

- MS, Agricultural & Biosystems Engineering, University of Arizona, 2005
- BE, Civil Engineering, University of Canterbury Christchurch New Zealand, 2003

### YEARS OF EXPERIENCE

- Total – 14

### PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS

- Professional Engineer – CA
- ENVISION Sustainability Professional

Ms. Sriboonlue is a Senior Water Engineer and Certified Project Manager at Arcadis with dedication to delivering quality work, attention to details, and adept organizational skills. Her 14 years of consulting experience spans a wide range of water and wastewater planning projects for municipal and industrial clients in southern California. Water resources planning is one of her specialty. She assisted numerous wholesale and retail water agencies to develop their 2010 and 2015 Urban Water Management Plans, including MWDOC and retail water agencies in Orange County, Inland Empire Utilities Agency and Water Facilities Authority, Central Basin Municipal Water District, West Basin Municipal Water District, and various other agencies. She has prepared many Water Supply Assessments (WSA) (SB610) for MWDOC member agencies. The most recent was the WSA for The Village at Laguna Hills Project completed in May 2020 for the El Toro Water District. She is also familiar with water loss audits (SB555) and has assisted the City of Norwalk in the preparation of its annual water loss audit and validation for CY 2016, 2017, and 2018. She has worked with many MWDOC agencies on other planning projects, including City of Newport Beach and Laguna Beach County Water District Water Master Plans, City of Buena Park's Sewer Master Plan, City of Huntington Beach Water Use Efficiency Plan. She is a member of the Arcadis Strategy and Innovation team that worked with Metropolitan Water District in 2019 to assess its organization's innovation program and organizational culture with the objectives to define Metropolitan's Innovation Program expectations and future aspirations. She was the Location Leader of the Arcadis Irvine office whose goal was to promote collaboration and a sense of community for the 100-person office. She is a certified ENVISION® Sustainability Professional who integrates sustainability values at work and at home.

## Project Experience

### 2015 and 2010 Urban Water Management Plans Municipal Water District of Orange County and Member Agencies, Fountain Valley, California

As Task Leader, Ms. Sriboonlue assisted in the preparation the 2015 and 2010 UWMP for Municipal Water District of Orange County (MWDOC) and its 21 retail agencies. She took over as Project Manager and through close communication with the Department of Water Resources ensured that all UWMPs were completed and in compliance with the California Water Code.

# Exhibit B

## **2015 Urban Water Management Plan and Land Use-Based Demand Modelling Inland Empire Utilities Agency, Chino Hills, California**

Oversaw two technical teams working in parallel to develop a land use-based water demand model and to develop IEUA's 2015 UWMP. IEUA's 2015 UWMP included the determination of the water energy intensity of IEUA's operations as well as the evaluation of climate change vulnerability impacts of IEUA's supply portfolio.

## **2015 Urban Water Management Plan Central Basin Municipal Water District, Commerce, California**

Assisted in the preparation the 2015 UWMP for Central Basin Municipal Water District. She was Task Leader for the analysis of demand management measures and for the assessment of the 20x2020 water use reduction goal compliance.

## **2015 Urban Water Management Plan West Basin Municipal Water District, Carson, California**

West Basin Municipal Water District prepared the majority of its 2015 UWMP in house and hired Arcadis to provide technical review and QA/QC. Was Task Leader for the review of demand management measures and the 20x2020 water use reduction goal compliance.

## **2015 Urban Water Management Plan and 2016 Water Resources Plan Liberty Utilities (previously Park Water Company), Downey, California**

Arcadis in collaboration with Maddaus Water Management assisted Liberty Utilities in the development of its 2015 UWMP and 2016 Water Resources Plan. Was the lead engineer for the Water Resources Plan development that involved conceptual evaluation of long-term water supply sources, such as direct and indirect potable reuse, desalination, groundwater storage and treatment alternatives. The project involved the evaluation of each potential source of supply in the context of reliability and financial stability. Findings were presented in a 10-year action plan.

## **Water Supply Assessments for The Village at Laguna Hills Project El Toro Water District, Lake Forest, California**

Project manager for the development of the WSA for the Village at Laguna Hills Project which proposed to modernize the existing Laguna Hills Mall property. The assessment addressed whether the projected supply for the next 20 years, based on normal, single dry, and multiple dry years would meet the demand projected for the project plus existing and planned future use within the El Toro Water District's service area per requirements of Senate Bill 610.

## **Water Supply Assessments for Village Activities Center Specific Plan and Five Lagunas Project El Toro Water District, Lake Forest, California**

Lead engineer for the assessment of water supply and demand projections to meet the needs of two new proposed developments within the El Toro Water District's service area per requirements of Senate Bill 610. The assessment addressed whether the projected supply for the next 20 years, based on normal, single dry, and multiple dry years would meet the demand projected for the project plus existing and planned future use.

# Exhibit B

## **Water Supply Assessment for Town and Country Project City of Orange, Orange, California**

Project manager for the assessment of water supply and demand projections to meet the needs of a new proposed development within the City of Orange's service area per requirements of Senate Bill 610.

## **Water Supply Assessment for Vantis Specific Plan Project Moulton Niguel Water District, Laguna Niguel, California**

Lead engineer in the preparation of a Water Supply Assessment for the Vantis Specific Plan development in the City of Aliso Viejo. The project assessed the ability of the water district's existing and planned water supplies to meet the projected water demands associated with existing demands and additional demand from the proposed development.

## **CY 2016, 2017 and 2018 Water Loss Audit and Validation City of Norwalk, Norwalk, California**

Project Manager for the Arcadis team that assisted the City of Norwalk in the preparation of its annual water loss audit and validation for CY 2016, 2017, and 2018 to satisfy SB 555.

## **Utility Innovation Program Review Metropolitan Water District of Southern California, Los Angeles, California**

Project manager for the Arcadis team that assisted Metropolitan in the assessment of its organization's innovation program and organizational culture through a series of surveys, individual and focus group interviews, and facilitated workshops. The objectives were to define Metropolitan's Innovation Program expectations and future aspirations and to develop recommendations for enhancing Metropolitan's Innovation Program.

## **Leading Water and Wastewater Utility Innovation Water Research Foundation, Denver, Colorado**

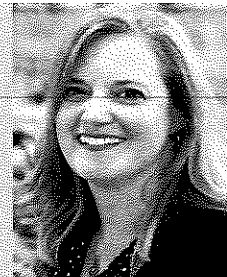
Ms. Sriboonlue is team member that is working with the Water Research Foundation and 70 water/wastewater utilities from the US, Australia, Canada, and the UK to achieve three main goals: 1) equip utilities with knowledge/network/tools to assess and encourage broad engagement in innovation; 2) provide guidance for building powerful innovation partnerships for early wins; and 3) develop a user-friendly tool for building an innovation strategy for utilities.

## **2018 Sewer Master Plan City of Buena Park, Orange County, California**

Ms. Sriboonlue was Project Manager for the development of the 2018 Sewer Master Plan for the City of Buena Park to update flow projections to reflect current conditions, procure a new hydraulic model, and evaluate impacts of future redevelopment and decreased wastewater flow trend due to reduced potable water demand stemming from the prolonged California drought.

# Exhibit B

## CHRISTINE COTTON, PE PRINCIPAL IN CHARGE



### EDUCATION

- BS, Civil and Environmental Engineering, University of Texas, Austin, 1994
- MS, Civil and Environmental Engineering, University of Texas, Austin, 1996

### YEARS OF EXPERIENCE

- Total – 24

### PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS

- Professional Engineer – AZ

### PROFESSIONAL ASSOCIATIONS

- American Water Works Association
- International UV Association
- Society of Women Engineers

Ms. Cotton has managed complex programs over her career, including program master plans, stakeholder development, large capital improvements designs, and facilities start-up. She has worked with LADWP over the last 9 years, assisting LADWP with multiple treatment projects (LAAFP UV, LAR UV, NHW UV AOP, Fairmont Sedimentation Plant), chloramine conversion and nitrification prevention, asset management, and LIMS assessment to highlight a few.

### Project Experience

#### Los Angeles Source Water Treatment Master Plan and Fairmont Treatment Plant Design and Owner's Agent Services

##### Los Angeles Department of Water and Power, California

Project Manager and Technical Lead for the evaluation of the current treatment strategies and operational practices for source waters conveyed through the Los Angeles Aqueduct (LAA), and source waters from the State Water Project East Branch (SWP-E) and State Water Project West Branch (SWP-W).

The project was planned and a roadmap was developed through a series of workshops that included individual workshops with Water Engineering, WQ, Water Operations, and Water Resources to review and screen alternatives and develop a roadmap for construction of the Fairmont Sedimentation Plant.

1. Preliminary Screening Evaluation Workshops – In this phase, a list of all treatment alternatives was developed, including a no-action alternative, which could potentially address the objectives. Alternatives were ranked in a workshop format against an established criteria list for water quality, operations, cost, and implementability.
2. Detailed Alternatives Evaluation Workshops – In this phase, the top three alternatives identified in phase 1 were further evaluated and compared against each other in workshops with LADWP stakeholders in different Divisions.

After the source water treatment and location was selected, She led the team to complete the 30% design and serve as the owner's agent for a progressive design build team (to be selected). The 30% design and the Preliminary Design Report are complete, and our team is assisting LADWP as-needed to procure the Progressive Design Builder.

# Exhibit B

## **Asset Management Program**

**Los Angeles Department of Water and Power, Los Angeles, California**

Project Manager assisting LADWP to increase awareness of the benefits of Asset Management through workshops. Presented functionalities of Maximo and the process to develop a business case and prioritize projects prior to inclusion in CIP list. Develop and led brainstorming sessions, exercises and training materials for engaging Asset Management training for LADWP staff. Evaluating and updating current LADWP asset management reports for main lines, pump stations and regulatory stations. Analysis of existing data for each asset classes and conducted a respective gap analysis in order to identify missing data and coordinate with LADWP in order to collect necessary missing information.

## **Owner's Agent - San Fernando Basin Groundwater Remediation**

**Los Angeles Department of Water and Power, Los Angeles, California**

Principal-in-Charge for Owner's Agent team providing full range of expert professional engineering and consulting services in order to assist in the initiation, planning, design, permitting, procurement, alternate delivery construction, commissioning, close out and operations of the SFB remediation and drinking water treatment facilities program. The SFB program will include several new treatment facilities to be constructed on an aggressive schedule between 2017 and 2022, comprising one the largest drinking water groundwater remediation programs in the world with total construction costs estimated from \$600 million to \$800 million. These facilities will restore pumping of groundwater from contaminated SFB wells, lessening LADWP's reliance on imported water that will also provide increased resiliency and sustainability in conjunction with increased stormwater capture.

## **Professional and Technical Services for Ultraviolet and Chloramine Facilities and Disinfection Integration**

**Los Angeles Department of Water and Power, California**

Program Manager for the Los Angeles Reservoir Ultraviolet Facility. The projected added ultraviolet disinfection facilities and converted from chlorine to chloramine residual disinfectant to comply with the Stage 2 Disinfectants and Disinfection By-Products Rule (D-DBPR) and the Long Term2 Enhanced Surface Water Treatment Rule (LT2ESWTR).

## **Griffith Park Hydraulic Computer Model and Distribution Improvements**

**Los Angeles Department of Water and Power, Los Angeles, California**

Contract Manager for the water distribution system around the iconic Griffith Park in LA. The project includes development of the hydraulic model for the system and identifying system alternatives for master planning and water quality.

## **Assistance with LAR Ultraviolet Treatment Project**

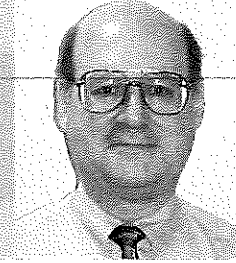
**Los Angeles Department of Water and Power, Los Angeles, California**

Program Manager for the Los Angeles Reservoir Ultraviolet Facility. The projected added ultraviolet disinfection facilities and converted from chlorine to chloramine residual disinfectant to comply with the Stage 2 Disinfectants and Disinfection By-Products Rule (D-DBPR) and the Long Term2 Enhanced Surface Water Treatment Rule (LT2ESWTR).

# Exhibit B

## GARY TRACHTMAN, PE, CDT

### WATER RESOURCE RELIABILITY



#### EDUCATION

- MSCE, Sanitary Engineer, New York University, 1972
- BSCE, Sanitary Engineering, Northeastern University, 1969

#### YEARS OF EXPERIENCE

- Total – 48
- With Arcadis – 9

#### PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS

- Professional Engineer
- Certified Construction Documents Technologist (CDT)

#### PROFESSIONAL ASSOCIATIONS

- American Society of Civil Engineers, Life Member
- American Water Works Association, Water Loss Control Committee, Customer Metering Practices Committee, Life Member

Mr. Trachtman has performed water loss audits for water systems ranging from 30,000 to 400,000 accounts and has recommended and assisted with implementation of programs for reducing and managing Non-Revenue Water. He has been a member of the AWWA Water Loss Control Committee (WLCC) for over 10 years, contributed to the 3rd and 4th editions of Manual M36 Water Audits and Loss Control Programs and peer-reviewed USEPA's guidance document on Best Practices to Consider When Evaluating Water Conservation and Efficiency as an Alternative for Water Supply Expansion (2016). He serves as Chair of the WLCC's Water Audit Regulatory Practices Subcommittee, and member of the WLCC's Subcommittees on Outreach and Strategic Business Planning for Non-Revenue Water Management. He is also Secretary of the AWWA Customer Metering Practices Committee and contributed to the 3rd edition of AWWA Manual M22 Sizing Water Service Lines and Meters.

#### Project Experience

##### Water Audit Review City of Newport Beach, California

Advisor to City Water Department for completion of Water Audits required for compliance with CUWCC MOU BMP 1.2 Water Loss Control. Assistance included review and interpretation of Reporting Worksheet entries and Data Validity Scores with City staff for each component of the AWWA M36 Water Audit Methodology using the Free Water Audit Software v5.0.

##### Central Basin MWD, Inland Empire UA Water Systems Water Audit Review Municipal Water District of Orange County (MWDOC), Multiple Cities Southern California

Advisor to Water Systems for completion of Water Audits required for completion of their 2015 UWMP. Also, for Mesa WD and the City of Norwalk, assistance with preparation of annual water audits to the CADWR Technical Assistance Program's Level 1 Validation Protocol using the AWWA M36 Water Audit Methodology and Free Water Audit Software v5.0.

##### Company-wide Water Loss Control Program Golden State Water Company, Anaheim, California

Subconsultant to M.E. Simpson Company for preparation of Water Loss Control Program for 38 water systems, of which 17 are required to submit annual water

# Exhibit B

loss audits under SB555. Included preparation of Technical Memoranda assessing water loss performance of individual water systems, recommendations for improved performance and revised Company-wide Policies and Procedures Manual for Water Loss Control.

---

## Water Supply Studies

### **Birmingham Water Works Board, Alabama**

Project manager conducted engineering investigation, cost estimates, and prepared report on future water requirements and alternative future water supply for system serving population of 650,000. Engineering analysis and preparation of reports on supply, transmission, and distribution systems of 15 service areas. Analysis of raw water system alternatives for interconnection with an existing filter plant and tie-in of proposed additional intake and transmission system. Co-facilitator of strategic planning workshops, assisted with preparation of draft Consolidated Strategic Plan, participant in competitive baseline assessment for senior and middle-management staff, and preparation of Effectiveness and Efficiency Master Plan. Assisted BWWB with development of its Drought Management Plan and performed an assessment of BWWB's Long Term Water Resources Needs. Identified three elements of water use efficiency that may have already affected existing demands for water and/or could reduce future water demand – progress made by the Board's Water Loss Reduction Initiative, implementation of conservation programs (including conservation-oriented rate structures) and increasing use of water-efficient fixtures in existing and new construction. Prepared a high-level review of other potential elements of an overarching water use efficiency program that would include potential conservation and water rate-based initiatives. Led workshops with BWWB staff to develop an appropriate mix of program elements to achieve the desired objective of reducing future water demand of raw water and potable water customers, based on assumptions of market penetration of individual potentially implementable elements. Background information examined included programs developed and implemented by State and regional agencies and/or by other water systems in the United States similar in size to BWWB's system, and the results of research conducted by regulatory agencies and other water industry organizations such as the United States Environmental Protection Agency (USEPA) WaterSense Program, American Water Works Association Research Foundation (AwwaRF), and the Alliance for Water Efficiency.

## Water and Wastewater Master Plan

### **Beaufort-Jasper Water and Sewer Authority, Beaufort South Carolina**

Project manager managed analysis of future demands and loads using GIS-based tool to facilitate investigation of improvement alternatives, develop and present CIP implementation plan and financial analysis for 20-year planning period, and for use in computer-based distribution and collection system models. Also, task leader for Integrated Water Resource Management Plan, evaluated a range of water supply options and demand management options for meeting water demands through 2060, using a rating system for technical, environmental, economic and social issues to assemble a portfolio of viable options for different future scenarios.

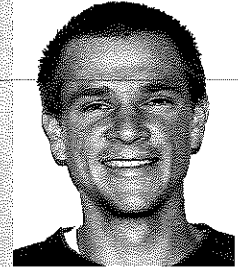
## Water Master Plan

### **City of Phoenix Water Services Department, Arizona**

Project advisor to team updating the near-term (5-10 years) and long-term (50 years) master plan for water system, including coordination of future scenarios with Maricopa Association of Governments growth projections and City Plan, procurement of hardware and software, training of Department staff, and preparation of staged Capital Improvement Program.

# Exhibit B

## DAVID EBERLE, PE, LEED AP, ENV SP ENERGY INTENSITY/SEISMIC RISK/WATER QUALITY



### EDUCATION

- BS, Chemical/Environmental Engineering, University of Arizona, 2001

### YEARS OF EXPERIENCE

- Total – 18

### PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS

- Professional Engineer – AZ
- LEED Accredited Professional GHG Emissions Verifier Training Course, CA Climate Action Registry (2007)
- Verification Advisory Committee, The Climate Registry (2009 – Present)
- American Water Works Association
- Engineers without Borders
- United States Green Building Council
- Water for People

Mr. Eberle has 18 years of experience as one of Arcadis's sustainability experts. He completed LEED certification, ENVISION certification, and an extensive GHG Emissions Verifier Training Course and has been integral to the development and execution of Arcadis's internal sustainability program over the past eight years. He led the Climate Change Vulnerability Assessment and Energy Intensity Assessment for IEUA's 2015 UWMP and has extensive experience working with clients to develop certifiable greenhouse gas inventories and has recently been working with clients to broaden their understanding of sustainability to include natural and social goals and metrics. His experience is deeply rooted in his industrial and municipal water work focused on feasibility studies, alternative assessments, triple bottom line analyses, treatment process layout/selection/costing, and conceptual level design. His goal is to incorporate elements of sustainability into every Arcadis project. Currently, he is also a core member of Arcadis' national and global sustainability teams responsible for developing, tracking, and monitoring the organizations' sustainability goals.

### Project Experience

#### 2015 Urban Water Management Plan and Climate Vulnerability Assessment Inland Empire Utilities Agency, Chino, California

Calculated energy intensities of IEUA's water supplies and wastewater flows following a standardized methodology; summarized results and identified key areas of focus to improve water and energy efficiency. Facilitated a climate vulnerability assessment for the region based on EPA's Climate Vulnerability Handbook focusing primarily on water supplies and energy security.

#### Hillview Drinking Water Life Cycle Assessment New York City DEP, New York, New York

Performed an LCA for six alternative disinfection strategies. The cradle to grave assessment included chemical manufacture, transport, and addition. Eco-indicators evaluated included global warming potential, acidification potential, eutrophication potential, ozone depletion potential, and human toxicity potential. A second analysis was performed in order to gage the relative impacts of an alternative disinfection strategy on the overall water treatment process. In general, the City's impacts were found to be minimal when compared to other typical water treatment plant processes across the United States.

# Exhibit B

## **Decision Support System for Selection of Satellite vs. Regional Treatment for Water Reuse**

### **Water reuse Foundation**

Developed a tool to evaluate the feasibility of different water reuse alternatives. Considerations included capital, O&M, and lifecycle costs, environmental impacts, and social impacts for various wastewater treatment trains required to produce varying effluent qualities based on AZ and CA reuse requirements.

### **CSX Transportation Sustainability Technical Guidance**

Provided as needed technical guidance for the CSX sustainability program. Technical guidance included methodology and boundary selection, discussion of Scope 3 emissions, and supplier engagement strategies. Other work performed for CSX included emission calculations and inventories, carbon tool development, carbon program submittals, and avoided emission calculations.

### **Water Sustainability Tool**

#### **University of Arizona, Tucson, Arizona**

Provided as needed assistance in the development of a water sustainability tool geared to evaluate water reuse options, considering drinking and wastewater implications (i.e. pumping, recharge, treatment, infrastructure). Duties included assistance with greenhouse gas and pumping calculations, cost development, system sizing, and life cycle assessment guidance.

### **Water Resource and Recharge Integrated Master Plan**

#### **City of Surprise, Surprise, Arizona**

Assisted in the development of an all-encompassing Integrated Water Master Plan for the City of Surprise. Developed a tool that would dynamically simulate "what-if" scenarios to help the City select a suitable water resources strategy for a sustainable future. The tool considered and accounted for the intimate relationships between potable water, wastewater, and reclaimed water. The project also included reviewing regulatory requirements, inventorying existing and potential future supplies, developing demand projections, preparing hydraulic models drinking water, wastewater, and reclaimed water systems, evaluating water system alternatives, and preparing a phased capital improvements program for the City.

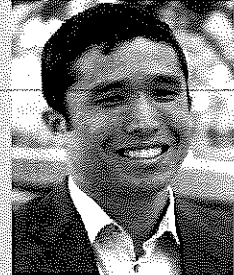
### **Water Resource Master Plan**

#### **City of Avondale, Avondale, Arizona**

Developed Water Resources Master Plan and Water Infrastructure Master Plan for the City of Avondale. Developed a tool that would dynamically simulate "what-if" scenarios to help the City select a suitable water resources strategy for a sustainable future. Using results from the tool, an alternatives evaluation was performed for future water supply strategies, considering economic, environmental, and social impacts. The project also included reviewing regulatory requirements, performing an inventory of existing and potential future supplies, developing demand projections, and updating the drinking water hydraulic model.

# Exhibit B

## GREG IMAMURA, PE, ENV SP ENERGY INTENSITY/SEISMIC RISK/WATER QUALITY



### EDUCATION

- MS, Civil Engineering, University of California, Los Angeles, 2010
- BS, Civil Engineering, University of California, Los Angeles, 2009

### YEARS OF EXPERIENCE

- Total – 9

### PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS

- Professional Engineer – CA
- Envision Sustainability Professional
- D2 Certified Operator – CA
- WAV Level 1

Mr. Imamura is a civil engineer specializing in drinking water treatment, quality, and planning. He has experience with a variety of water issues, ranging from nitrification planning and corrosion analyses to extensive work developing viable hexavalent chromium treatment for drinking water and performing water audit validations. He also has a strong background in optimizing work processes and fully utilizing large datasets to provide added value and cost savings.

### Project Experience

#### Water Audit Validations Various Clients

Developed Level 1 validations for utilities in satisfaction of California SB 555, which included analysis of audit supporting information, interviews with utility staff, and developing reports for submission to the Department of Water Resources.

#### Water Supply Assessment Moulton Niguel Water District, Laguna Niguel, California

Developed water supply assessment for a mixed use proposed facility in the City of Laguna Niguel in accordance with California SB 6610. Analyzed projections of the District's water supplies and the project's water use during various normal and dry scenarios to ensure the project would have sufficient water available.

#### 2015 Urban Water Management Plans MWDOC Member Utilities, Orange County, California

Assisted with report template development, data collection, and calculation review for the 2015 UWMPs. He also helped with editorial review of the individual plans.

#### Integrating Desalinated Seawater into Municipal Distribution Systems

##### Water Environment Research Foundation, Carlsbad, California

Developed a user-friendly system to input, store, and analyze project data. The study examined the effects of integrating RO-treated water into existing supplies in San Diego county, with specific emphasis on corrosion indicators,

# Exhibit B

residual stability, and DBP formation. His system allowed for his ensuing analysis to encompass a large scope under the same budget constraints to ensure many factors were considered.

---

## **Distribution System DBP Mitigation**

### **Confidential Water District, California**

Led the team that worked closely with the District to develop cost-effective solutions in the distribution system for their rising TTHM levels. As part of developing and evaluating alternatives, the project team refined the District's hydraulic model and added a water quality modelling component (chlorine and TTHM formation modelling) to assist in visualization and decision making. The team continues to develop more advanced water quality models for the District to aid in future planning.

## **Sustainable Water Infrastructure Project**

### **City of Santa Monica, Santa Monica, California**

Supporting this design/build by ensuring the project meets regulatory, Envision, and City requirements and goals. The project treats stormwater/urban runoff, municipal wastewater, and brackish groundwater to both maximize the use of local resources and protect the watershed. Among other responsibilities, he specifically helped analyze existing practices and future strategies to develop post-treatment strategies that would meet City objectives.

## **Orthophosphate Study**

### **City of La Puente, La Puente, California**

Evaluated the ramifications of stopping orthophosphate injection after a changed ion exchange process through water quality modeling. Developed a function that automatically generates corrosion indices from a database of input parameters, allowing for novel and robust and scenario planning.

## **Groundwater System Improvement Study**

### **Los Angeles Department of Water and Power, Los Angeles, California**

Heavily involved with this study of groundwater sources affected by multiple contaminants, including hexavalent chromium. Conducted a thorough literature review for treatment options (including GAC) for perchlorate and 1,4-dioxane and was responsible for data management and analysis for the water quality, during which he guided practices for dealing with non-detect results that skewed averages. Involved with assessing the feasibility of Packed Tower Aeration for VOC removal at the sites and comparing treatment costs over the long term between alternative methods.

## **Development of a Uniform Approach to Prepare Drinking Water Hexavalent Chromium Compliance Plans**

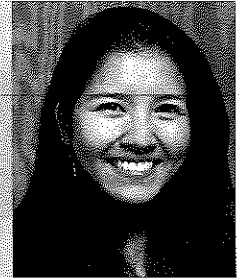
### **Water Research Foundation and Coachella Valley Water District, Coachella, California**

Led the field work and report for Tailored Collaboration projects 4445 and 4516, which tested three different WBA resins, an SBA resin, and modified RCF using chlorine and MF to remove Cr(VI) from two different wells at CVWD, as well as removal of Cr(VI) in the full-scale SBA arsenic treatment systems currently being operated by CVWD. Developed and evaluated brine disposal alternatives for CVWD's current and planned full-scale SBA treatment systems. He designed, procured equipment, oversaw construction and operation of the pilot units, and estimated scaled-up costs based on performance.

# Exhibit B

## CAROLINA VILLACIS, EIT

### DATA COLLECTION & AGENCY COORDINATION



#### EDUCATION

- BS, Environmental Science, Specialization in Environmental Engineering University of California-Los Angeles, 2017

#### YEARS OF EXPERIENCE

- Total – 4
- With Arcadis – 3

#### PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS

- Engineer in Training
- 40-Hour HAZWOPER

Ms. Villacis has experience in a wide range of water resources planning projects for municipal and industrial clients. She has drinking water, stormwater, and wastewater consulting experience; government experience from working at the Long Beach Water Department; and technical experience in areas including database management and analysis, geographic information systems (GIS), pilot-scale testing, cost estimating, and life cycle analysis.

#### Project Experience

##### **CY 2018 Water Loss Audit City of Norwalk, Norwalk, California**

As project engineer, prepared the City of Norwalk's American Water Works Association (AWWA) Water Loss Audit in compliance with California Senate Bill 555. She was responsible for analyzing, calculating, and inputting water supply, authorized consumption, apparent loss, system, and cost data to compile the audit. After completion and Level 1 Validation of the audit, all necessary documents were uploaded to the California Department of Water Resources WUE Data Portal.

##### **2018 Updated Sewer Master Plan Buena Park Public Works Department, Buena Park, California**

As lead engineer, was responsible for collecting historical and current wastewater, asset, census, and cost data; managing sub-consultants; using GIS to perform analysis on various inputs including pipe parameters, land use zones, capacity, velocity, and freeboard; assisting in the development of the InfoSWMM hydraulic model; analyzing model results; and developing the Client's 20-year capital improvement program (CIP) for sewer projects.

##### **Phase 1 - Achieving Consensus on Groundwater Banking Concept Inland Empire Utilities Agency, San Bernardino, California**

As technical support was responsible for supporting the planning of operational, managerial, and financial requirements needed to develop a groundwater bank in the Chino Basin. She aided in obtaining consensus from regional stakeholders, such as neighbouring water agencies and water rights holders. She also contributed in writing the final report, to effectively communicate the benefits of a groundwater bank through principles including promoting drought

# Exhibit B

resilience, improving basin yield, addressing subsidence and earth fissuring, and addressing water quality concerns.

---

## **Sustainable Water Infrastructure Project**

**City of Santa Monica, Santa Monica, California**

As project engineer, coordinated the condition assessment of a pump station and 0.5 MGD urban water runoff treatment and recycling facility. The condition assessment was completed using Fulcrum, a field data collection application installed on portable tablets. She was responsible for collaborating with the programmer to prepare the digital field form, deciding the data parameters to be collected, managing the database, and preparing analyses based on the collected field data. prepared a final report to communicate the condition of existing facilities, recommend a prioritized list of assets to repair or replace, and recommend any changes that may be necessary to support the addition of brackish influent water.

## **United States Environmental Protection Agency (USEPA) Lead and Copper Rule Implementation**

**Long Beach Water Department, Long Beach, California**

As project manager, led USEPA-mandated monitoring of lead and copper levels at the consumer's taps, to test that concentrations of lead did not exceed its action level of 0.015 mg/L and the concentration of copper did not exceed its action level of 1.3 mg/L. She managed a team of samplers, chemists, and microbiologists to obtain and test the water samples; served as direct liaison to customers in both English and Spanish; and wrote and distributed final reports to customers.

## **COVID-19 Emergency Response Implementation**

**East Valley Water District, Highland, California**

As the Documentation Unit Lead, developed Incident Action Plans and Situation Reports to plan and document a locally and nationally compliant response to the COVID-19 (coronavirus) pandemic. She coordinated regularly with East Valley Water District's General Manager and Operations, Planning, Logistics, IT, and Finance managers to obtain information and support the response and recovery of operations. She is currently assisting in the development of the Business Continuity Plan, to document safe return to work procedures, in response to COVID-19 and future incidents.

## **Emergency Response Communications Network Design**

**Los Angeles Regional Interoperable Communications System, Los Angeles County, California**

As permitting manager, coordinated with engineers, scientists, CAD drafters, and permitting agencies to obtain the Civil, Structural, Mechanical, Electrical, Geotechnical, Fire, Air Quality, Storm Water and Demolition permits necessary to construct a land mobile radio network, exclusive to emergency responders, to improve the resiliency and public safety of Los Angeles County. During the design phase, was also responsible for initial field investigations, designing site layouts, and designing stormwater construction Best Management Practices.

# Exhibit B

## MELISSA DARR, PE, LEED AP SUPPORT STAFF



### EDUCATION

- BS, Environmental Science, Specialization in Environmental Engineering  
University of California-Los Angeles, 2017

### YEARS OF EXPERIENCE

- Total – 6
- With Arcadis – 6

### PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS

- Professional Engineer – AZ 64908
- Leadership in Energy & Environmental Design 10958917

Ms. Darr is a Management Consultant in the Business Advisory group, out of the Phoenix, Arizona office. She has worked with utilities on a wide range of projects focused on improving efficiencies within the organization. These include energy management, master planning, data collection and processing, and facility design.

### Project Experience

#### AMI Program Management City of Mesa, Arizona

Business analyst responsible for various aspects of work related to a need's assessment, RFP development, and program management. Worked collaboratively with the City to collect information about Mesa's unique needs across three different utility functions (water, gas, and electric) and to educate the City on AMI best practices. In progress – RFP expected to be issued in summer 2020.

#### 91st Avenue Wastewater Treatment Plant Facility Assessment Study Services City of Phoenix, Arizona

Visual condition assessment for thousands of assets at the 91st Avenue Wastewater Treatment Plant Facility. Developed a prioritized list of projects to restore the facility to good working condition. Estimated the cost of in-kind replacements and asset upgrades. Created a ten-year Capital Improvements Project (CIP) schedule to complete necessary upgrades.

#### Spa 2 Reclaimed Water Master Plan Update City of Surprise, Arizona

Hydraulic modeler responsible for modeling water availability and demand over a 30-year time horizon. Recommended system upgrades to meet future water demand and estimated the cost of phased system upgrades to meet this demand.

#### Fostering Research and Innovation within Water Utilities Water Research Foundation, Alabama

Field data collection responsible for interviewing operators and managers from dozens of water and wastewater utilities across North America and Australia to

# Exhibit B

understand the circumstances under which innovation can be successful in a water utility. Compiled information from these interviews and industry research into a Water Research Foundation (WRF) report.

## **SCADA Master Plan and Implementation - Water Tank Sites at Belle Hayden and Papago Buttes**

### **City of Tempe, Arizona**

Designer responsible for designing and building new HMI control screens for well sites and booster sites across the City as well as a dam using Citect SCADA Software and configured servers and PCs to work with the new SCADA system. Assisted with the reprogramming of certain tags, using RSLogix 5000.

## **America's Water Infrastructure Act Risk and Resilience Report**

### **Various clients, California, Arizona, Texas and Puerto Rico**

Assessment lead responsible for assessing utility-owned water assets for their vulnerability to a variety of natural and malevolent threats and estimating the monetary impact these threats would pose to the utility. Hosted workshops to collect information from utilities, conducted site visits, and evaluated regional threats. Compiled all information necessary for AWIA compliance for each client.

## **Primavera and Maximo Program Support**

### **Salt River Project, Tempe, Arizona**

Planner scheduler for the Generation Engineering group. Led the group through an upgrade to the newest version of Maximo. Planned and Scheduled over 100 projects and tasks within Maximo and taught project engineers how to schedule their own small projects in the future. Led the development of Tableau dashboards to gain better insight on data stored within Maximo. Developed SOP's for work planning.

## **SAP Phase 2.0**

### **Birmingham Water Works Board, Alabama**

Project engineer responsible for creating visual dashboards using SAP Business Objects to better understand issues related to non-revenue water. Assisted with data cleansing and migration for all Birmingham Water Works Board customer records from OTIS to SAP using Microsoft SQL. Responsible for building a new database structure to track customer identification and payment records in a more intuitive way and wrote stored procedures to populate new database tables in the correct format with information from old databases.

## **Technology Master Plan**

### **City of Scottsdale, Arizona**

Project engineer responsible for assessing the current state of the Work Order, Asset Management, Smart Meter, Enterprise Architecture, and Non-Revenue Water programs for inefficiencies and recommended upgrades to address gaps in current technology offerings and presented to the City's Board of Directors.

# Exhibit B

## SHIVANI SHROTRIYA SUPPORT STAFF



### EDUCATION

- MS, Civil Engineering, University of California, Los Angeles, 2018
- B.tech, Civil Engineering, Aligarh Muslim University, 2017

### YEARS OF EXPERIENCE

- Total – 2
- With Arcadis – 2

Ms. Shrotriya has a master's degree in civil engineering from University of California, Los Angeles (UCLA). With her water resources planning experience, she has been a part of multiple condition assessment plans, water master plans, sewer master plans, water bank development, green infrastructure conceptual designs and stormwater management, and water treatment at Arcadis. In her graduate and undergraduate programs, she has participated in multiple team projects involving, wastewater treatment plant design, green infrastructure, advanced oxidation processes, and geographic information systems (GIS).

### Project Experience

#### **Laguna Hills Water Supply Assessment El Toro Water District, Lake Forest, California**

Arcadis assisted in preparing the water supply assessment (WSA) for the client's service area, associated with a proposed development project, 'The Village at Laguna Hills'. Reviewed the water supply planning and other documents applicable to estimating demand for the proposed project and assessing demand and supply conditions; documented the findings in a WSA report.

#### **91st Avenue Wastewater Treatment Plant (WWTP) Facility Assessment City of Phoenix, Phoenix, Arizona**

The purpose of this project is to provide the client with information to determine the existing condition of the liquid and solid stream facilities within the treatment process and buildings on-site. This involves an assessment including a physical and performance investigation of the assets within the 91st Avenue WWTP. This assessment study will also determine the remaining life of plant assets, whether assets should be repaired, rehabilitated, or abandoned, as well as identify recommendations to improve operational efficiencies. Summarized the findings of the physical condition assessment of the facility in a report; developed a GIS model to summarize the findings of the roadway condition assessment, that was performed to assess the pavement condition for the 91st Avenue WWTP area.

# Exhibit B

## **Sewer Mains Condition Assessment and Access Improvements City of Oceanside, Oceanside, California**

Arcadis in collaboration with Infrastructure Engineering Corporation provided condition assessment and rehabilitation design services for three wastewater pressure pipelines. Arcadis led the condition assessment of the three ductile iron force mains, which range from 3 to 6 miles length and 24 to 42 inches in diameter. Based on the failure history of these pipelines, team developed a condition assessment plan that involved screening of key pipe segments, detailed condition assessment for pipe segments that possess high consequence of failure, and soils investigations for some key locations. The goal was to provide the most cost-effective approach to understand pipe conditions and avoid further failures. Results of these testing informed our recommendations for repair, replacement, rehabilitation, and on-going monitoring for the pipelines. Assisting the Arcadis project team in summarizing the condition assessment and rehabilitation design services findings and recommendations in a technical memorandum.

## **Los Angeles River Pro Bono project The Nature Conservancy, San Francisco, California**

The intent of the Arcadis team was to conduct a high-level screening of the proposed green infrastructure projects at the watershed level, quantify the benefits of green infrastructure, evaluate feasibility of proposed projects, and identify/prioritize a subset of feasible projects. Helped develop the GIS base maps for the entire Los Angeles River watershed that laid the ground work for the evaluation of individual sites; generated maps and data for the potential sites for implementing green infrastructure; prepared the conceptual designs for the proposed green infrastructure elements at selected locations.

## **Chino Basin Water Bank Development Inland Empire Utilities Agency, Chino, California**

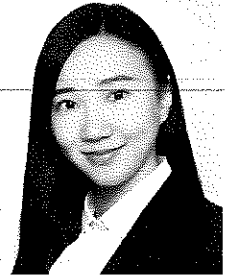
The objective of the project was to establish a water bank program to build the necessary infrastructure and governance to sustainably maximize available water supplies for Chino Basin's collective benefit. Helped team develop the report on the evaluation of the existing facilities required for operating the Water Bank, generated GIS figures for the proposed water banking scenarios; put together the Operations Plan for the Water Bank development; helped in the project management tasks like managing project budget, scope and so on; prepared reports, presentations and other documents for the project meetings.

## **Leading Water and Wastewater Utility Innovation Water Research Foundation**

This project assembles innovation leaders from various utilities to develop an Innovation Leader's Resource that will provide guidance for developing innovation strategies, engaging stakeholders in the innovation program and leveraging existing supply chain relationships for near term impact. Organized the project documents for the workshops, client meetings; assist in project management activities such as tracking budget, managing scope and so on; prepared case studies for the participating utilities.

# Exhibit B

**XINTONG QIU**  
**SUPPORT STAFF**



## EDUCATION

- MS, Civil & Environmental Engineering, Duke University, 2017
- BS, Civil & Environmental Engineering, Sun Yat-Sen University (Guangzhou, China), 2015

## YEARS OF EXPERIENCE

- Total – 3
- With Arcadis – 2

## PROFESSIONAL REGISTRATIONS

- Fundamentals of Engineering – NC, CA

Ms. Qiu has about two years of experience at Arcadis providing technical support for water projects. She has been involved with projects including sedimentation plant design, safety program implementation project construction, stormwater treatment design, distribution system evaluation, and UV disinfection plant construction. She has experience in design support, preparing technical reports, project management assistance, and data analysis. She also has one-year government experience through work with the Los Angeles Regional Water Quality Control Board in waste discharge requirements permitting and surface water NPDES permitting.

## Project Experience

### J-126 Safety Program Implementation

**Orange County Sanitation District, Fountain Valley, California**

As technical support was responsible for reviewing construction submittals and RFI's and coordinating with engineers in different disciplines to address issues during construction of the safety program for OCSD wastewater treatment plants and pump stations.

### Progressive DB Services for Santa Monica SWIP - Pre Const. 100% GMP

**City of Santa Monica, Santa Monica, California**

As design assistance, worked on the general and mechanical design for the SMURRF stormwater treatment process. Her responsibilities include conducting site inspections, coordination on Reverse Osmosis design, mechanical pipe design, tank design, pump design, and relevant calculations. She coordinated with manufacturers to acquire relevant designing information. She also participated in the specification development and preliminary design report preparation.

### Fairmont Sedimentation Plant

**Los Angeles Dept of Water & Power, Los Angeles, California**

As technical support, assisted in the sedimentation plant design process including equalization circulation pump design, pump calculations, equipment list, terminology list, and comment log preparation. She also coordinated the project cost estimate and assisted in preparing the Basis of Design report.

# Exhibit B

## **EOC OCC-110: Fire Protection Design Dirty Sox & Sulfate Facilities Los Angeles Dept of Water & Power, Los Angeles, California**

As project assistant, was responsible for coordinating on the project management and assisted in mechanical design. She conducted site visits with the senior engineer and coordinated with tank and scanning manufactures on tank design and site scanning work. She also assisted in project schedule management and preparing slides for the user review meetings

## **Goleta: Evaluation of DBP Treatment and Control Strategies Goleta Water District, Goleta, California**

As assistant engineer conducted historical data analysis of the Goleta distribution system and researched potential DBP treatment and control strategies. She evaluated the feasibility and cost of each strategy in applying in the Goleta distribution system and assisted in the hydraulic model development to compare the impact of each strategy in the system. A technical memorandum was developed to present the evaluation results and recommendations.

## **Los Angeles Reservoir UV Disinfection Construction Los Angeles Dept of Water & Power, Los Angeles, California**

As technical support was responsible for preparing technical reports and assisted in the construction coordination. She prepared the technical reports including Operation, Maintenance, and Monitoring plan, Disinfection Monitoring Plan, Lamp Break Evaluation Memorandum, and Testing, Start-up, and Commissioning Strategy. She investigated the historical data and reports and conducted CT calculations.

## **OMMP Development for Disinfection Facilities Los Angeles Dept. of Water & Power, Los Angeles**

As technical support was responsible for preparing the Operation, Maintenance, and Monitoring Plans for the chloramination station, ammoniation station, and fluoridation station in the distribution system. She investigated the as built and design drawings for the chloramination design criteria, investigated system operating procedures, and conducted chemical dosage calculation.

# Exhibit B

**HANNAH KEIFE, ET**

**SUPPORT STAFF**



## **EDUCATION**

- BS, Environmental Engineering, University of California Riverside, 2018

## **YEARS OF EXPERIENCE**

- Total – 1

## **PROFESSIONAL ASSOCIATIONS**

- Fundamentals of Engineering – NC, CA

Ms. Keife is a Water Resources Engineer who has been with Arcadis for one year. She graduated from the University of California, Riverside, with B.S. in environmental engineering. Her undergraduate research experience includes competing on a research team that designed and marketed a system that reduced ammonia emissions coming from poultry farms. At Arcadis, she has worked on the design of a membrane bioreactor and chemical treatment areas at the Sterling Natural Resource Center wastewater treatment facility; primary clarifier and sludge pump station design for the City of Glendale; equalization and surge basin design for Provo WATRR Center; pump station design for the Port of San Diego; GIS proximity hazard analysis for East Valley Water District; along with planning and field work for projects in Los Angeles.

## **Project Experience**

### **Provo Water Advanced Treatment and Resource Recovery Center**

#### **Provo City Public Works Department, Provo, Utah**

As the design lead for the Equalization and Surge Basins, used the existing aeration basins to design one EQ basin and three surge basins to control the flow throughout the treatment facility. This included calculating weir and orifice sizing for peak flows, routing inlet and outlet piping, and including the necessary mechanical equipment such as level sensors and big bubble mixing systems. Also assisted in designing the P&IDs, structural, and process mechanical drawings.

### **Sterling Natural Resource Center**

#### **East Valley Water District, Highland, California**

Assisted in the mechanical design of the membrane bioreactor (MBR) area at the new SNRC wastewater treatment facility. This included sizing and routing pumps, pipes, valves, flow meters, and other mechanical equipment in the MBR area to minimize the total footprint on the plant while still meeting all codes and regulations. Also assisted in the design of the chemical treatment area which included calculating dose concentrations, sizing tanks, and routing pipes.

# Exhibit B

## **Proximity Hazard Analysis**

### **East Valley Water District, Highland, California**

Downloaded and created GIS layers showing natural and anthropogenic hazards to the District's assets including pump stations, booster stations, and treatment plants. Performed a proximity analysis in GIS to show what assets were in range of each hazard and created a summary analysis of the results.

## **Glendale West Area Water Reclamation Facility**

### **City of Glendale, Glendale, Arizona**

Assisted in the mechanical design of the primary clarifier and sludge pump station for the Glendale WAWRF Improvements Project. Hydraulic calculations were performed to tie in additional pumps and equipment into the existing facility. Additionally, the design included contacting manufacturers for equipment, routing, and sizing pipes within the existing facility, and adding the necessary valving and other appurtenances.

## **Nitrification Program**

### **Los Angeles Department of Water and Power, Los Angeles, California**

Wrote a report summarizing LADWP's efforts to reduce nitrification throughout their distribution system and recommendations for future efforts. Created figures for LADWP managers to view this information at a high level and make it easier to understand rather than reading a long report. Sampled water at one tank in the distribution system that was experiencing frequent nitrification events and sent the samples for a UV pilot test to research what UV dose is most suitable for treatment. Wrote a report summarizing these results and recommendations to further reduce nitrification using UV technology.

## **Port of San Diego Stormwater Pump Station Design**

### **B Street Pier, San Diego, California**

Designed a pump station that lifted water from a hydrodynamic separator to biofiltration units for a stormwater BMP project. The pump station was designed as a wet well containing two submersible pumps that satisfied flow and head requirements. The pumps were designed to operate as a lead-stand by system. The water travelled through a flow meter vault containing a check valve, flow meter, and plug valve to ensure accurate flow to the biofiltration units.

## **Two-Phase Ammonia Removal System**

### **University of California, Riverside, Riverside, California**

Designed a system that reduced ammonia emissions from poultry farms. The first phase consisted of a water absorption tower that converted ammonia gas to aqueous ammonia. The solution then was pumped through the second phase that consisted of a biochar filter column that adsorbed the ammonia, purifying the water to be recycled back into the absorption column.

# Exhibit B

## LISA MADDIAUS, PE WATER SHORTAGE CONTINGENCY



### EDUCATION

- MS, Civil and Environmental Engineering, UC Davis, 2001

### YEARS OF EXPERIENCE

- Total – 25

### PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS

- Professional Engineer – CA C60047
- Instructor, AWWA California Nevada Section, Water Use Efficiency Practitioner
- Efficiency Practitioner
- Trainer, California Water Efficiency Partnership (CalWEP), Cost-Effectiveness Tools and Conservation Coordinator Workshops

### AREAS OF EXPERTISE

- Water Resources Planning Management
- Drought
- Water Loss
- Strategic Stakeholder Engagement
- California Water Policy & State Regulations
- Integrated Water Resources Planning
- Climate Change
- Shared Vision Planning
- Strategic Stakeholder Engagement

### Project Experience

#### Alliance for Water Efficiency Study “Use and Effectiveness of Municipal Irrigation Restrictions During Drought

AWE sponsored this two-year research study, selecting and water management as the primary Research Team. The main purpose of the study was to explore how drought response measures have been implemented and water demand reductions have been achieved across different water suppliers in California, Texas, Arizona, and Nevada. This research study provides new information on the range of approaches used and lessons learned during a water shortage through a review of recent experiences in these four states. The findings detail the practice and impact of voluntary municipal irrigation restrictions applied under dry year conditions and mandatory restrictions subsequently required during more severe water shortages.

#### Water Conservation Pilot Planning Study, Water Conservation Program Plan, Procedures Manual Honolulu Board of Water Supply, Hawaii

Technical lead in developing a comprehensive water conservation program that balanced the three components of sustainability: resource, economic, and organizational sustainability. The first phase involved a business case analysis and implementation recommendations for eight pilot projects. The second phase involved the development of a comprehensive plan to support the Water Conservation Program budgeting and staffing for a new BWS Water Conservation Section. The third phase included developing a procedures manual for water and energy demand-side management projects and programs, public education and outreach, and technical services for utility water loss auditing procedures. and the MWM team also provided two separate trainings in support of BWS’s process to certify commercial properties for the state of Hawaii’s Green Business Program. Currently, another phase of code writing, program planning, and technical assistance for implementation has been approved and is in the contracting process. In addition, is developing a water system audit for Honolulu BWS.

# Exhibit B

## **Santa Clarita Valley Water Suppliers Water Use Efficiency Strategic Plan**

Project manager for this Water Use Efficiency Strategic Plan (WUE SP) that was prepared on behalf of and in support of Castaic Lake Water Agency (CLWA) and the four-retailer agency water use efficiency programs. This was an update to the prior plan published in 2008 and was developed as a collaborative effort among staff at CLWA, the Retailers, and MWM. The WUE SP was prepared in close coordination with the Water Conservation Coordinators Committee and received CLWA and Retailer management buy-in through the Water Committee. The WUE SP was prepared per United States Environmental Protection Agency and American Water Works Association guidelines for the development of Water Conservation Plans. The deliverables included: (1) data collection and historical water use analysis; (2) review of current water use efficiency efforts; (3) identification and development of future water use efficiency measures; (4) analysis of cost effectiveness of measures using the DSS Model; (5) creation of program scenarios of measures; (6) optimization of recommended measures to meet goals including GPCD targets; (7) achievement of buy-in on recommended program; (8) preparation of Plan document; and (9) Plan adoption. (2014-2015).

## **Water Conservation Master Plan**

**City of Santa Cruz, California,**

Project manager for the Water Conservation Master Plan, which was finalized utilizing MWM's DSS Model. The involved public planning process included attendance at over 12 water commission meetings to make the plan an open and integrated process. The plan included analysis for the City and consisted of two main parts: 1) create a demand and conservation analysis for 2015 to 2035, and 2) evaluate conservation savings potential for 2015 to 2035 through a variety of different measures and conservation programs.

## **Selected Publications and Presentations**

Use and Effectiveness of Municipal Drought Restrictions: Final Study Report, Co-Principal Investigator with A. Bamezai of Western Policy Research, Alliance for Water Efficiency, January 2020.

<https://www.allianceforwaterefficiency.org/impact/our-work/use-and-effectiveness-municipal-irrigation-restrictions-during-drought>

AWWA's Manual of Water Supply Practices: M60 – Drought Preparedness and Response, 2<sup>nd</sup> Edition. (2019). Lisa was part of the original M60 author team as well as the update team for the second edition.

AWWA's Water Conservation Programs – A Planning Manual, 2<sup>nd</sup> Edition (AWWA Manual M52). Lisa was part of the MWM team to update M52 from 2014-2017.

"Water Conservation 101 Workshop," with M. Maddaus, WaterSmart Innovations Conference, Las Vegas, Nevada, October 2019.

"Water Conservation Program Benefit-Cost Analysis Workshop," with M. Maddaus, WaterSmart Innovations Conference, Las Vegas, Nevada, October 2019.

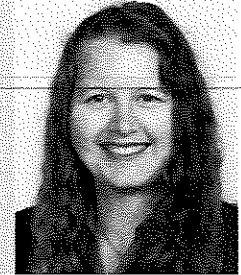
"Keys to Integrated Resources Plans and Designing a Sustainable Water Demand Forecast," American Water Works Association Sustainable Water Management Conference, Tucson, Arizona, April 2019.

"What Now? How 27 Agencies are Dealing with California's 'Making Water Conservation a California Way of Life' Legislation," with A. Johnson (BAWSCA), WaterSmart Innovations Conference, Las Vegas, Nevada, October 2018.

"Transition to the New California Water Efficiency Partnership (Cal-WEP)," Association of California Water Agencies Water Management Committee Meeting, Monterey, California, May 2017.

# Exhibit B

## MICHELLE MADDAUS, PE DEMAND MANAGEMENT MEASURES



### EDUCATION

- MBA, University of California, Davis, 2003
- BS, Civil and Environmental Engineering, UC Davis, 1999
- Study Abroad, University of New South Wales, Sydney, Australia, 2003
- Study Abroad, University of Oxford, UK, 1997

### YEARS OF EXPERIENCE

- Total – 21

### PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS

- Professional Engineer – CA C68712
- Instructor, AWWA California Nevada Section, Water Use Efficiency Practitioner
- Efficiency Practitioner
- Trainer, California Water Efficiency Partnership (CalWEP), Cost-Effectiveness Tools and Conservation Coordinator Workshops

### AREAS OF EXPERTISE

- Water Resources Planning Management
- Demand and Conservation Planning
- Integrated Water Resources Planning
- Commercial, Industrial, and Institutional (CII)
- Advanced Metering Infrastructure (AMI)
- Drought

### Project Experience

#### Mid-Peninsula Water District, 2015 Urban Water Management Plan California

Project manager for the MWM project team that worked with Marty Laporte from ManageWater to prepare water demand and conservation savings forecasts for Mid-Peninsula Water District's (MPWD's) 2015 Urban Water Management Plan. The Plan closely followed the content requirements found in the California Department of Water Resources 2015 Guidebook. As part of the UWMP development, a per capita water use analysis, DSS Model based water demand analysis and demand management measure study were conducted. The DSS Model included a conservation analysis of more than 20 individual water conservation measures. The measures were reviewed along with per capita conservation targets to meet the SB X7-7 conservation targets of 20% reduction by the year 2020. Michelle also lead the team in updating MPWD's Water Shortage Contingency Plan.

#### Urban Water Management Plans (UWMPs)

Working with Urban Water Management Plans since 2000. She has been involved in plans with the City of Sacramento (2000), Calistoga (2005), Suisun-Solano Water Authority (2005, 2010, 2015), South Tahoe Public Utilities (2010), Liberty Utilities (2015-16), Mid-Peninsula Water District (2015-16), City of Sonoma (2015-16) and technical demand analysis portion of the UWMPs for over 60 agencies, including Marin Municipal Water District, North Marin County Water District, City of Santa Rosa, City of Petaluma, City of Rohnert Park, Town of Windsor, City of Sonoma, Valley of the Moon, City of Cotati.

#### BAWSCA "Making Conservation a Way of Life" Water Conservation Strategic Plan and Regional Water Demand/Conservation Projections California

From 2017-18, managed this multi-team Phase 1 effort to develop BAWSCA's Water Conservation Strategic Plan, reviewing California's "Making

# Exhibit B

Conservation a Way of Life” regulations and existing BAWSCA conservation efforts. Phase 2, completed in June 2019, had two objectives: 1) a residential indoor and outdoor water use study designed to provide insight into the current breakdown of indoor and outdoor water use among residential customers within the BAWSCA service area; and 2) a commercial Pilot Project that evaluated the potential for the successful implementation of a Regional CII Audit Program. In 2019, Michelle and the MWM team began Phase 3 with a follow-up effort to develop regional water demand and conservation projections for each of the 27 agencies. The demand and conservation projections will be designed to support BAWSCA’s regional and individual agency planning efforts and is due to be completed in June 2020.

## **Foster City Water Supply Assessments California**

Project manager for three Water Supply Assessments (WSAs) that provided information for use in the California Environmental Quality Act (CEQA) analysis for various proposed projects in Foster City. Each WSA involved an assessment of whether available water supplies would be sufficient to serve the demand generated by the project as well as the reasonably foreseeable cumulative demand during normal year, single dry year, and multiple dry year conditions over the next 20 years. The WSA reports built on previous water demand projections created as part of the BAWSCA Regional Demand and Conservation Projections, also completed in September 2014. The new demands from the BAWSCA study were approved by Estero Municipal Improvement District (EMID) and were used as a basis for the 2015 UWMP submitted by EMID in June 2016. MWM collaborated on the WSAs with Urban Planning Partners and the Foster City (EMID) Planning and Engineering Departments. MWM’s role was to estimate calculations for the water demand and assist in compiling the WSA reports for the following projects: Lincoln Center Campus, Pilgrim Triton Development Project Phase C, a new hotel in Metro Center, and the new Gilead Wellbeing Center.

## **Water Conservation Master Plans**

Completed Water Conservation Plans for City of Anaheim, City of Corona, East Bay Municipal Utility District, and Marin Municipal Water District, all in California; Southern Oregon Water Conservation Work Group in Oregon; Jordan Valley Water Conservancy District, Weber Basin, Central Utah Conservancy District, Washington County, and Kane County, all in Utah; United Water in Idaho; City of Cape Coral and Palm Beach County, both in Florida; and Catawba-Wateree Management Group in North/South Carolina. Currently, Michelle is working on plans for Alameda County and Walnut Valley Water Districts in California and City of Bend, Oregon.

## **Santa Barbara Water Conservation Master Plan and 2020 Urban Water Management Plan Technical Assistance California**

MWM is supporting development of a Water Conservation Strategic Plan “Making Conservation a Santa Barbara Way of Life,” intended to support the City’s compliance with the G480 Standard and joining the AWE Leader board. This is a complement to and continuation of previous work between the City and MWM. Historical and ongoing water use is tracked and analyzed for various demand projection scenarios, and water conservation estimates are being developed for over 25 conservation measures and 3 conservation program scenarios.

# Exhibit B

## ANNIKKI CHAMBERLAIN QA/QC/ CALIFORNIA WATER CODE COMPLIANCE



### EDUCATION

- MS, Northern Arizona University, 2011
- BS, Watershed Science, Colorado State University, 2008

### YEARS OF EXPERIENCE

- Total – 12

### AREAS OF EXPERTISE

- Commercial, Industrial, and Institutional (CII)
- Commercial
- Water Auditing
- Water Data Analyst
- Water Conservation Modeling
- Water Demand Forecasting
- Benefit-Cost Analysis
- AMI Water Data Analysis
- GIS Mapping
- Analysis

### Project Experience

#### Water Conservation Plan and DSS Model Update for the Honolulu Board of Water Supply Hawaii

The Water resources analyst for the MWM team providing technical services for the Honolulu Board of Water Supply (BWS) Water Conservation Program. This effort includes taking stock of existing laws, rules and regulations connected to water conservation; researching additional best practices for codes and ordinances with examples from other agencies; and preparing a technical memorandum with summary conclusions and recommendations. also is providing modeling and technical support to update the water demand and conservation projections from the 2011 BWS DSS Model update.

#### Commercial Water Audit Training Pacific Gas & Electric

Collaborated with MWM and PG&E staff to provide a CII training webcast on "Water Audit Basics for Small to Medium Businesses" to over 110 attendees from 17 states. The training webcast, originally scheduled for an in-person training, was successfully adapted to provide both engaging classroom lecture and virtual hands-on training to attendees. The adaptation to webcast was so successful that the 2021 course is planned to combine the original in-person training with an added webcast option for remote attendance.

#### BAWSCA Conservation Strategic Plan and Regional Water Demand and Conservation Projections California

Provided modeling using MWM's DSS Model and technical support in a multi-team effort to develop regional water demand and conservation projections for each of BAWSCA's 27 member agencies. The project began as a 5-year update to the previous 2014 BAWSCA Demand and Conservation Update effort.

# Exhibit B

## **Alliance for Water Efficiency Study “Use and Effectiveness of Municipal Irrigation Restrictions During Drought”**

Provided technical and editorial support for MWM on research study sponsored by AWE to explore how drought response measures have been implemented and water demand reductions have been achieved across different water suppliers in California, Texas, Arizona, and Nevada. This research study provides new information on the range of approaches used and lessons learned during a water shortage through a review of recent experiences in these four states.

## **Commercial Water Audit Training for El Paso Water Texas**

Worked with MWM staff to conduct a CII workshop to train 10 El Paso Water staff personnel on the procedures to audit commercial and institutional customers in the service area. The workshop consisted of two days of training, both in a classroom lecture setting and hands-on training at two commercial sites, one for cooling tower field testing and other hotel facility was used for training more comprehensive field testing of CII equipment.

## **Indoor Fixture Efficiency Market Analysis Denver Water, Colorado**

Was the Water Resources Analyst on the MWM team conducting a market analysis of water efficient indoor plumbing fixtures. Work included a market assessment of the development of new water-efficient fixtures and appliances. This assessment included: what types of products are being developed; for which markets (residential, commercial, etc.); how much water is used; and expected market deployment.

## **Water Conservation Plan, Walnut Valley Water District California**

For the Walnut Valley Water District Water Conservation Plan, water Resources Analyst for the MWM team that is conducting data collection, facilitating collaborative meetings, and analyzing historical water use and conservation activity. This is done to evaluate current conservation measures and identify new ones to reduce future water demand; estimate the costs and water savings of these measures; then combine the measures into increasingly more aggressive programs to evaluate costs and water savings.

## **San Antonio Water Supply (SAWS) Multifamily Sector Analysis Texas**

Water resources analyst on the project team analyzing over 700 multifamily properties in the SAWS water service area. The project includes detailed analysis of multifamily water use trends including water use per unit calculations; trends in water use over time; statistical assessment of property water use; and virtual geographic map generation to show location of high, medium, and low water use properties.

# Exhibit B

## HANNAH BRAUN SUPPORT STAFF



### EDUCATION

- BA, Environmental Studies, University of California, Santa Cruz, 2017

### YEARS OF EXPERIENCE

- Total – 3

### AREAS OF EXPERTISE

- Commercial, Industrial, and Institutional (CII) Audit Training
- Water Data
- Analyst
- Commercial
- Water Auditing
- Water Conservation Modeling
- GIS Analysis and Review
- Water Demand Forecasting

### Project Experience

#### Santa Barbara Technical Engineering Services California

Supports the MWM team to compile updated data in the DSS Model, clean up the data workbook with new updated consumption data, analyze differences in production, and update demand scenarios. Hannah also supports ongoing client requests such as analysis and development of R-GPCD and GPDA without irrigation for future development.

#### Hayward Demand Forecast, California

Water resource analyst supporting the MWM team in developing water demand forecast and conservation programs for the City of Hayward in conjunction with the BAWSCA Water Conservation and Regional Water Demand project. She has worked with the MWM team and City of Hayward staff to advise in the selection of water conservation measures to be used in the City's water conservation program that is being analyzed in the DSS Model.

#### BAWSCA Water Conservation Strategic Plan & Regional Water Demand and Conservation Projections California

Modeler for the 2019-present portion of this project (known as Phase 3). Hannah has worked on the follow-up effort to develop regional water demand and conservation projections for each of BAWSCA's 27 member agencies as a 5-year update to the previous 2014 BAWSCA Demand and Conservation Update.

#### Water Efficiency Master Plan Alameda County Water District, California

For the Alameda County Water District Water Efficiency Master Plan, Hannah is the Water Resources Analyst. She is part of the MWM team that has reviewed the data collected and created a baseline survey to accomplish the

# Exhibit B

following: 1) evaluate current and historical conservation measures and identify new potential water use efficiency program options; 2) estimate costs and water savings of the measures; and 3) combine the measures into increasingly more aggressive programs to evaluate costs and water savings. She also assisted in developing customized water conservation measures and programs.

## **Commercial Water Audit Training**

### **El Paso Water, Texas**

In November 2019, Hannah worked with MWM staff to conduct a CII workshop to train 10 El Paso Water staff personnel on the procedures used to audit commercial and institutional customers in El Paso Water's service area. The workshop consisted of two days of training, both in a classroom lecture setting and hands-on field training, at two commercial sites, one for cooling tower field testing and one for more comprehensive field-testing training of CII equipment (hotel facility).

## **Water Conservation Plan**

### **Walnut Valley Water District, California**

For the Walnut Valley Water District Water Conservation Plan, Hannah supports the MWM team to conduct data collection, facilitate collaborative meetings, and analyze historical water use and conservation activity to evaluate current conservation measures and identify new ones for potential future implementation.

## **Water Efficient Equipment in New or Renovated University Buildings**

### **Stanford University, California**

Reviewed and revised the building standards document for Stanford University based on the updated 2019 CALGreen Code. This document is used for water efficiency standards and goals for all new or renovated buildings at Stanford University.

## **Southern Nevada Water Authority CII Water Audit Training**

### **Las Vegas, Nevada**

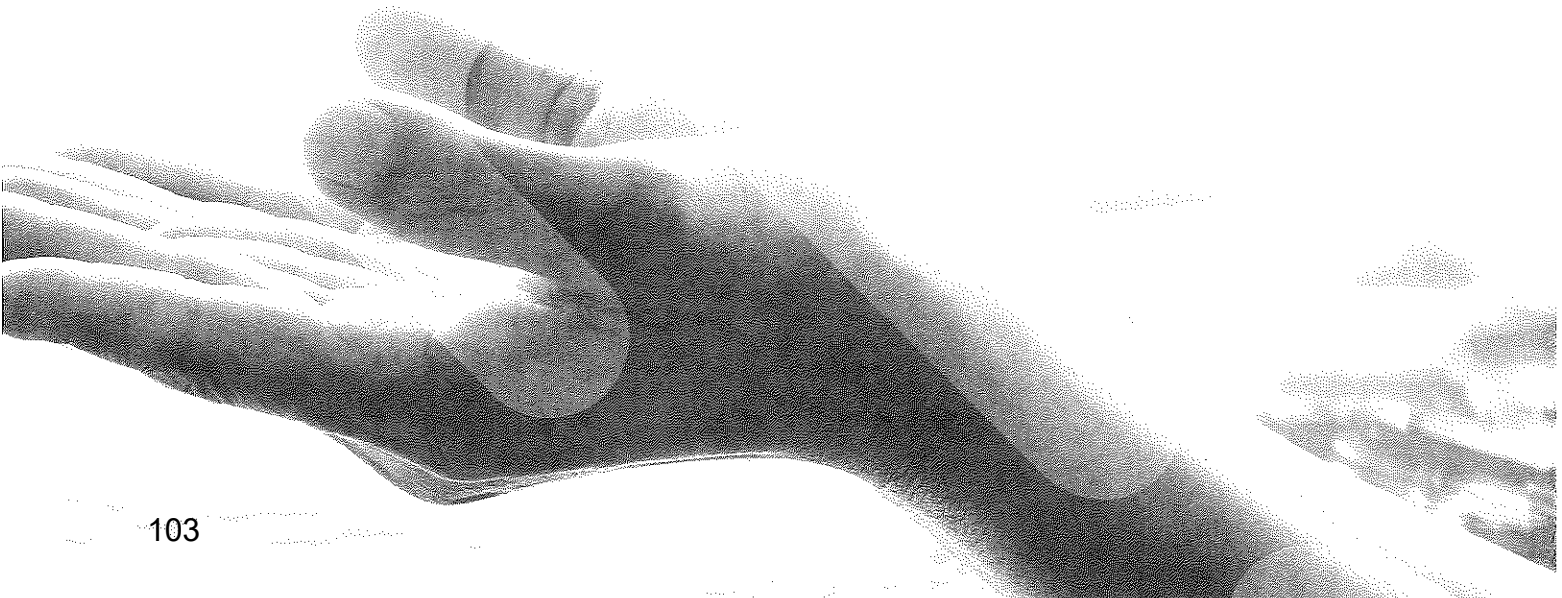
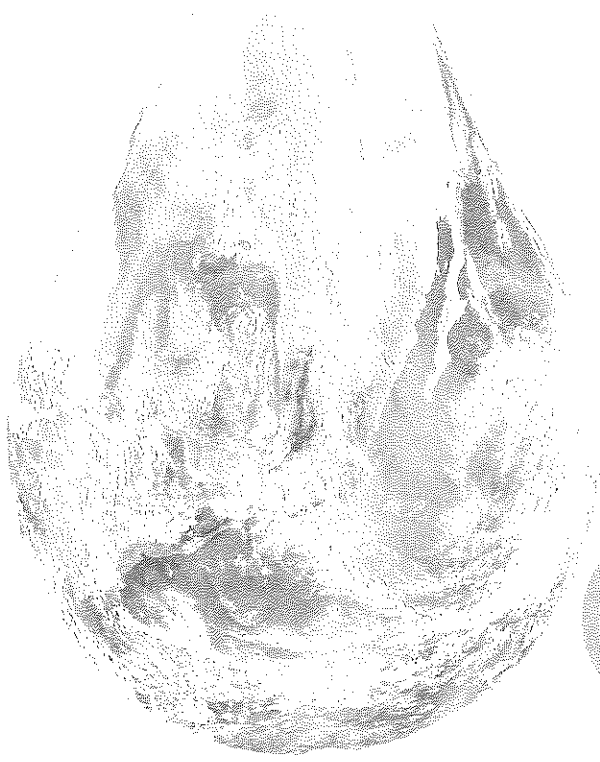
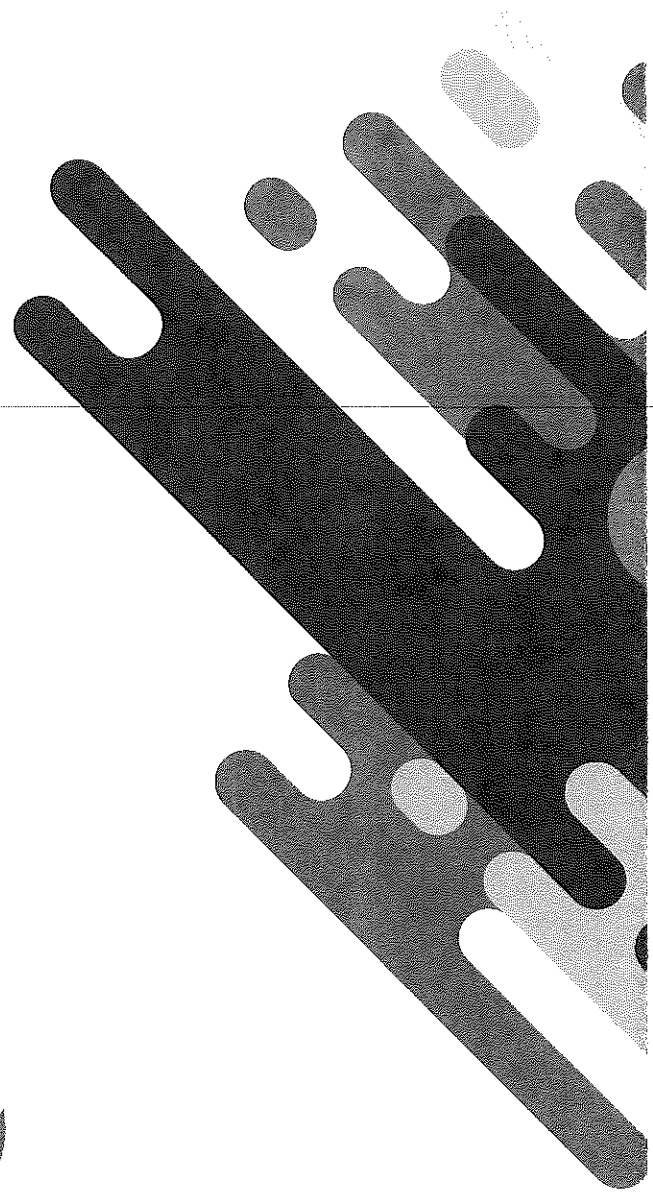
Co-trainer for this intensive 3-day commercial water auditing class for 27 attendees from the Southern Nevada Water Authority and surrounding water agencies. Hannah assisted with the training which involved classroom-setting instruction as well as hands-on field training at two different commercial sites: a full-service restaurant and bar and sports facility. She helped train on field audits which included cooling towers, swamp coolers, sports arena public bathrooms, locker rooms, a full-service kitchen and bar and more. Hannah also conducted in-depth training on MWM's Water Audit Tool software for use with field inspections.

## **Water Conservation Assistant**

### **Alameda County Water District, California**

As a water conservation assistant, Hannah supported implementation of water conservation programs offered by the District. This included processing rebates; conducting pre-rebate and post-rebate awarded inspections of sites participating in CII rebate programs; and processing leak detection and water conservation kits provided by the District. In addition, she was responsible for handling customer inquiries related to water conservation.

320 Commerce  
Suite 200  
Irvine, CA 92602  
Tel (714) 730-9052  
[www.arcadis.com](http://www.arcadis.com)



**EXHIBIT B**  
**Cost Summary for Development of Urban Water Management Plans for 2020**

**Exhibit B**  
**Cost Summary For Development of Urban Water Management Plans for 2020**  
**Contingency Items**

Budget Groupings of Agencies	Base Price	Contingency Items													Total With All ACTIVATED Contingencies
		1. Demand Assessment	2. Redesign of the WSCP	3. WSCP Communication Protocols	4. Annual Water Supply and Demand Assessment Procedures	5. Energy Intensity	6. Changes from MET or other sources	7. Climate Change Impacts Assessment	8. Agencies Coordination	9. Presentation and Meetings	10. DWR Submittal	11. Agencies with complicated arrangements	12. Agency coordination with limited staff	13. Local Hazard Mitigation Plan	
		\$ 5,200	\$ 7,000	\$ 1,600	\$ 3,100	\$ 3,400	\$ 2,500	\$ 4,200	\$ 750	\$1,000/meeting	\$ 300	\$ 3,200	\$ 1,200	TBD	
<b>MWDOC</b>															
1	MWDOC	\$32,720													\$ 32,720
<b>OCWD Groundwater Agencies</b>															
2	City of Buena Park	\$24,650													\$ 24,650
3	City of Fullerton (not a part of MWDOC)	\$24,650													\$ 24,650
4	City of Garden Grove	\$24,650													\$ 24,650
5	City of La Palma	\$24,650													\$ 24,650
6	City of Orange	\$24,650													\$ 24,650
7	City of Seal Beach	\$24,650													\$ 24,650
8	City of Tustin	\$24,650													\$ 24,650
9	Yorba Linda Water District	\$24,650													\$ 24,650
10	City of Westminster	\$24,650													\$ 24,650
11	East Orange County Water District (1)	\$27,650													\$ 27,650
<b>OCWD Groundwater Agencies with Recycled Water</b>															
12	City of Fountain Valley	\$25,530													\$ 25,530
13	City of Newport Beach	\$25,530													\$ 25,530
14	City of Santa Ana (not a part of MWDOC)	\$25,530													\$ 25,530
15	Huntington Beach	\$25,530													\$ 25,530
16	Mesa Water	\$25,530													\$ 25,530
<b>South County Agencies with Recycled Water</b>															
17	City of San Clemente	\$24,910													\$ 24,910
18	El Toro Water District	\$24,910													\$ 24,910
19	South Coast Water District	\$24,910													\$ 24,910
20	Trabuco Canyon Water District	\$24,910													\$ 24,910
<b>Non-OCWD Groundwater Agencies</b>															
21	City of Brea	\$25,790													\$ 25,790
22	City of La Habra	\$25,790													\$ 25,790
<b>South County Agencies without Recycled Water</b>															
<b>Total for All Agencies</b>															
	<b>Total</b>	<b>\$561,090</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 561,090</b>

(1) EOCWD = Wholesale & Retail Plans under one